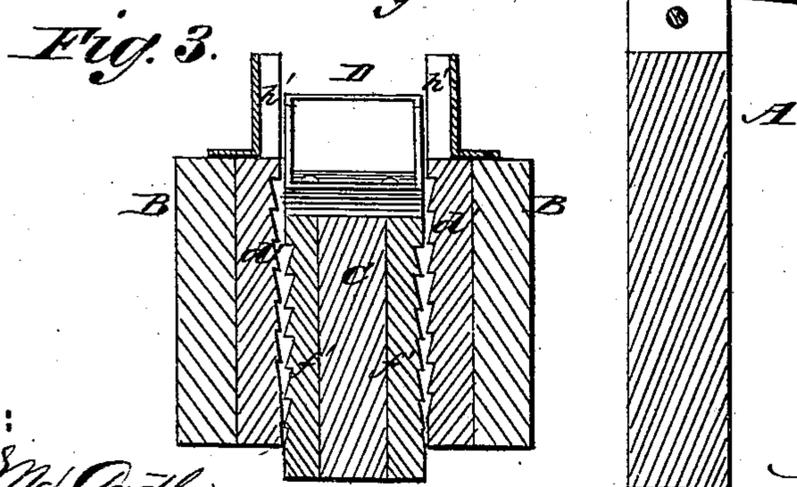
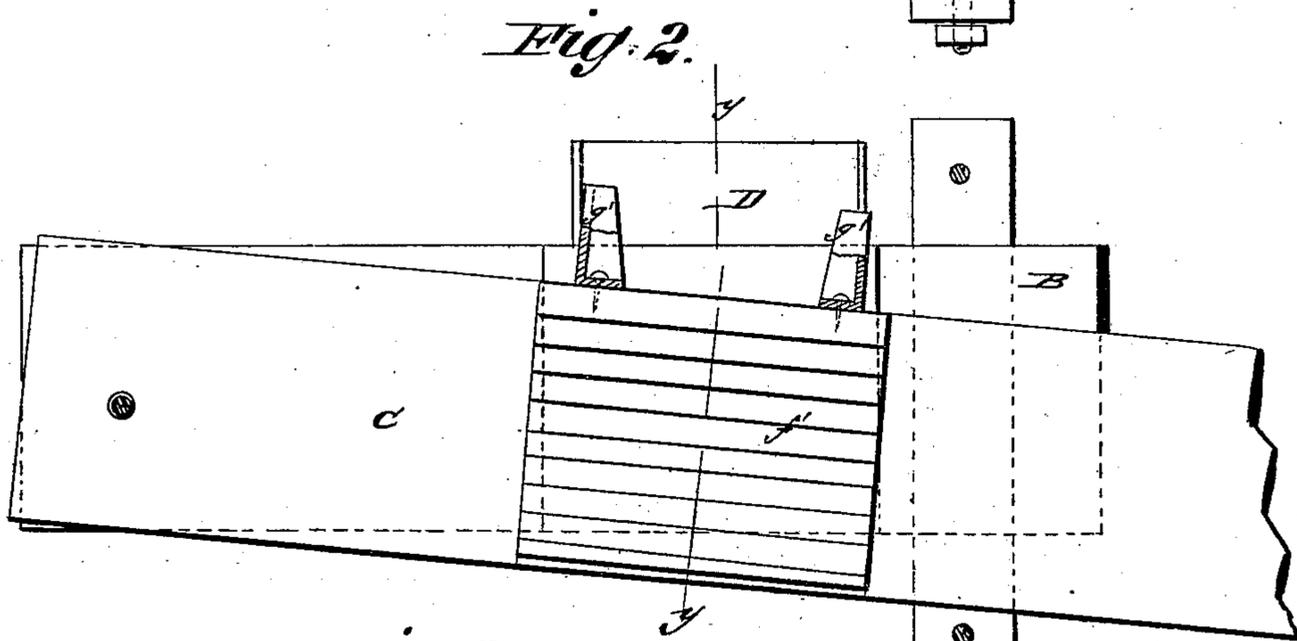
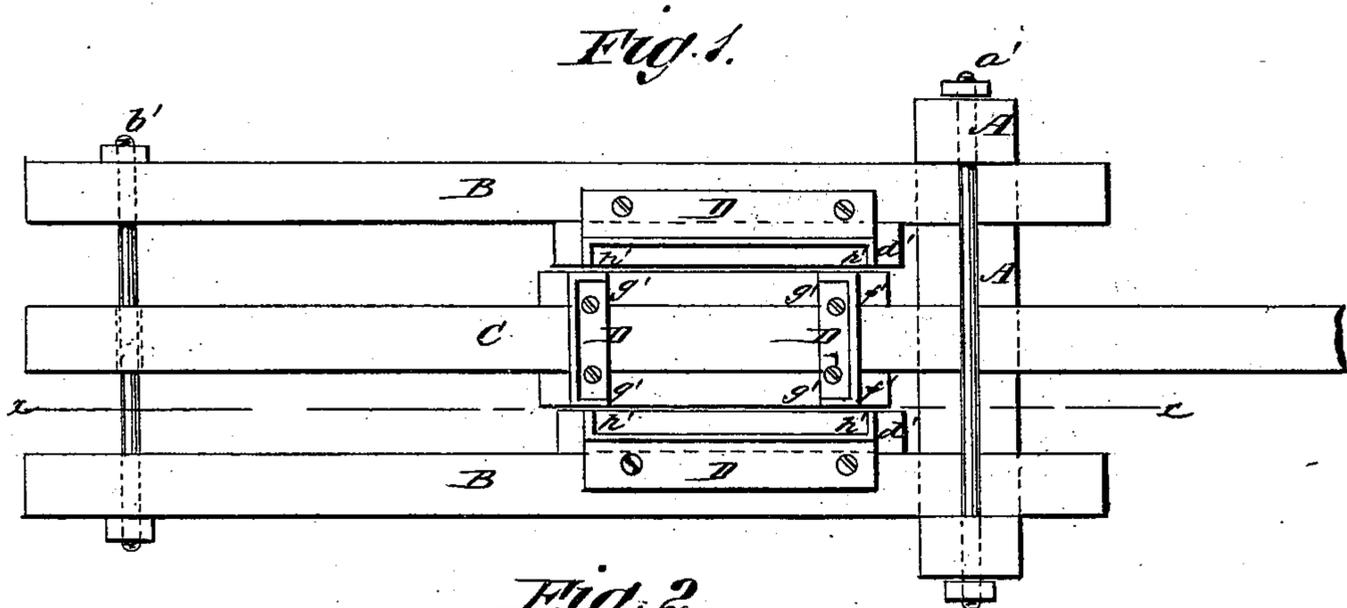


G. METCALF.
Hopper for Feed-Grinders.

No. 226,337.

Patented April 6, 1880.



WITNESSES:

Francis McChale
C. Sedgwick

INVENTOR:

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BY *Mitchell & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE METCALF, OF LELAND, ASSIGNOR TO HIMSELF AND SENECA
CULVER, OF SANDWICH, ILLINOIS.

HOPPER FOR FEED-GRINDERS.

SPECIFICATION forming part of Letters Patent No. 226,337, dated April 6, 1880.

Application filed August 9, 1879.

To all whom it may concern:

Be it known that I, GEORGE METCALF, of Leland, in the county of La Salle and State of Illinois, have invented a new and Improved Feed-Grinder, of which the following is a specification.

Figure 1 is a plan of the grinder. Fig. 2 is a sectional side elevation on line *x x*. Fig. 3 is a sectional end elevation on line *y y*.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a cheap and simple machine for grinding feed for cattle, horses, &c., that is designed more particularly to be operated by windmills having a crank motion.

A is a standard that supports the two stout timbers B B, that constitute the frame-work of the machine. At one end of the machine these timbers and the vertical beams of the standard are bolted firmly together by the bolt *a'*, and at the other end the side pieces of the frame are held by bolt *b'*, on which the lever C is pivoted. Secured to the inner faces of the side pieces, B B, are the corrugated or grooved grinding-plates *d' d'*, while on either side of the lever corresponding grinding-plates *f' f'* are fastened. Immediately over these plates, and large enough to cover them, is a hopper or box, D, for the reception of the feed to be ground. A side of the box is attached

in an upright position to each side piece, B B, while the ends are secured in proper position on the lever C. The ends of the box-sides and the ends of its ends are turned inward at right angles, as shown at *g' g'* and *h' h'*, so as to better hold the grain in the box or hopper while the machine is in operation.

Preferably the grain is fed into the machine through a tube leading from a hopper at a higher elevation, in order to prevent as much as possible loss of grain through the corners of the hopper D.

When the machine is in operation the grain or feed put into the hopper falls between the lever grinding-plates and the side grinding-plates, and is crushed and ground between them by the up-and-down reciprocating motion of the lever, discharging finally into any receptacle placed under the machine.

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

The combination, with frame B and lever C, of the hopper D, having the ends of the ends and sides turned inward at *g' h'*, as and for the purpose specified.

GEORGE METCALF.

Witnesses:

E. M. KINNE,
Mrs. L. KINNE.