

(No Model.)

W. W. HUNTLEY.

FEED DEVICE FOR GRAIN CLEANING MACHINES, ROLLER MILLS, &c.

No. 447,072.

Patented Feb. 24, 1891.

Fig. 1.

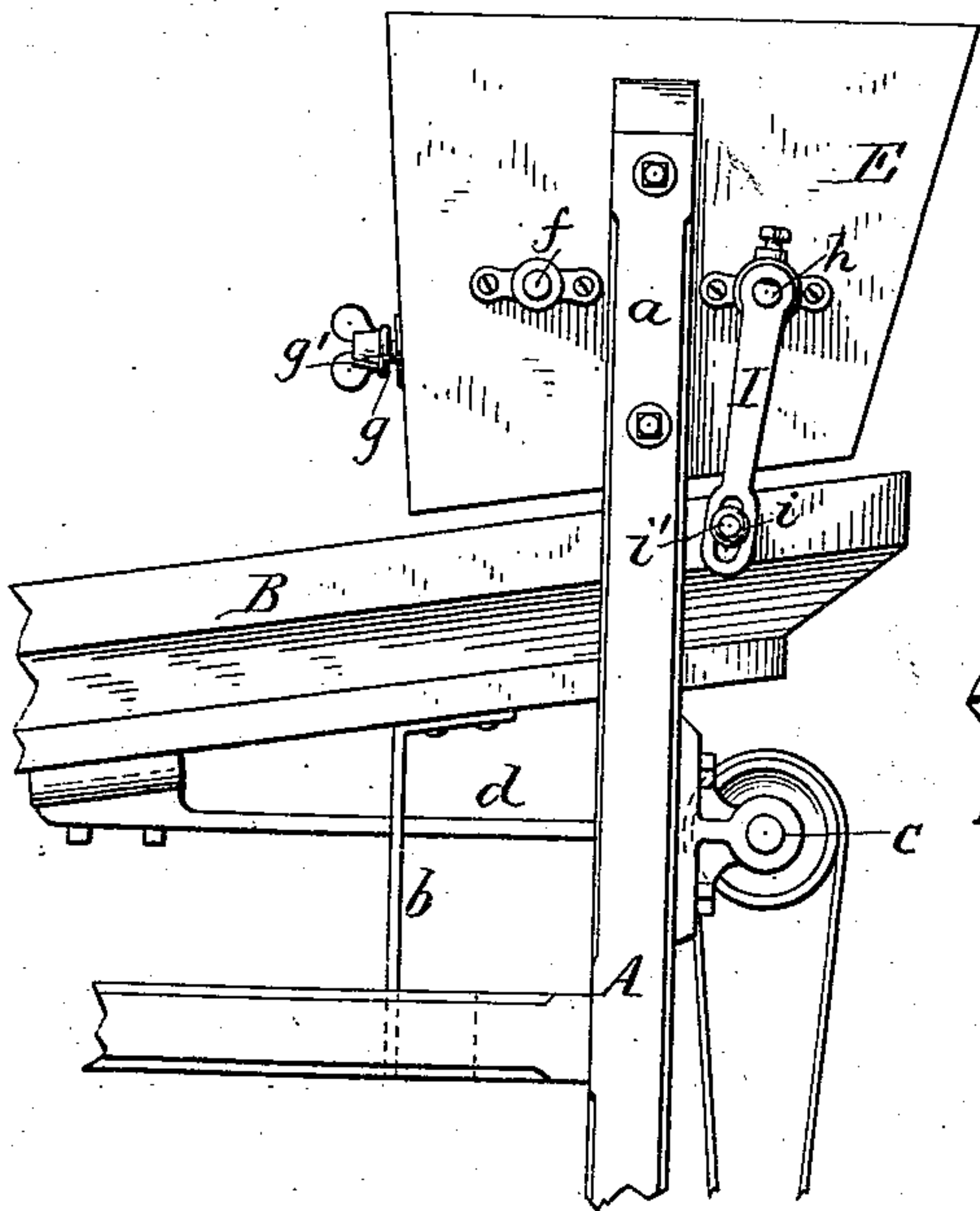


Fig. 2. \times

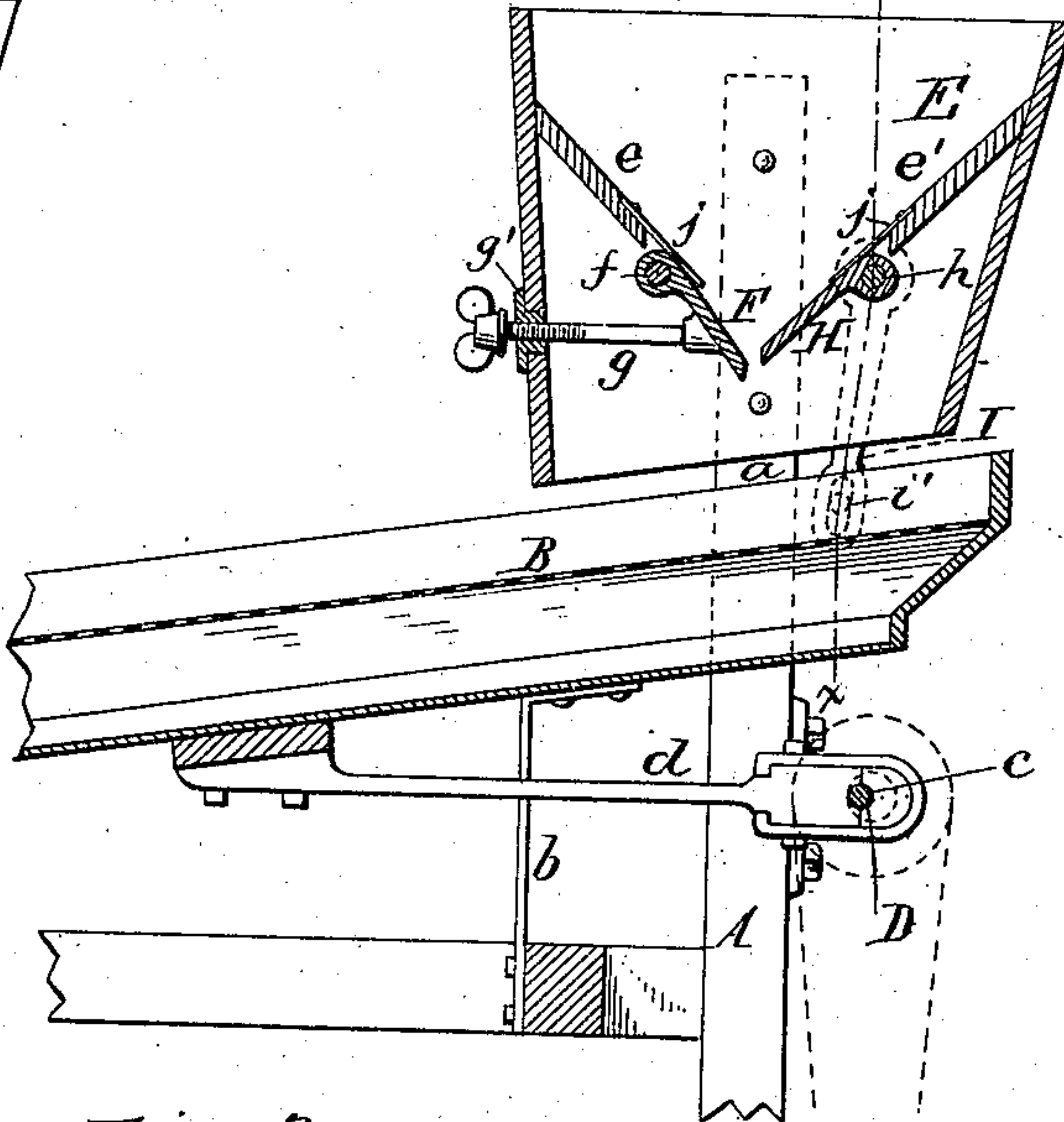


Fig. 3.

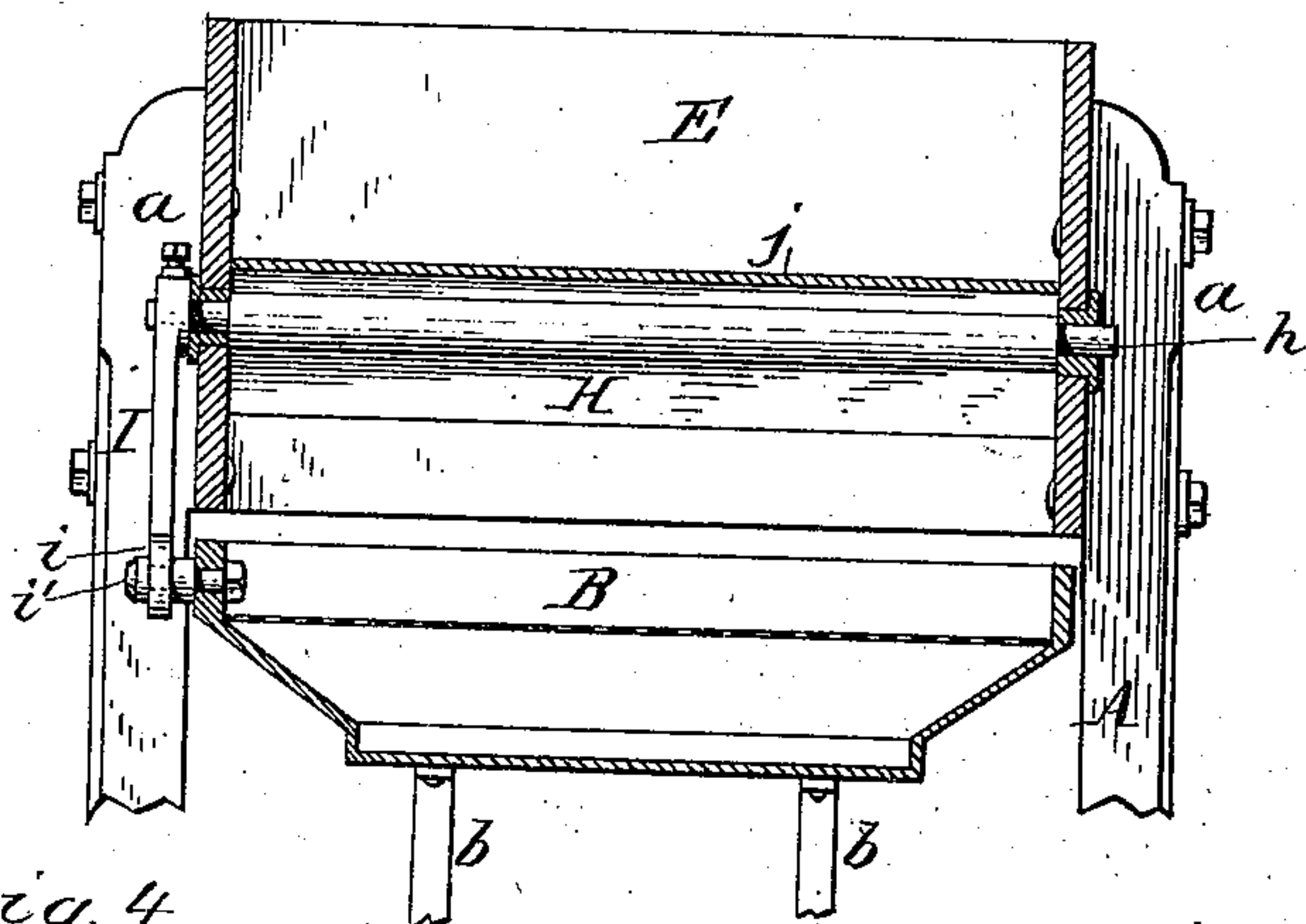


Fig. 4.

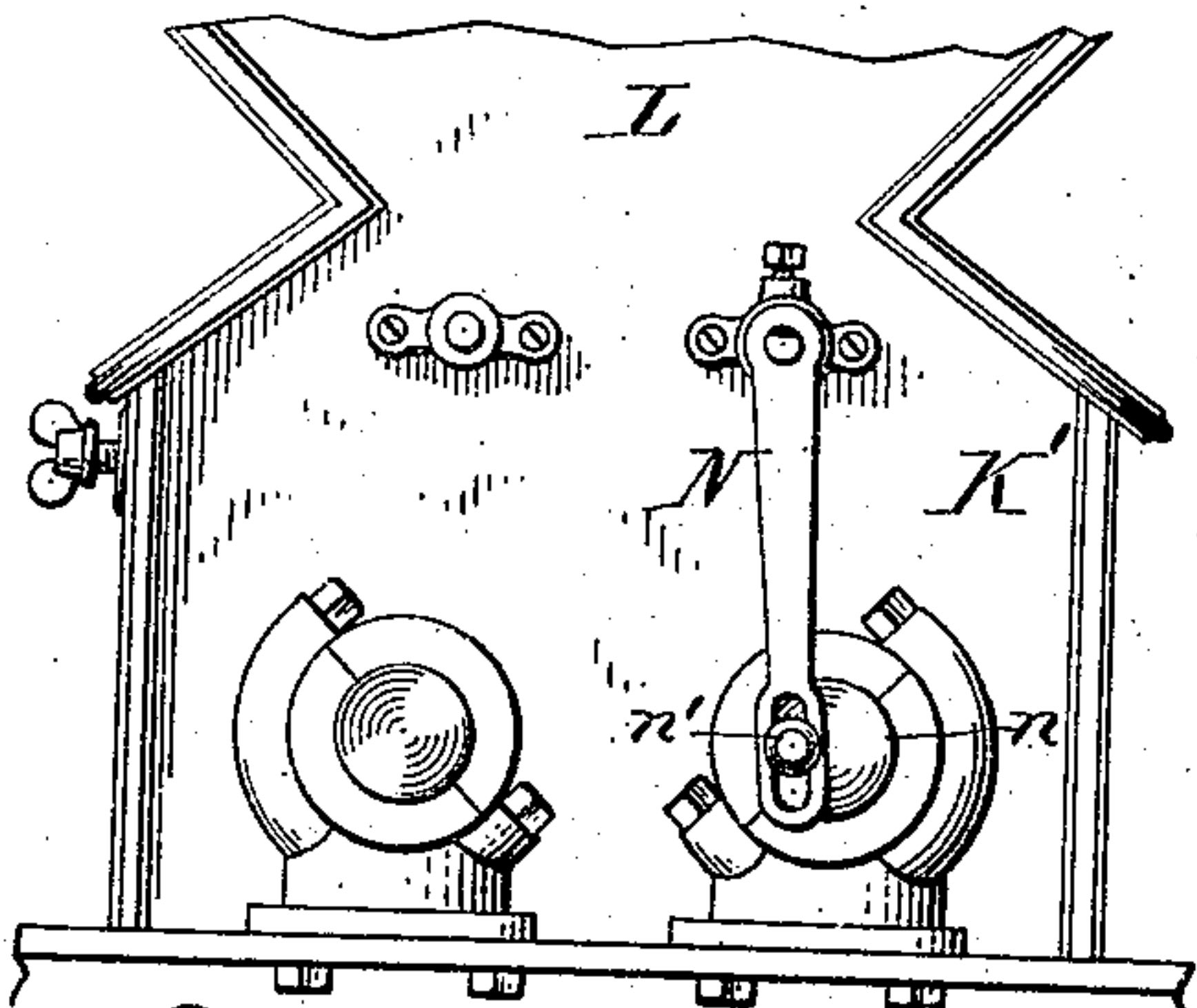
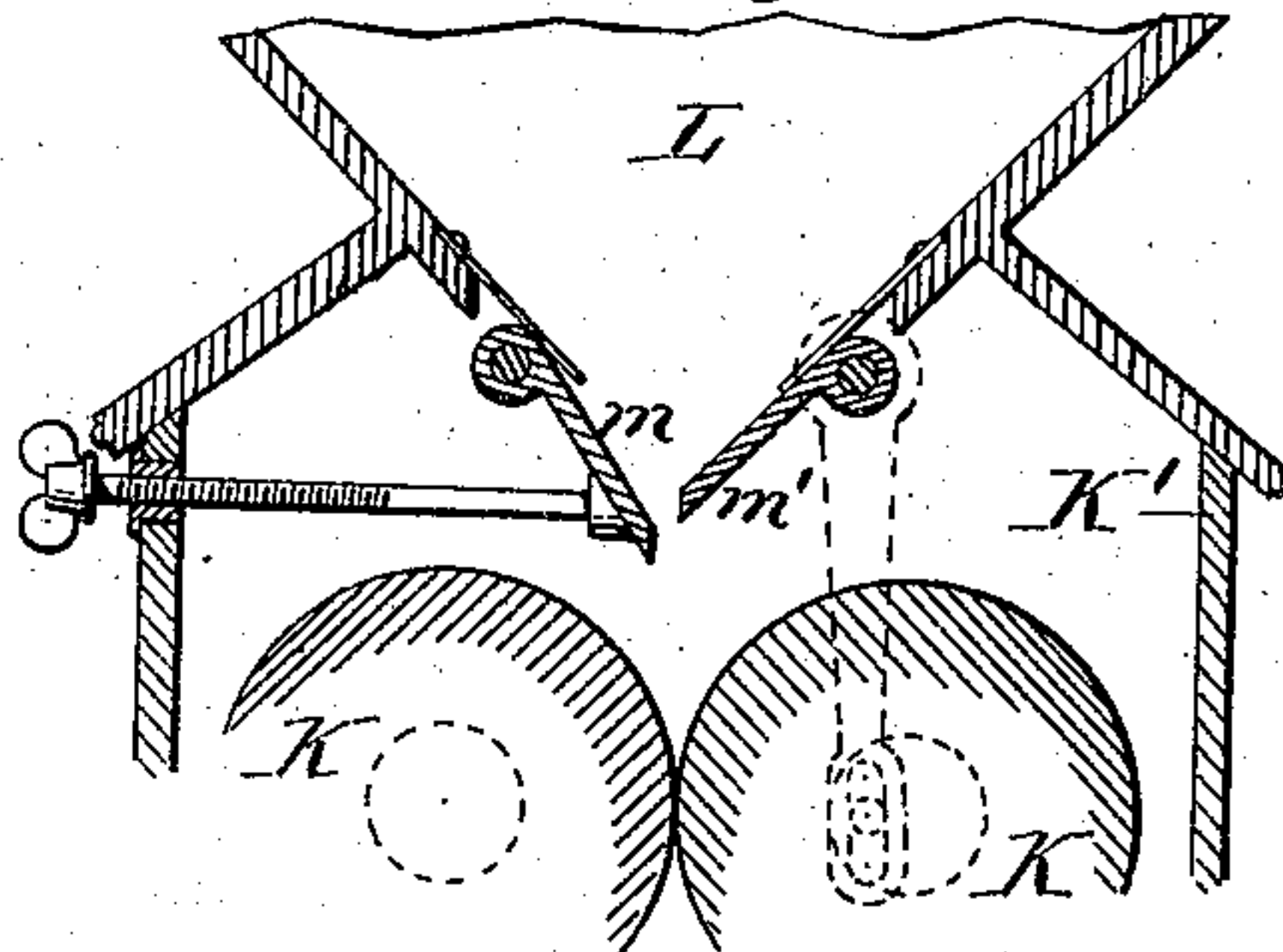


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM W. HUNTLEY, OF SILVER CREEK, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HUNTLEY, CRANSON & HAMMOND, OF SAME PLACE.

FEED DEVICE FOR GRAIN-CLEANING MACHINES, ROLLER-MILLS, &c.

SPECIFICATION forming part of Letters Patent No. 447,072, dated February 24, 1891.

Application filed October 22, 1887. Serial No. 253,056. (No model.)

To all whom it may concern.

Be it known that I, WILLIAM W. HUNTLEY, of Silver Creek, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Feed Devices for Grain-Cleaning Machines, Grinding-Mills, &c., of which the following is a specification.

This invention relates to an improvement in that class of feed devices which are applicable to grain-scourers, grain-separators, grinding-mills, and similar machines, and which contain adjustable feed-plates, whereby the material is caused to flow uniformly throughout the entire width of the discharge-opening or throat of the feed-hopper.

The object of my invention is to construct a simple device of this character; and the invention consists in the improvements which will be hereinafter fully described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation showing my improved feed device applied to the shaking-screen of a grain scourer or separator. Fig. 2 is a longitudinal sectional elevation thereof. Fig. 3 is a cross-section in line *x x*, Fig. 2. Fig. 4 is a fragmentary elevation of a roller-mill provided with my improved feed device. Fig. 5 is a fragmentary sectional elevation thereof.

Like letters of reference refer to like parts in the several figures.

A represents the stationary frame of the grain scourer or separator, and B is the shaking screen or sieve, which is supported by flexible bars *b* in the usual manner. The shaking-screen receives a vibrating motion from a horizontal shaft *c* by means of an eccentric D and a connecting-rod *d*.

E represents the feed-hopper, arranged above the head of the shaking-screen B and secured to two posts *a* of the supporting-frame A. The bottom of the hopper E is formed by two inclined stationary feed-boards *e e'*.

F represents an adjustable feed-gate arranged below the stationary feed-board *e*, and whereby the throat of the hopper can be enlarged and contracted to regulate the feed. The feed-gate F is mounted upon a horizontal shaft *f*, which is journaled in suitable bear-

ings arranged in the side walls of the hopper E.

g represents an adjusting-screw bearing with its inner end against the feed-gate F, and working in a screw-nut *g'*, secured to the feed-hopper.

H represents an oscillating feed board or plate arranged below the stationary feed-board *e'* of the hopper and standing opposite the adjustable gate F. The feed-plate H oscillates or reciprocates vertically, as contradistinguished from the feed-plate, which vibrates transversely or horizontally in the hopper, so as to lift the material at each upward stroke and permit the same to descend on the downward stroke. This lifting of the material by the oscillating feed-plate keeps the material in constant agitation in the hopper, and breaks up any solid accumulations of material in the hopper, such as arches or bridges, thereby causing a uniform flow of material throughout the width of the feed-throat or discharge-opening of the hopper. The feed-gate F and oscillating plate H extend across the entire width of the hopper, and their lower ends form the throat thereof. The plate H is secured to a horizontal rock-shaft *h*, which is arranged in suitable bearings secured to the hopper E.

I represents a rock-arm secured to one end of the shaft *h*, and connected with its lower end to the shaking-screen B, so as to be actuated by the same. The rock-arm I is provided at its lower end with a slot or fork *i*, which engages with a pin *i'*, secured to the frame of the shaking-screen.

j represents plates or shields secured to the stationary boards *e e'*, and lapping over the feed-gate F and oscillating feed-plate H, so as to cover the spaces between these parts and prevent the material from escaping through the said spaces.

The feed is regulated by adjusting the gate F toward and from the oscillating plate by means of the screw *g*, and when it is desired to shut off the feed entirely the motion of the screen is arrested and the feed-gate adjusted, so that its lower end rests against the lower end of the oscillating plate.

In the construction represented in Figs. 4

and 5 my improved feed device is applied to a roller-mill.

K K represent the crushing-rollers, K' the inclosing casing, and L the feed-hopper.

5. *m* is the adjustable feed-gate, and *m'* the vertically-oscillating feed-plate. The rock-arm N is preferably actuated from the journal *n* of one of the rollers by a pin *n'*, arranged eccentrically upon the journal and
10 engaging in the slot of the rock-arm.

I claim as my invention—

- The combination, with a feed-hopper provided with inclined stationary feed-boards *e*
15 *e'*, of an adjustable feed-gate F, pivoted below the lower edge of the stationary feed-board *e*, a vertically-oscillating feed-board H, secured to a horizontal rock-shaft *f*, arranged below

the stationary feed-board *e'*, the feed-gate F and feed-board H, facing each other and forming continuations of the stationary feed-boards *e e'*, an adjusting-screw *g*, supporting the lower end of the feed-gate F, whereby the latter can be adjusted on its pivot for contracting or enlarging the throat of the hopper, and an actuating-arm I, secured to one
20 end of the rock-shaft *f*, for imparting to the feed-board H a vertically-oscillating movement, substantially as set forth.

Witness my hand this 11th day of October, 1887.

WILLIAM W. HUNTLEY.

Witnesses:

CHAS. H. STERLING,
H. W. REYNOLDS.