(No Model.) 2 Sheets—Sheet 1.

C. CHRISTIAN.

FEED CUTTER.

No. 265,755. Patented Oct. 10, 1882.

Fig. 1.

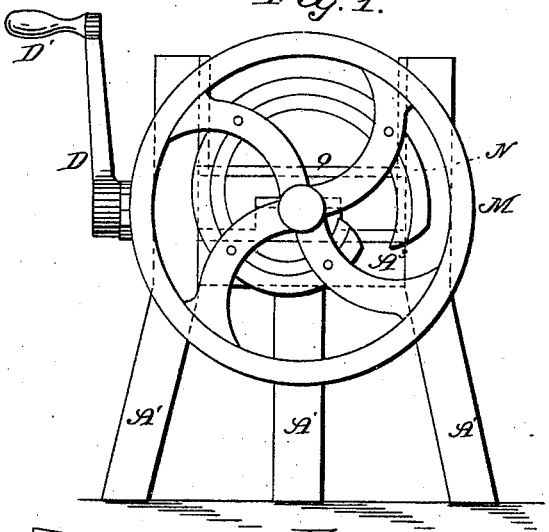


Fig. 2.

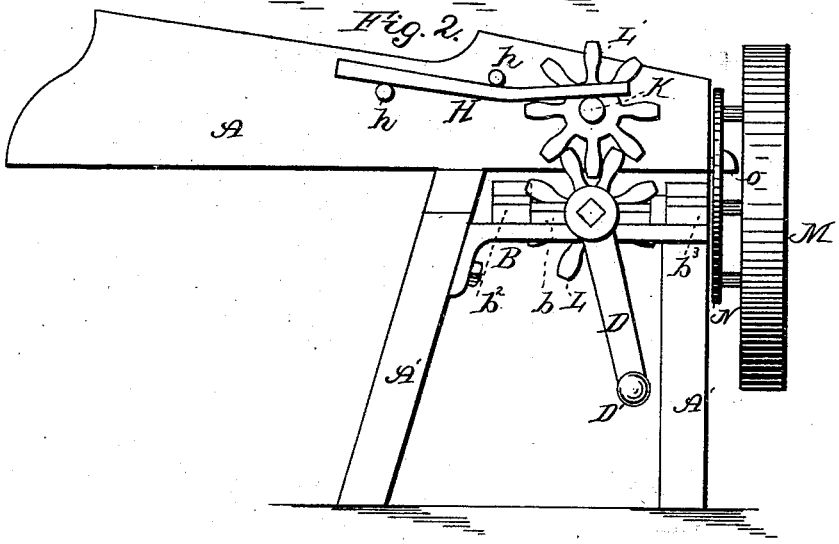
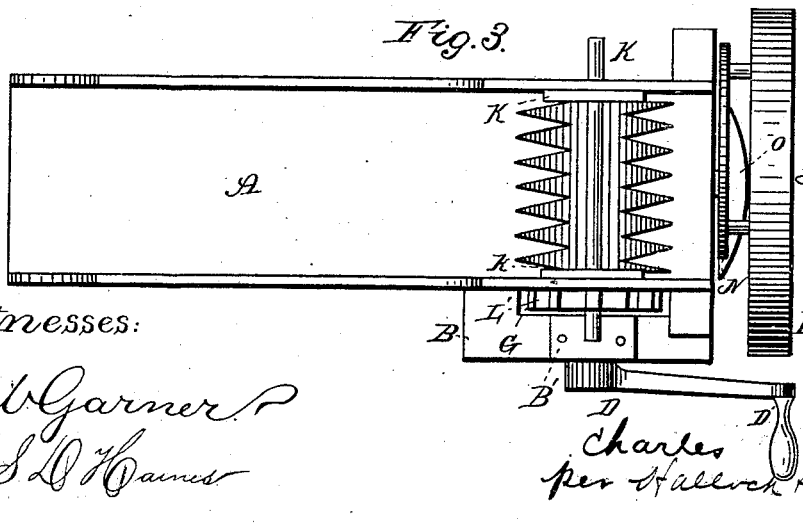


Fig. 3.



Witnesses:

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W. S. D. Haines

Inventor:

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attys.

(No Model.) 2 Sheets—Sheet 2.

C. CHRISTIAN.

FEED CUTTER.

No. 265,755. Patented Oct. 10, 1882.

Fig. 4.

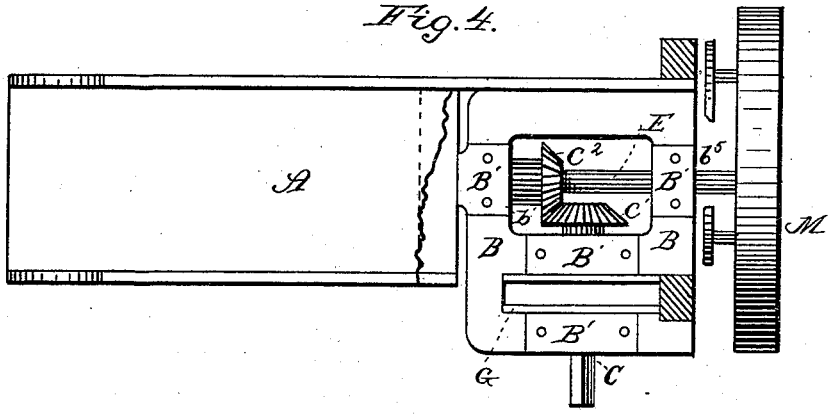


Fig. 5.

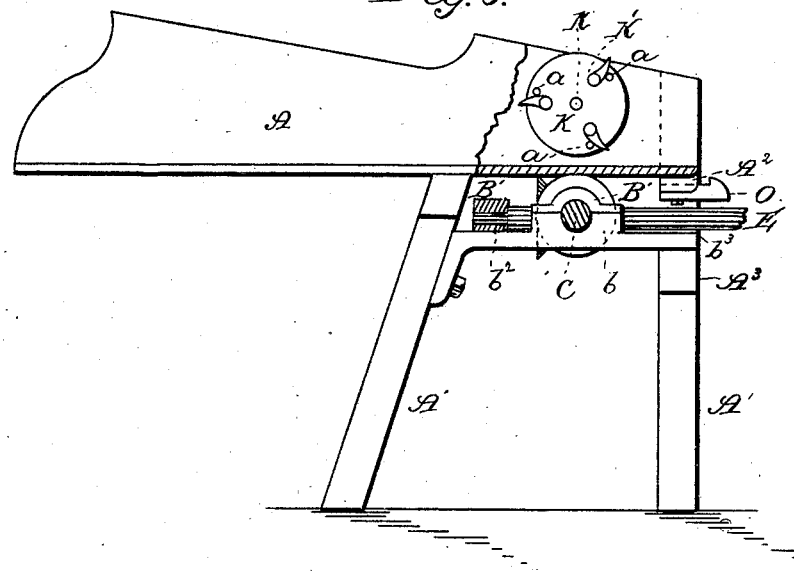


Fig. 6.

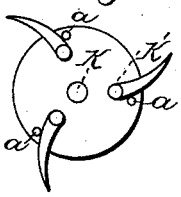


Fig. 7.

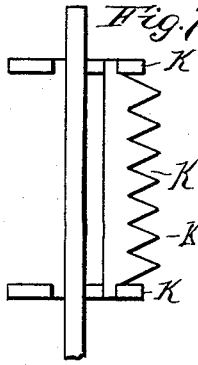


Fig. 8.

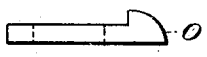
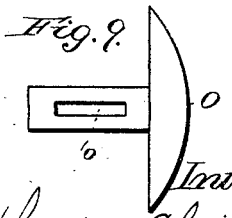


Fig. 9.



Witnesses:

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W. S. O'Haines

Inventor:

Charles Christian,

per Wallace & Wallace,

Attys.

UNITED STATES PATENT OFFICE.

CHARLES CHRISTIAN, OF KNOXVILLE, TENNESSEE.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 265,755, dated October 10, 1882.

Application filed May 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CHRISTIAN, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented certain new and useful Improvements in Feed-Cutters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The nature and object of my invention will more fully appear from the subjoined description and claims.

In the drawings, Figure 1 represents a front elevation of my device; Fig. 2, a side elevation; Fig. 3, a top plan view; Fig. 4, a top plan view with feeder removed and feed-box partly broken away; Fig. 5, a side elevation with gear removed and part of the frame broken away; Figs. 6 and 7, detail views of the feeder. Figs. 8 and 9 are detail views of detachable cutter-plate.

A represents the feed-box, supported upon legs A' and cross-pieces A^2. Below the front cross-piece, A^2, is another cross-piece, A^3, which supports the front end of a plate, B. This plate is attached to the rear leg by means of bolts. Upon the upper surface of plate B are projections b^2 b^3, having semi-cylindrical depressions, which correspond to similar depressions in plates B', attached to the upper side of plate B, and forming therewith bearings for the shafts C and E, which revolve therein. Upon the outer end of shaft C is a crank, D, having a handle, D', and upon the inner end is a beveled-gear wheel, C', which meshes with a corresponding wheel, C^2, in shaft E, placed at right angles to the first shaft, C. The rear end of shaft E is journaled in plate B at b^2, and the forward end rests upon and projects forward of plate B, as shown at b^3. Upon the outer end is attached a wheel, M, having a scroll-like knife, N, which revolves in front of and across the mouth of the feed-box.

Keyed upon shaft C, and working in slot G in plate B, and near the side boards of the feed-box, is a pinion, L, which meshes with a second pinion, L', on a shaft, K. This shaft carries the disks K, in which the feed-rakes are journaled, and is journaled in slots formed in the side walls of the feed-box, and is so arranged that the shaft will rise or fall, according to the amount of feed under the shaft. A spring, H, held in place by pins *h*, and having its free end pressing down upon the end of shaft K, serves to hold the shaft to its work. Upon shaft K, near the inner sides of the feed-box, are keyed disks *k*, on which the feed-rakes are pivoted. The inner sides of these disks are provided with lugs or strips *a*, one to every rake, which is supported by its lug while being elevated and held to its work while being lowered, as shown in Fig. 5.

The feed-rakes K' are provided with serrations or teeth k' for an obvious purpose.

The pinions L L' are provided with teeth having their ends rounded and sides curved in an ogee form, so that when revolved the curved parts of the teeth in contact will have a steady and smooth sliding motion upon each other, instead of the uncertain motion that teeth formed with straight sides and squared ends have.

A cutter-plate, O, is attached to the end of the box A by a bolt passing through the slot *o*, by means of which the plate can be adjusted.

The operation is as follows: The feed to be cut is placed in box A and forced toward the knife at the same time crank D is turned and motion imparted to shaft C, which revolves wheel M and knife N by means of shaft E and gear C' C^2, and the feed-rakes by means of pinions L L' and shaft K. If a quantity of feed of greater depth than the distance between the lowermost rake and the bottom of the feed-box be fed to the knife, the feed will lift shaft K from its bearing and pass beneath it. Spring H, however, will interpose sufficient downward pressure to prevent the feed from passing too rapidly to the cutter. When the usual quantity has passed the feed-rakes the spring will force the shaft back to its former position.

What I claim as new is—

1. In a feed-cutter, a feed-shaft having disks keyed thereon and feed-rakes journaled in the disks, for the purpose set forth.

2. In a feed-cutter, a feed-shaft having disks with lugs on their inner faces and feed-rakes journaled in the disks, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES CHRISTIAN.

Witnesses:
C. J. YEARY,
JEROME MARSH.