

W. Dahlem,

2. Sheets. Sheet 1.

Straw Cutter.

No. 110,834.

Patented Jan. 10. 1877.

Fig. 1.

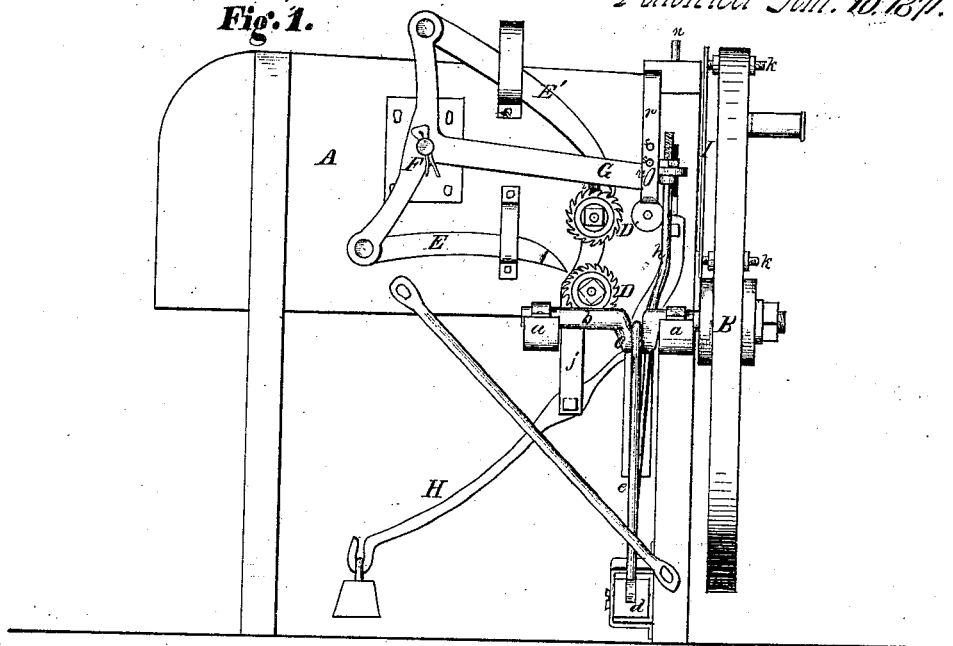
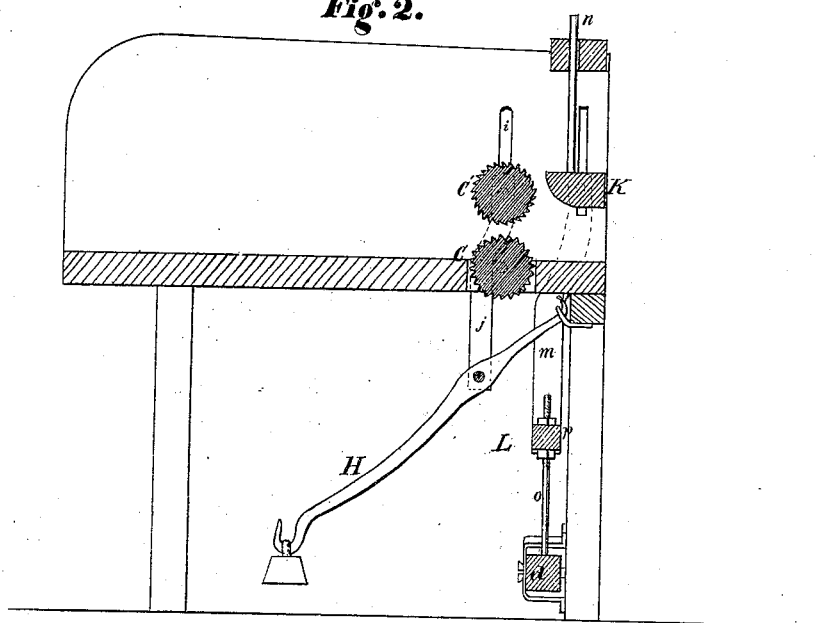


Fig. 2.



Attest.

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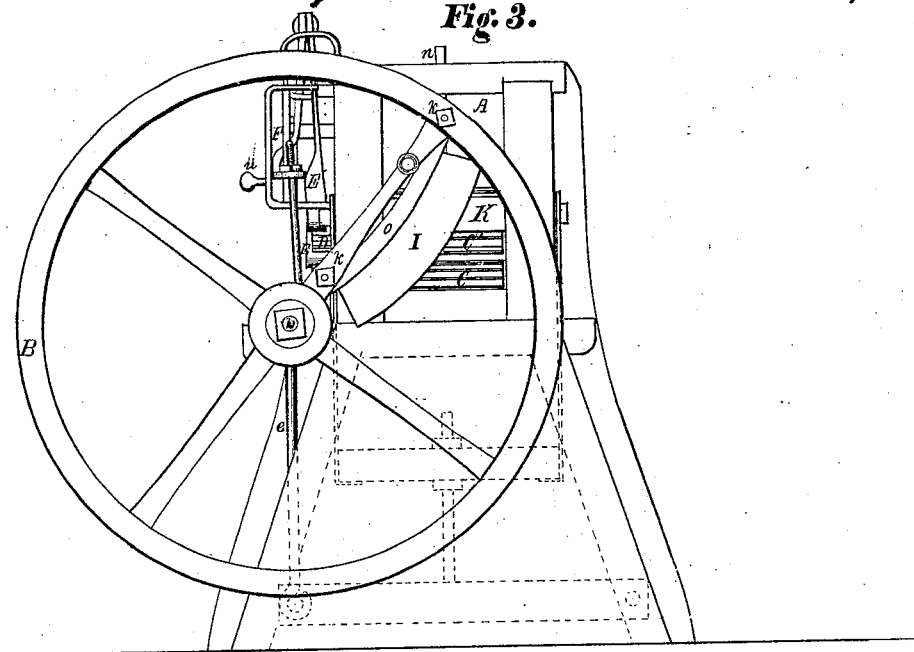
2. Sheets, Sheet 2.

### Straw Cutter.

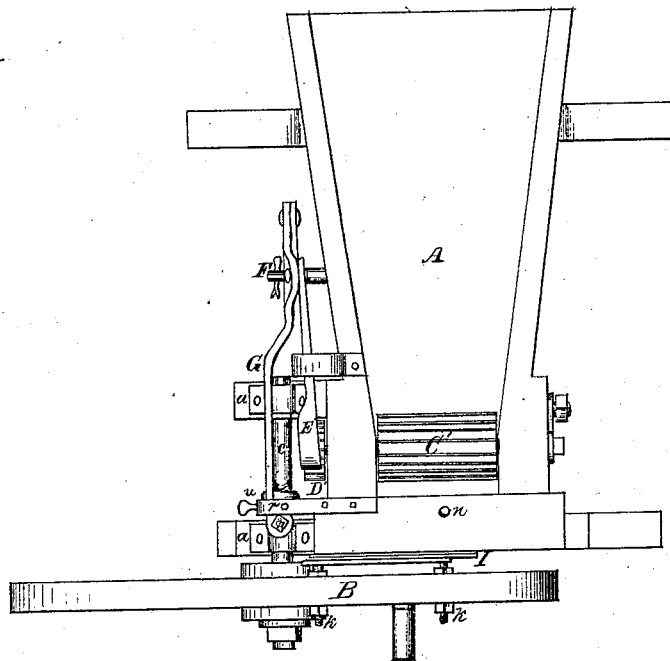
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*Patented Jan. 10. 1871.*

**Fig. 3.**



**Fig. 4.**



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# United States Patent Office.

WILLIAM DAHLEM, OF MADISON, INDIANA.

Letters Patent No. 110,834, dated January 10, 1871

## IMPROVEMENT IN FEED-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, WILLIAM DAHLEM, of Madison, in the county of Jefferson and State of Indiana, have invented an Improved Feed-Cutter; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing making part of this specification:

Figure 1 being a side elevation;  
Figure 2, a longitudinal vertical section;  
Figure 3, an end elevation; and  
Figure 4, a plan of the machine.

Like letters of reference designate corresponding parts in all the figures.

The object of my invention is to furnish a complete and durable machine capable of cutting feed of all kinds, hay, straw, corn and other forage, of any desired length within practical limits.

It has several novel and important features, one being the complete feeding-device, which is so arranged as to cut coarse or fine at pleasure.

Another feature consists in the device by which the forage is held firmly down while the cut is being made, but still allows it to be fed to the knife at the proper time.

Let A, in the drawing, represent the box of the cutter, supported on legs in the usual manner.

Supports *a a*, projecting from the box A, furnish bearings for a shaft, *b*, which carries a heavy crank-wheel, B, on its outer end, secured firmly thereto.

This shaft is bent between its journals to form a crank, *c*, and is connected to a cross-beam, *d*, by means of a pitman, *e*.

The beam *d* is pivoted at one end to a leg of the machine, and receives a vertical reciprocating motion from the pitman *e* (attached at the other end) when the shaft *b* is rotated.

Toothed rollers, C C', form the principal part of the feeding device.

The lower stationary roller C has V-shaped teeth, and the upper adjustable roller C' has ratchet-teeth.

These rollers are operated by means of ratchet-wheels, D D', which are secured to the outer end of the journals of said rollers.

Pawls E E' connected with a bell-crank, F, mesh with the said ratchet-wheels.

The bell-crank turns or oscillates on a journal, *f*, secured to, and projecting from the side of the box A, and receives motion through the medium of the lever G, which is connected with the beam *d* by a rod, *h*.

It will be seen that by this arrangement a rotary motion is imparted to the rollers C C' by the reciprocating motion of the beam *d*.

The upper roller C' has a vertical play up and down to accommodate different thicknesses of feed.

The journals pass through slots, *i i*, see fig. 2, in the sides of the box and turn in hangers *j j*.

These hangers are connected below by a bar, which passes through a weighted lever, H, substantially as shown. This weight is intended to keep the upper feed-roller down firmly upon the forage that is being cut.

To the crank-wheel B is secured the cutting-knife I, which is attached to one of the arms by means of bolts and nuts, as indicated by *k k*.

The knife is clearly shown in fig. 3.

A presser, K, connected by hangers, *m m*, with a cross-piece, L, has a guide-rod, *n*, and is moved up and down at each revolution of the wheel B by the beam *d*, which has an adjustable connection with the cross-piece L, by the rod *o* and double nuts, *p*. This arrangement is shown in fig. 2.

The machine may be adjusted to cut long or short by means of a device consisting of a guide-link, *r*, in which the lever G reciprocates.

This link has threaded holes, *s s*, as shown in fig. 1, in which the thumb-screw U is inserted.

The height at which said screw is inserted regulates the length of the forage cut by allowing the pawls E E' to pass over a greater or lesser number of teeth in the ratchets D D' on the feed-rollers at each revolution.

The cutting is done by revolving the wheel B, to which the knife I is secured, each revolution making one cut.

The wheel B should be so set upon the shaft *b* with relation to the crank *c* that the presser K will be down at the time the knife is cutting.

Having thus described my invention,

I claim—

A feed-cutter, consisting of the adjustable intermittent feeding device shown, the presser K, knife-bearing wheel B, and box A, all combined and arranged to operate together in the manner shown and for the purposes set forth.

WILLIAM DAHLEM.

Witnesses:

A. M. COMMETT,  
HENRY COMMETT, Jr.