

E. F. BISHOP.

Combined Straw Cutter and Feed Mixer.

No. 47,386.

Patented April 25, 1865.

Fig. 1.

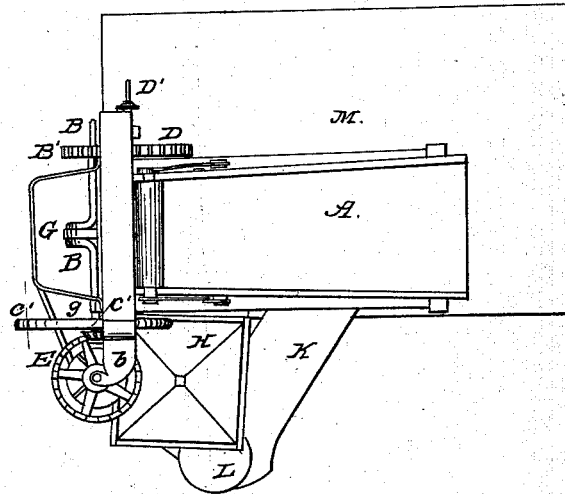


Fig. 3.

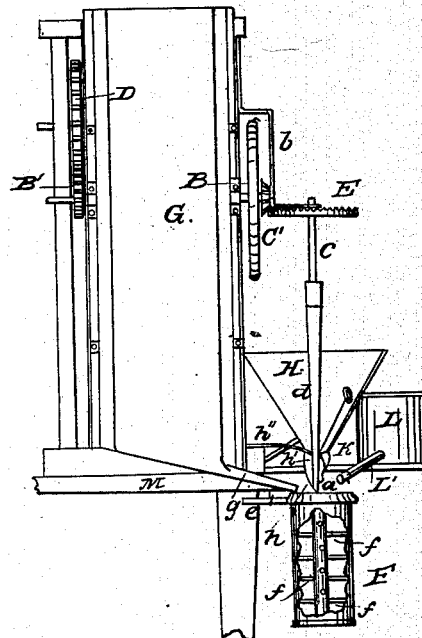
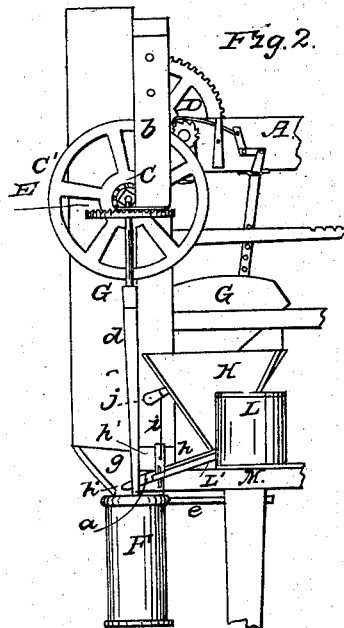


Fig. 2.



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E. F. BISHOP, OF BURTON, OHIO.

IMPROVEMENT IN STRAW-CUTTER AND FEED-MIXER COMBINED.

Specification forming part of Letters Patent No. 47,386, dated April 25, 1865.

To all whom it may concern:

Be it known that I, E. F. BISHOP, of Burton, in the county of Geauga and State of Ohio, have invented certain new and useful Improvements in a Straw-Cutter and Feed-Mixer Combined; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the machine. Fig. 2 is a side view, with the rear end broken away. Fig. 3 is an end view.

Like letters of reference denote like parts in the several views.

My improvement relates to the manner of constructing and operating a combined straw-cutter and feed-mixer, described as follows:

A is the cutter-box, with feed-rollers at one end, operated by an arrangement of devices connected with the crank-shaft.

B is the crank-shaft, turned by a pinion, B', on the shaft, working in the gear-wheel D, to which the crank D' is connected. The crank shaft operates the cutter, and on the other end there is a beveled gear or pinion, C, outside of the driving-wheel C', that works in notches on the upper face of the wheel E, arranged transversely to the wheel C'.

b is a bent arm or plate extending down from the frame to which it is secured, and it is curved round so as to pass onto the upper end of the shaft c of the wheel E to hold it steadily in place. The shaft c is secured to a square wooden shaft, d, that extends down into the cylinder or mixer F, where it has arms f, projecting crosswise from each side, as represented in Fig. 3. The cylinder F is connected to the frame by a rod, e, or in any other suitable manner.

G and G' are guides or shields on the outside and under the cutting apparatus, that terminate at the lower end on one side in a spout, g, that empties into the cylinder F, whereby the cut feed from the rollers is guided down into the mixer.

H is a hopper attached to the side of the frame, from under the lower end of which extends a spout, h, to the top of the mixer, where one side, h', extends out beyond and comes against the shaft d, that as the shaft revolves, the square corners coming against it agitate the spout or cause it to vibrate, which also agitates the hopper in a similar

manner. The spout h is hung by a spring, h'', attached to the frame and one side of the spout. To this spring is attached a cord, i, the other end being connected to a spring, j, on one side of the hopper, by means of which the end of the spout can be raised or lowered, increasing or decreasing the inclination of the spout by simply wrapping the thread more or less around the pin. The object of thus changing the inclination of the spout is to adjust the quantity of ground feed that will be discharged from the hopper H into the mixer.

L is a bucket with a spout, L', on one side, that extends also over the mixer F, by which water can be discharged into it, there being a faucet, a, in the end of the spout. The bucket or water vessel is supported on a piece, K, extending out from the main frame. The frame consists of a platform, M, on which the straw-cutter is arranged with legs or supports underneath, elevating it sufficiently above the ground.

In the practical use of this machine, by turning the crank D' on the shaft of the wheel D the straw-cutter is operated, and the cut straw or feed falls down through the guides G G' and spout g into the mixer. At the same time the crank-shaft, revolving, turns the shaft d by means of the wheel E and pinion C, which turns the arms f, around in the mixer and agitates the spout h, causing the ground feed from the hopper H to be distributed in any desired quantity in the mixer with the cut feed, and water can be added through the spout L' as it is needed, the whole being perfectly mixed by the rapid and continual revolution of the shaft d and arms f. A pail or vessel must be placed under the mixer to receive the mixed feed, the feed being mixed in passing from one end of the cylinder F to the other. In this way the hay or straw is cut and the ground meal or feed mixed with it at one operation.

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

The special arrangement of the hopper H, mixer F, shaft d, with its arms f, and spout g, in combination with the straw-cutter when operating conjointly, substantially as and for the purpose set forth.

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Witnesses:

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