

No. 624,087.

Patented May 2, 1899.

E. M. PUMPHREY.

GRAIN SAVING ATTACHMENT FOR FEED BOXES.

(Application filed Oct. 21, 1898.)

(No Model.)

Fig. 1.

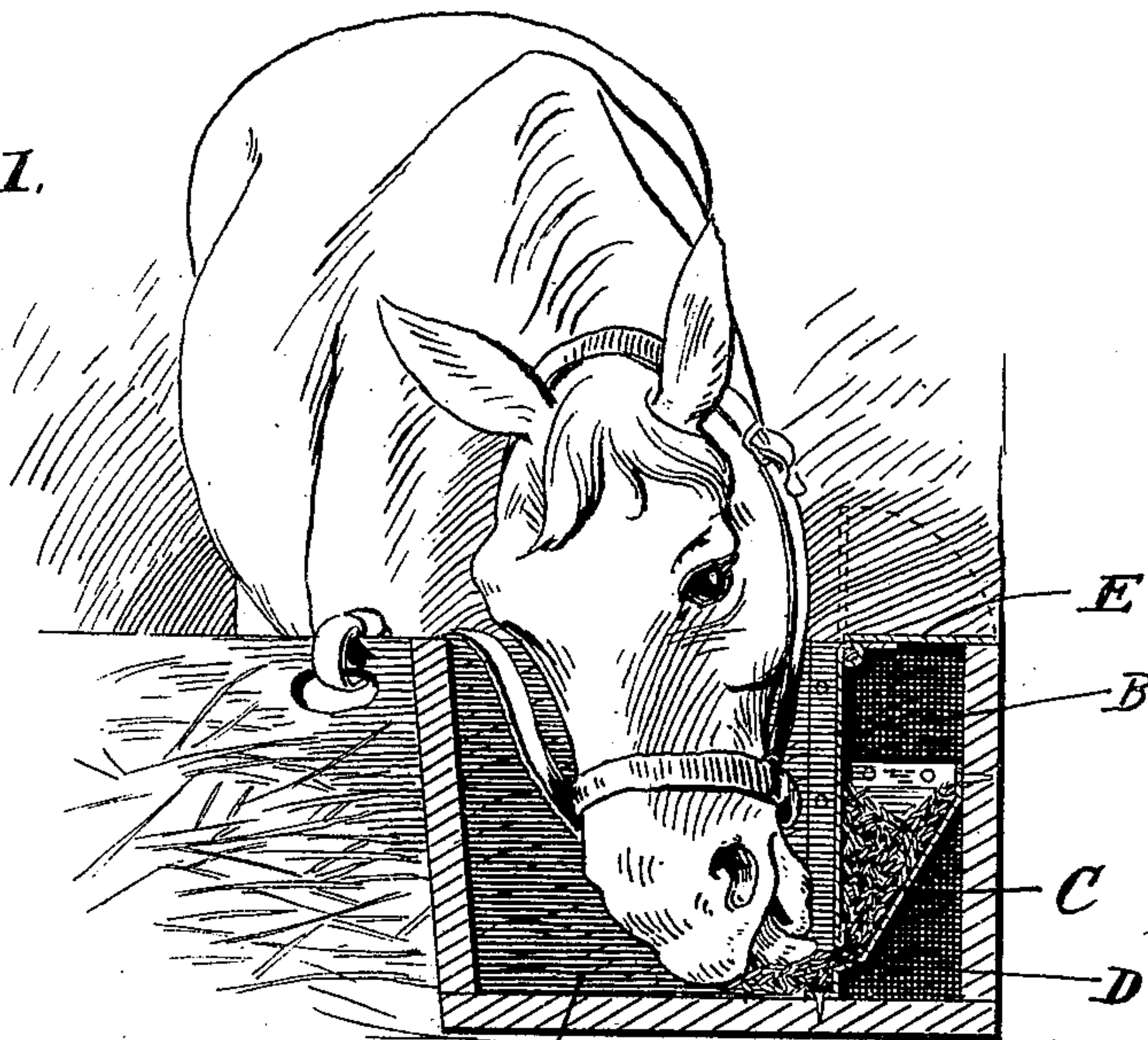


Fig. 2.

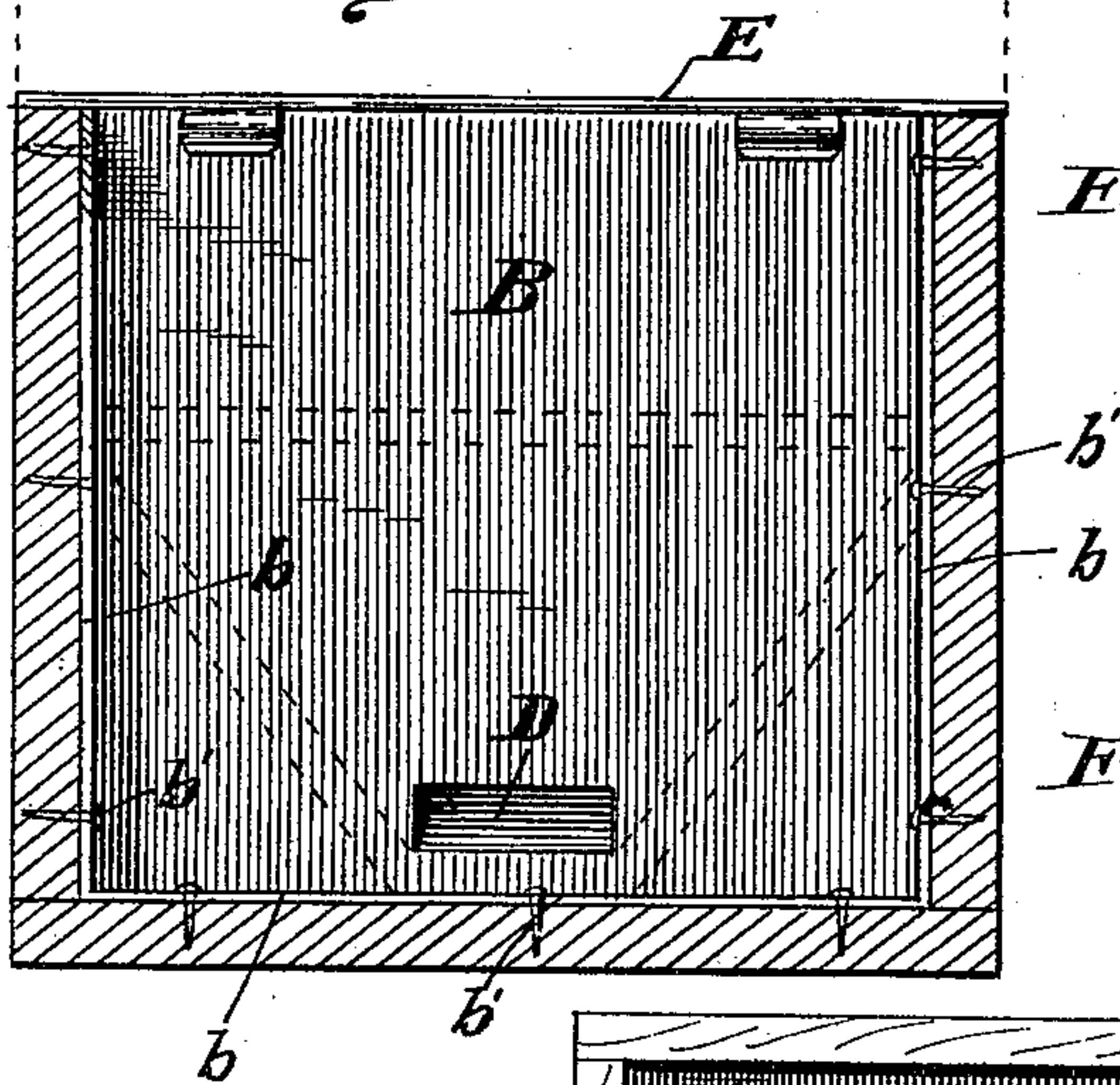


Fig. 3.

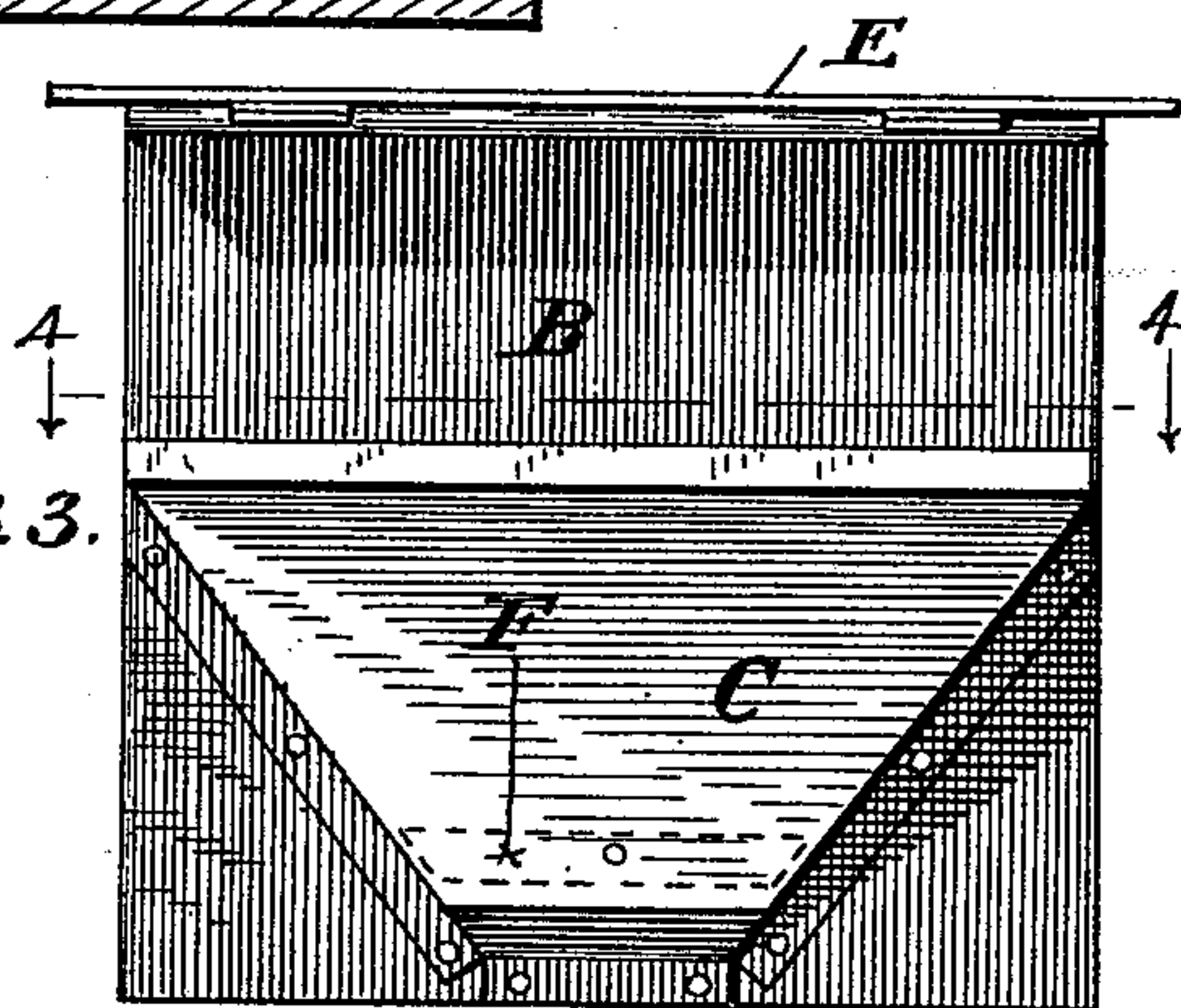


Fig. 4.

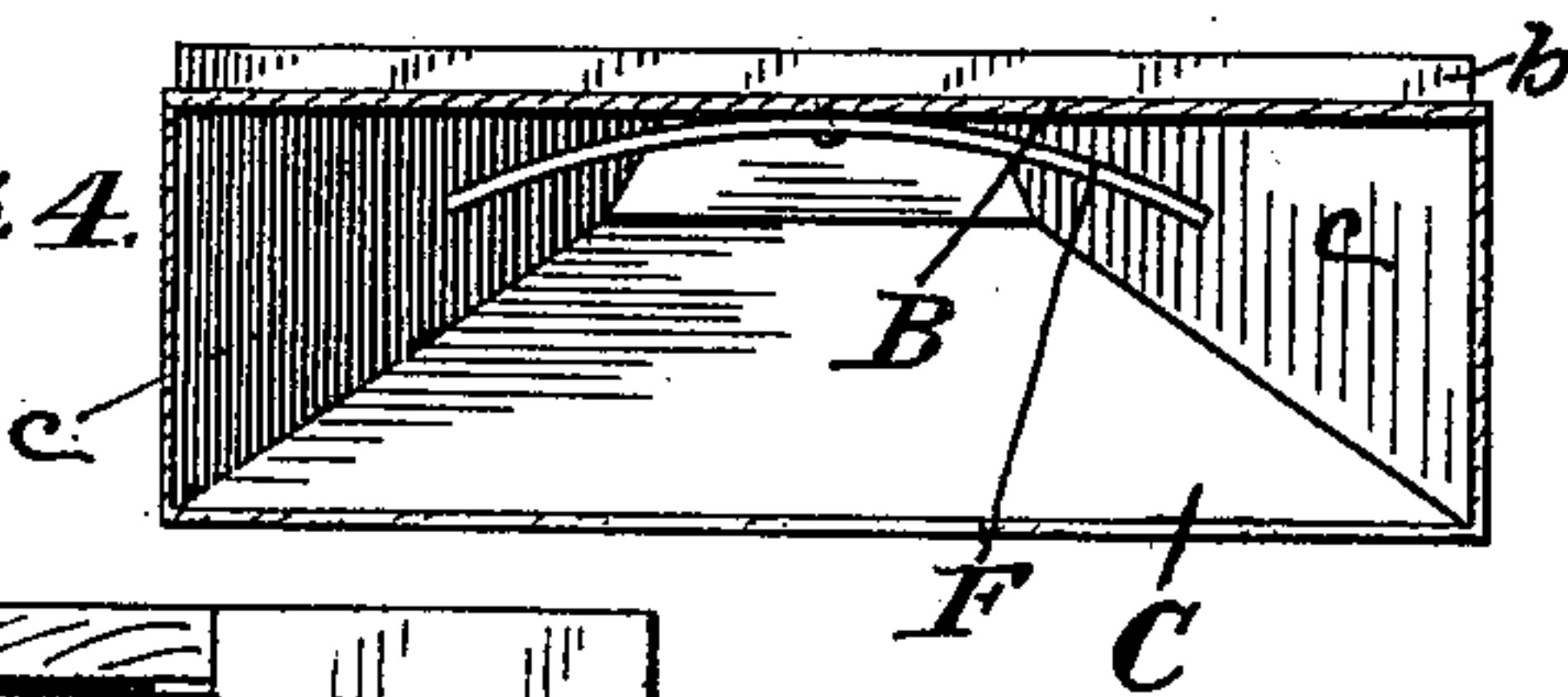
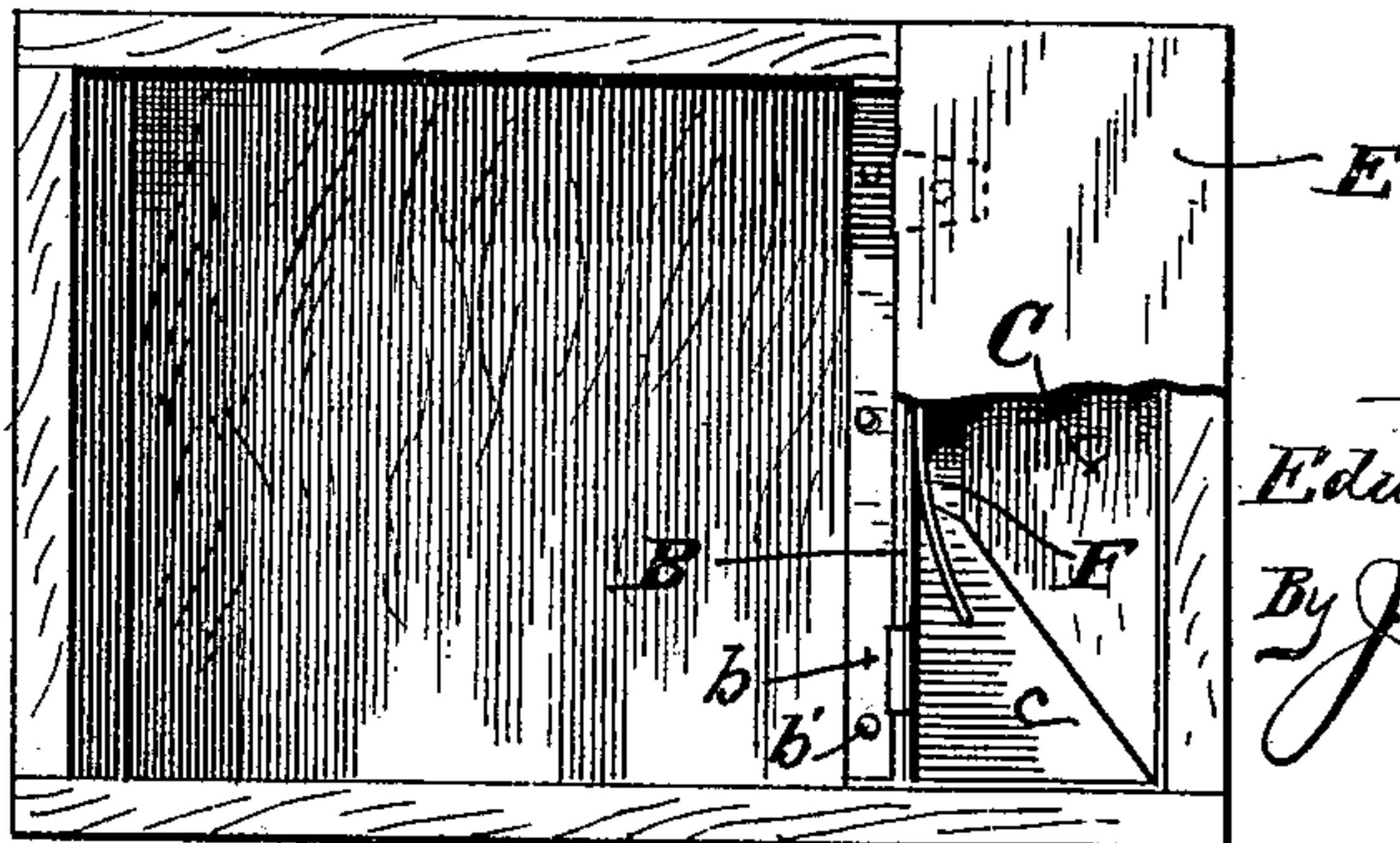


Fig. 5.



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# UNITED STATES PATENT OFFICE.

EDWARD M. PUMPHREY, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-THIRD TO THEODORE F. SMITHER, OF SAME PLACE.

## GRAIN-SAVING ATTACHMENT FOR FEED-BOXES.

SPECIFICATION forming part of Letters Patent No. 624,087, dated May 2, 1899.

Application filed October 21, 1898. Serial No. 694,180. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. PUMPHREY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Grain-Saving Attachments for Feed-Boxes, of which the following is a specification.

This invention relates to improvements in feed-boxes; and the object of the invention is to hold back the supply of oats, shelled corn, or the like and deliver it in small but regular quantities automatically to the feeding animal for the double purpose of preventing waste of feed by the latter and to compel the animal to eat slowly and more thoroughly masticate his food than he habitually does when allowed unrestricted access thereto.

The object also is to improve and simplify the mechanism of my feed-box in a manner which will be fully described, and pointed out in the claims.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a feed-box furnished with my invention and showing a horse in the act of eating out of said box; Fig. 2, a vertical section on the dotted line 2 2 of Fig. 1 looking in the direction of the arrows; Fig. 3, a rear side view of the metal partition and its attached hopper; Fig. 4, a vertical section on the dotted line 4 4 of Fig. 3 looking in the direction of the arrows; and Fig. 5, a plan view of a feed-box with my improvement, the view showing the lid broken away in part to show the underlying parts.

Like letters refer to like parts throughout the several views of the drawings.

A represents a four-sided feed-box of usual construction having a closed bottom, but no top.

B is a partition, preferably of sheet metal, such as galvanized iron or tin, with bottom and side edges *b* turned at right angles to the body of the plate, through which small nails or tacks *b'* will be driven in order to fasten the partition to the bottom and sides of the box in the manner as clearly shown in the drawings. C is a hopper, also preferably of

sheet metal, which is riveted to the partition-plate B. It tapers at the ends from top to bottom, and the side also tapers from top to bottom toward the plate B. The outlet from the hopper is through the partition-plate B, about one-half inch above the bottom of the feed-box, through the slot D, which is approximately a half-inch wide and two inches long and extends transversely of the plate immediately above the junction therewith of the bottom of the hopper. The hopper reaches from the partition to the nearest end of the feed-box and from side to side of the latter and provides a tapering bottom to the compartment thus divided off from the body of the feed-box by the partition. This compartment is large enough to contain the quantity of oats or other grain or feed to be fed at one time, and the weight of the mass of shifting particles will cause them to run out through the slot D until the discharged quantity is sufficient outside to arrest the flow. The animal will eat the feed as it is discharged, and by so doing will remove the outside quantity, and thereby permit additional supplies to be discharged. This action will be automatic and continuous until the entire contents of the hopper has been drawn out. The quantity of discharge will be regulated by the size of the opening D.

In feeding the oats or other feed soon becomes wet from the saliva from the animal's mouth, which causes the particles to adhere and form into a mass, which chokes the outlet so as to interfere with the discharge, and for that reason I elevate the discharge-opening a distance above the bottom of the feed-box sufficient to provide room below the outlet for the wet particles.

The receptacle for feed is closed by a lid E, which is hinged to the upper edge of the partition-plate B.

Sometimes the feed will stick to the walls of the hopper instead of discharging freely, and to overcome this difficulty I fasten a curved strip or bar F at its middle to the plate B just above the discharge-slot. The ends of the strip F rest loosely upon the ends *c c* of the hopper and will be moved laterally by the vibration of the plate B, which is caused by the pressure of the animal's nose against it



in its efforts to reach the feed through the discharge-opening. The elasticity of the plate will cause it to spring back into its normal plane when pushed out of it by the animal's nose, and this vibration of the plate B gives a movement back and forth to the ends of the strips F against the hopper. This movement stirs up the feed and causes it to crowd down to the outlet.

10 Inasmuch as the feed-box used by me is the same in construction, size, and material as is in general use, I will prefer in practice to make the sheet-metal parts such as I have described and sell them separate from the feed-box as an attachment to be applied to 15 the boxes already in use; but I do not desire to restrict myself to such practice of selling the invention as an attachment.

20 Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. A feed-box having a compartment separated from the body of the box by a resilient partition, a compartment thus formed having 25 a hopped bottom, a resilient partition hav-

ing a slotted opening opposite the bottom of the hopper and an agitator consisting of a curved plate or bar fastened between its ends to the resilient partition substantially as shown.

2. A feed-box having a compartment separated from the body of the box by a resilient partition, the compartment thus formed having a hopped bottom, a resilient partition having a slotted opening opposite the bottom 35 of the hopper but said hopper bottom and opening being both above the bottom of the feed-box to provide a drain for the saliva away from the opening, and an agitator consisting of a bent plate or bar fastened between its 40 ends to the resilient partition, substantially as shown.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 7th day of October, A. D. 1898.

EDWARD M. PUMPHREY. [L. S.]

Witnesses:

JOSEPH A. MINTURN,

CARL SCHLEGEL.