

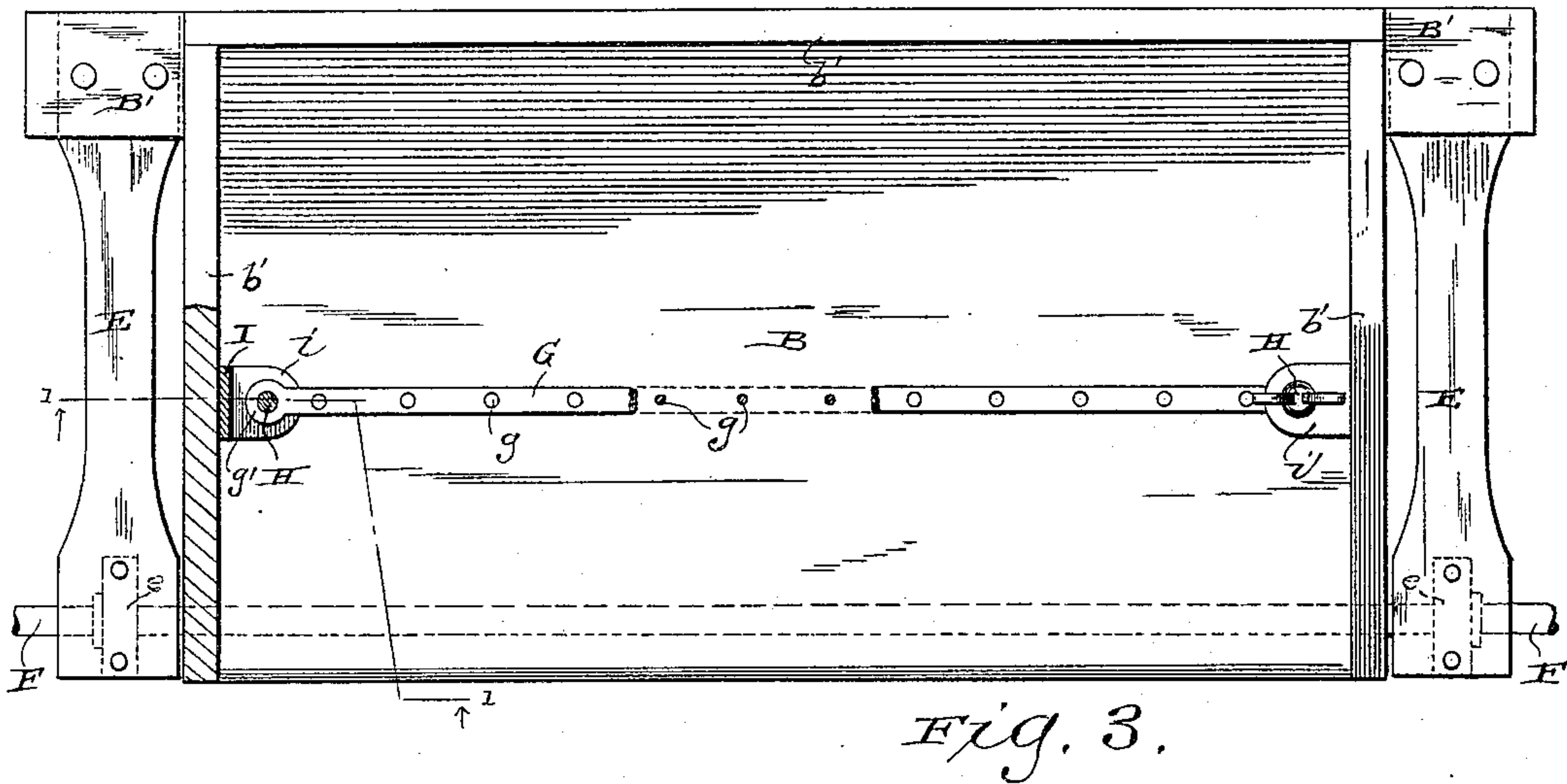
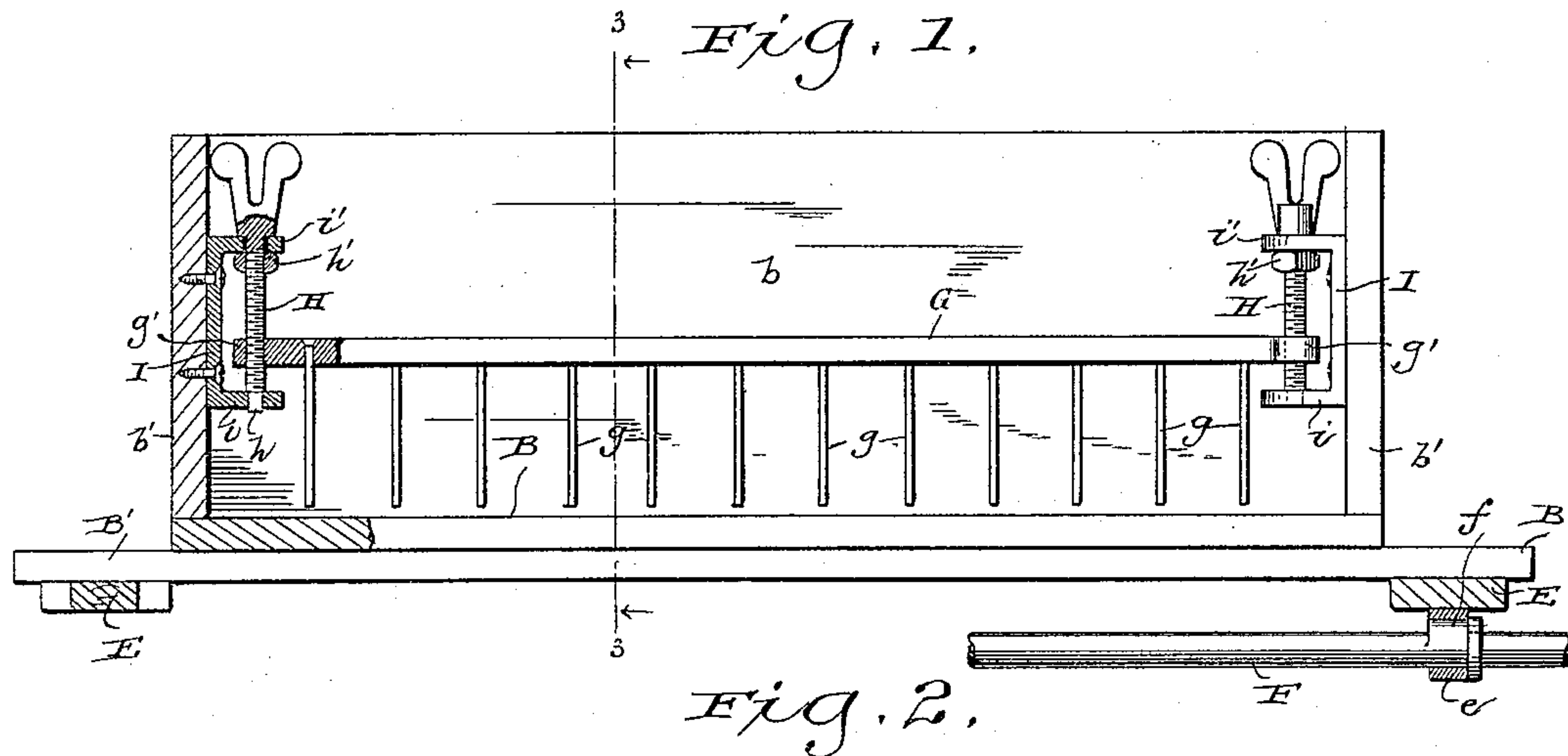
(No Model.)

C. A. COREY.

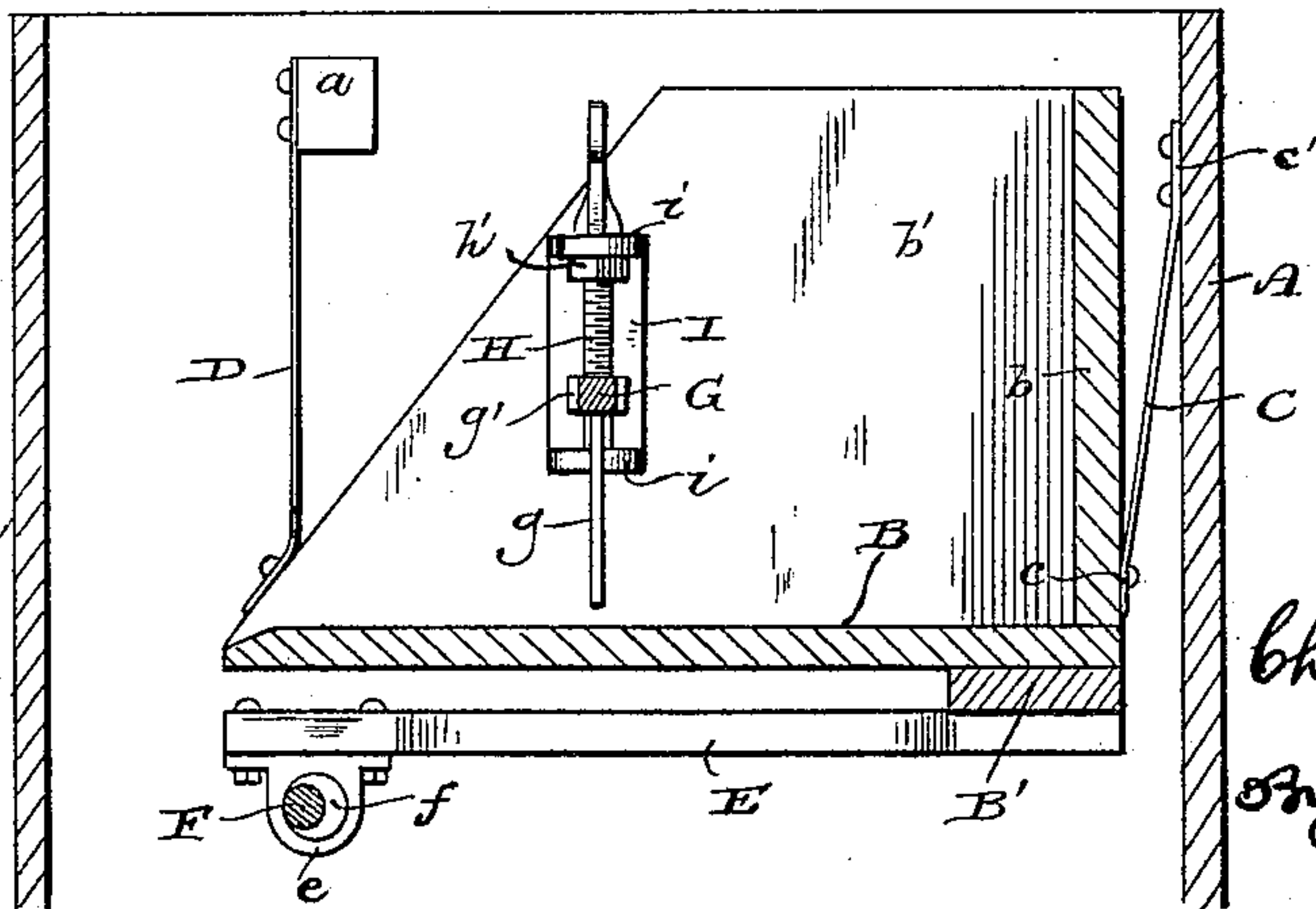
FEED REGULATOR FOR ROLLER MILLS, &c.

No. 448,853.

Patented Mar. 24, 1891.



Witnesses
Geo. W. Young.
Lawson Scott



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UNITED STATES PATENT OFFICE.

CHARLES A. COREY, OF WATERTOWN, WISCONSIN.

FEED-REGULATOR FOR ROLLER-MILLS, &c.

SPECIFICATION forming part of Letters Patent No. 448,853, dated March 24, 1891.

Application filed August 23, 1890. Serial No. 362,806. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. COREY, of Watertown, in the county of Jefferson, and in the State of Wisconsin, have invented certain new and useful Improvements in Feed-Regulators for Roller-Mills, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to appliances used in mills for grinding grain by the roller process; and my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described, and pointed out in the appended claims.

In the drawings, Figure 1 is a front elevation of my improved spreader, a portion of the spreader being in irregular vertical section on the line 1 1 of Fig. 2. Fig. 2 is a plan view of the same. Fig. 3 is a transverse vertical section of the same on the line 3 3 of Fig. 1.

In the roller-mills for grinding grain great difficulty has been experienced in securing an even distribution of the grain throughout the contact-surfaces of the rolls, so as to insure a uniform feed and homogeneous product from the rolls. The irregular feeding has caused a considerable percentage of stock to pass through the rolls either wholly unground or only partially ground, and this has necessitated regrinding or has lowered the grade of the product. The object of my invention is to overcome these defects, and this result I accomplish by virtue of the mechanism which I will now proceed to describe.

Referring to Fig. 3 of the drawings, A designates a portion of a chute or hopper, into which the grain is fed by any suitable means. Within this hopper is placed the shaker B, which is preferably of oblong rectangular form, as shown, and which is constructed with a back *b* and end pieces *b'*, sloping down to the front edge of the bottom of the shaker, the front of the receptacle being entirely open. This shaker is supported at its back by one or more flexible or resilient hangers C, the lower end of each hanger being bolted or otherwise secured to the lower part of the back *b* of the shaker, and the upper part of said hanger being similarly secured to the inner side of the back of the hopper A above

the point of attachment *c*. The ends of the shaker are supported by flexible or resilient hangers D, each of which is bolted or similarly secured to the inner side of one end of the hopper, preferably to an inward projection *a* thereof. The lower end of each of these hangers D is bolted or similarly secured, preferably, to the lower part of the sloping edge of the adjacent end piece *b'* of the shaker. Extending longitudinally of this shaker, and secured beneath the rear part of its bottom, is a bar *B'*, the ends of which protrude beyond the ends of the shaker, and to each of these protruding ends is bolted or otherwise suitably secured one end of a link E, the opposite end of which carries on its under side a strap *e*. A shaft F extends across the hopper or chute A and longitudinally beneath the shaker B, and this shaft carries two eccentrics *f*, which work within the straps *e*, before referred to.

It will be seen that as the shaft F is rotated (by a belt, pulley, or other equivalent means) a rapid forward and rearward reciprocation will be imparted to the shaker, so that the grain, rebounding from the back *b* of the shaker, will be fed out over its front edge.

In order to render the feed of the grain uniform throughout the length of the shaker B, I provide the latter with a longitudinal spreader. This spreader consists of a long bar G, provided with a suitable number of teeth or fingers *g* pendent at its under side and disposed in a row extending longitudinally of the bar. The ends of this bar are provided with internally-screw-threaded ends *g'* to embrace adjusting-screws H, which latter are mounted in vertical U-shaped brackets I, bolted or otherwise suitably secured to the inner sides of the ends *b'* of shaker B. The lower ends *h* of these screws are reduced to enter openings or sockets in the lower arms *i* of the brackets I, while the upper ends of the screws work through the upper arms *i'* of said brackets, clamping-nuts *h'* being provided to hold the screws in their required position. Thus it will be seen that as the mass of grain moves toward the front of the shaker, as above described, the fingers *g* will subdivide it, so that it will be spread uniformly along the front of the shaker, and thus be fed evenly

to the rolls. It will also be seen that by turning the screws H one way or the other the spreader can be raised or lowered to accord with the amount of grain passing through the shaker.

It is obvious that one of these devices can be placed after the first set of rollers only, or one between each successive set of rollers, as may be found expedient; but it is preferably placed after the first rolls, so as to work on the product of the first break-stock. The device works also advantageously on the second break, third break, and fourth and fifth break or bran rolls, as well as on any mill stock. The shaker is preferably inclined downward from back to front, so as to facilitate the travel of the grain or stock toward the spreader.

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

1. The combination, with a shaker having

an open front and an actuating eccentric shaft for said shaker, of brackets carried by the shaker, a spreader-bar provided with spreader fingers or teeth, and adjusting-screws working in said brackets and threaded through said bar, substantially as set forth.

2. An improved feed-regulator for roller-mills, &c., comprising a reciprocatory shaker and a spreader consisting of a fingered bar adjustably connected at its ends to the ends of the shaker, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at the city of Wauwatertown, in the county of Jefferson and State of Wisconsin, in the presence of two witnesses.

CHARLES A. COREY.

Witnesses:

JOHN G. CONWAY,

J. B. BEYXON.