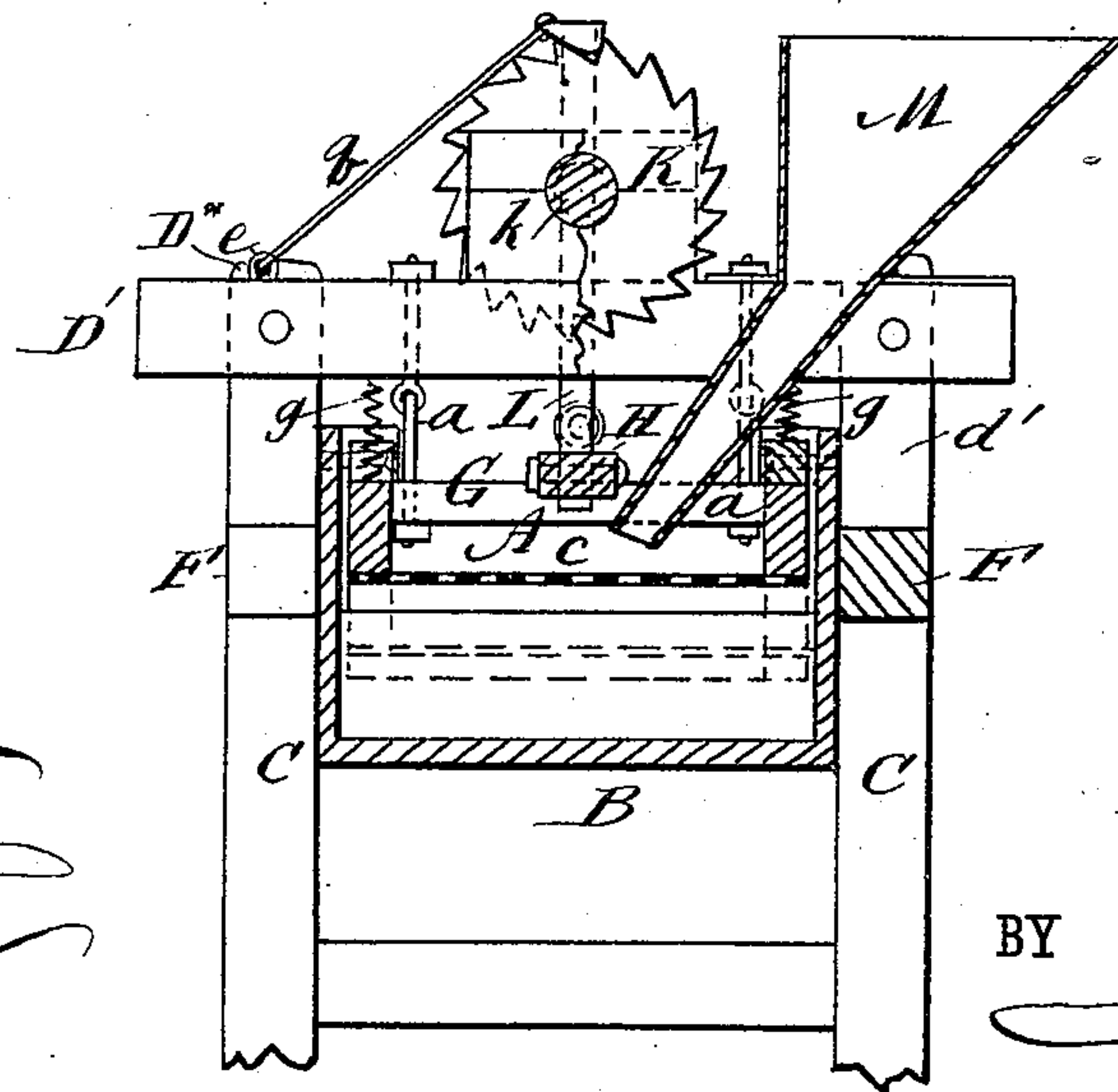
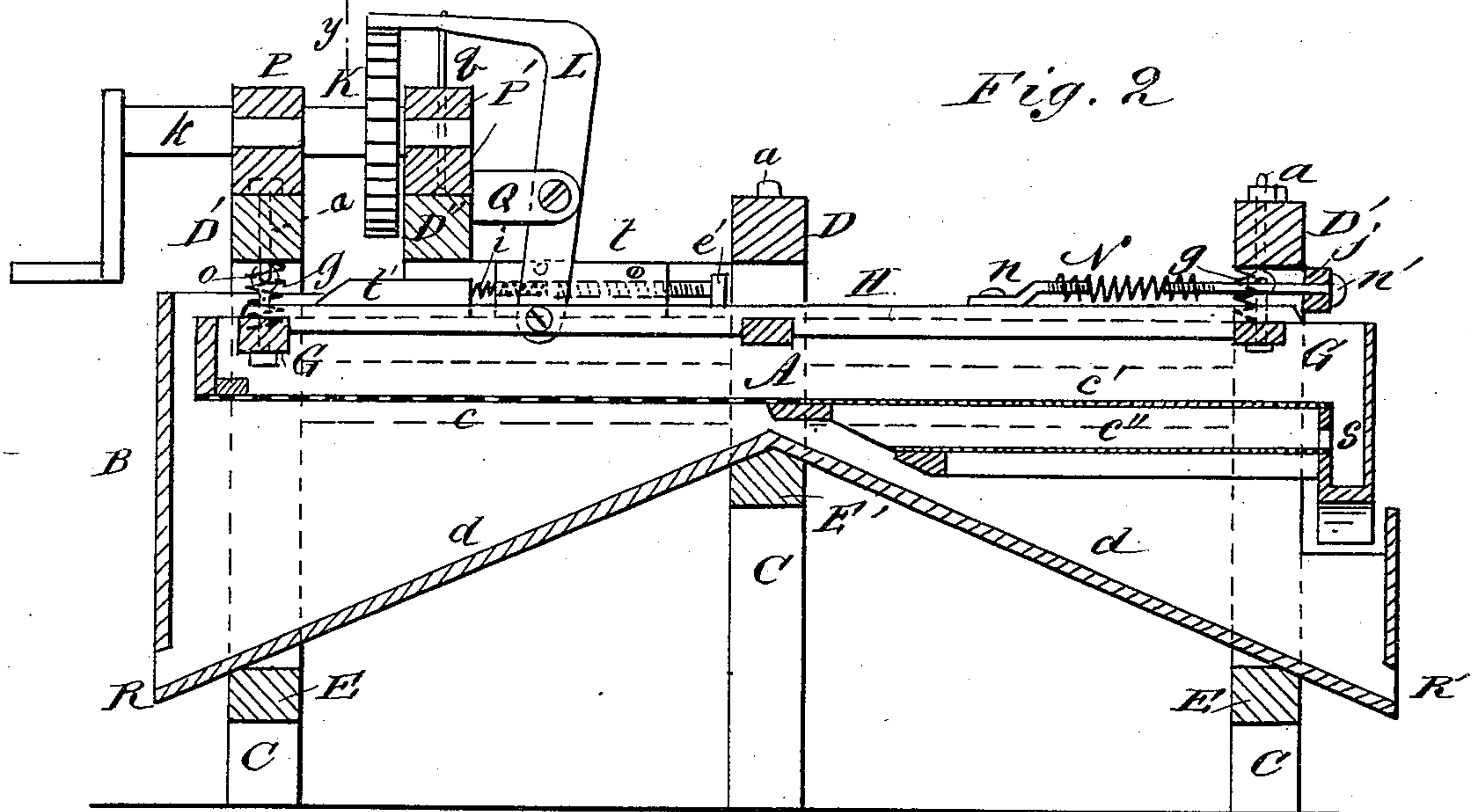
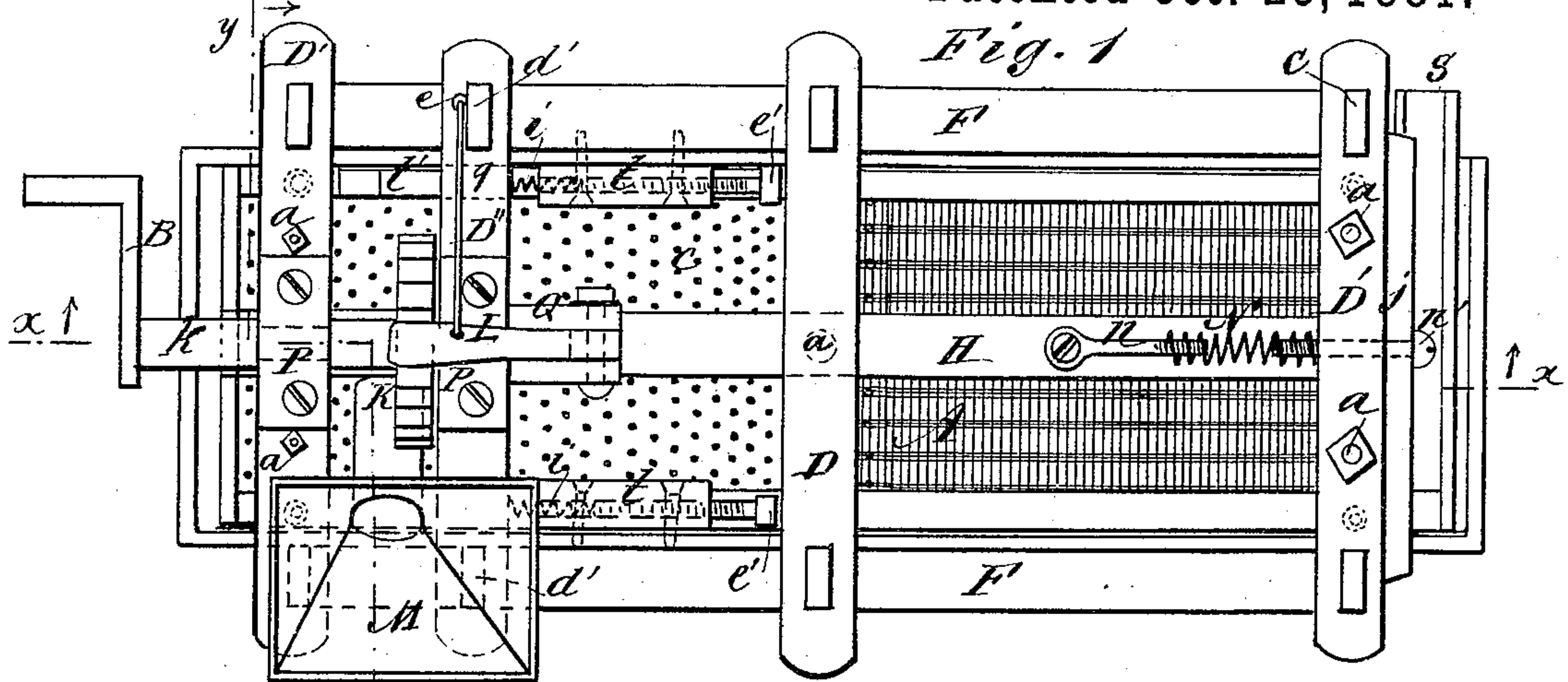


(Model.)

G. BEAL.
FLAXSEED CLEANER.

No. 248,693.

Patented Oct. 25, 1881.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE BEAL, OF GILMAN, IOWA.

FLAXSEED-CLEANER.

SPECIFICATION forming part of Letters Patent No. 248,693, dated October 25, 1881.

Application filed May 12, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEORGE BEAL, of Gilman, Marshall county, Iowa, have invented a new and Improved Flaxseed-Cleaner, of which the following is a specification.

The object of my invention is to provide a machine which will thoroughly separate flaxseed from the chaff, screenings, and other impurities and produce a clean and pure product.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a longitudinal section taken on line *x x*, Fig. 1; and Fig. 3 is a cross-section taken on the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The screen *A* is suspended from the upper cross-bars of the frame in nearly a horizontal position within the box *B*, which box is secured to or formed in the frame, which latter is composed of the uprights *C*, upper cross-bars, *D D'*, horizontal bars *F F*, lower cross-bars, *E* and *E'*, the cross-bar *E'* being elevated, as shown, to support the joined ends of the inclined bottom boards, *d d*, of the box. The links *a a*, by which the screen is suspended from the upper cross-bars, *D'*, pass through the cross-bars *G G*, which are secured to the frame of the screen near the ends thereof, and the links are provided above the cross-bars *D'* and below the bars *G G* with suitable screw-nuts for regulating the slant of the screen; and between the cross-bars *D' D'* and *G G* are placed the springs *g g* at the four corners of the screen, which hold the screen firmly against any vertical movement which would cause an undesirable jumping action to be given to the grain. In some instances blocks of wood may be used in place of the springs.

Longitudinally across the center of the screen, and secured at its ends to the centers of the cross-pieces *G G*, is the bar *H*, through which motion is imparted to the screen by means of the wiper-wheel *K* and angle-lever *L* (the lower end of which lever is pivoted in a slot in the bar *H*) and the spring *N*, which is placed upon and secured to the bent rod *n*, screwed to the bar, and the rod *n'*, which passes through the cross-head *j*, which abuts against the outside of the uprights *C C* at the end of the frame. The

crank-shaft *k*, upon which the wiper-wheel *K* is secured, has its bearings in the blocks *P P'*. The block *P* is bolted to the end cross-piece, *D'*, of the frame, and the block *P'* is bolted upon the cross-piece *D''*, which is supported at ends upon the upright studs *d' d'*, which rise from the longitudinal side bars, *F F*, of the frame.

To the side of the cross-bar *D''* is secured the horizontal bifurcated arm *Q*, in which the lever *L* is fulcrumed. The upper end of this lever is held against lateral movement from frictional contact with the wheel *K* by the rod *q*, which is secured to the lever and to the eye *e* on the cross-piece *D''*, as shown, and the upper end of the lever is held in constant contact with the wiper-wheel by the action of the spring *N*, so that upon motion being imparted to the wheel *K* the projections thereon will give to the screen sudden and rapid longitudinal jerking and shaking movements.

In order to obviate any jarring action due to too sudden stopping of the screen, which would cause the screen to throw up or toss the grain, I provide the spring or rubber (preferably rubber) bumpers *i i*, which are placed in holes through the blocks *t t*, secured to the sides of the box, so as to nearly come in contact with the projections *t' t'*, secured to upper edges of the screen-frame, as shown. These springs or rubber bumpers are adjustable in the blocks by means of the rods *e' e'*, which screw into the blocks for the purpose of regulating the action of the screen, and also for regulating the feed of the grain from the mouth of the hopper *M*, which is held in close proximity to the screen.

The hopper is supported in a board or plate placed upon the cross-pieces *D'* and *D''* and near the forward end of the screen. That portion of the screen *c* which is near the hopper is of perforated sheet metal, while the screens *c' c''* are of woven wire.

In operation, the seeds to be cleaned being fed to the hopper and motion given to the wheel *K* by any power applied to the crank or pulley, the screen will be given a rapid, sudden, but still an easy longitudinal back-and-forward motion, which will cause the small seeds—such as mustard and foxtail seeds—and the other small impurities to pass out the opening *R* of

the box, and cause the material to slowly traverse the screens, the screenings and the other impurities passing out the spout S of the screen-frame, the pure flaxseed passing out at the opening R' of the box.

It will be understood that a body of the material being separated will be maintained upon the screens or sieves. By adjusting the rubber bumpers the depth of this body can be regulated—that is to say, by forcing the rubber farther out of the blocks the discharge of screenings will, as the rearward impulse of the screen is retarded a greater distance, not be so rapid, and by withdrawing the screws the discharge will be more rapid.

The rapidity of the feed from the hopper will always be in accordance with that of the discharge. The rearward movement of the screen is somewhat retarded by the rubber bumper, while the forward movement is not retarded. This slow rearward and sudden forward motion tends to maintain a body of material upon the screen, which banks around the discharge-pipe from the hopper and prevents the flow of material, except as fast as the same passes off from

the screen; so a uniform depth of the material upon the screen can be accurately maintained, which is of great advantage.

Though I have described my invention as applicable for cleaning flaxseed, it is obvious that by changing the screen to suit it can be used for cleaning other seeds and grain with equal efficiency.

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

1. The combination, with the screen A, of the lever L and wiper-wheel K, the latter arranged in a plane at right angles to the horizontal part of said lever, as shown and described, whereby the screen is given a peculiar lateral as well as a longitudinal movement.

2. The rod q, the wiper-wheel K, and spring N, combined with the lever L, to hold the latter in contact with the wiper-wheel without allowing any lateral movement to said lever, as described.

GEORGE BEAL.

Witnesses:

A. W. PATTERSON,
JOHN O. HARRISON.