

(No Model.)

W. H. & B. D. COOK.  
COMBINED FLOUR BIN AND SIEVE.

No. 516,367.

Patented Mar. 13, 1894.

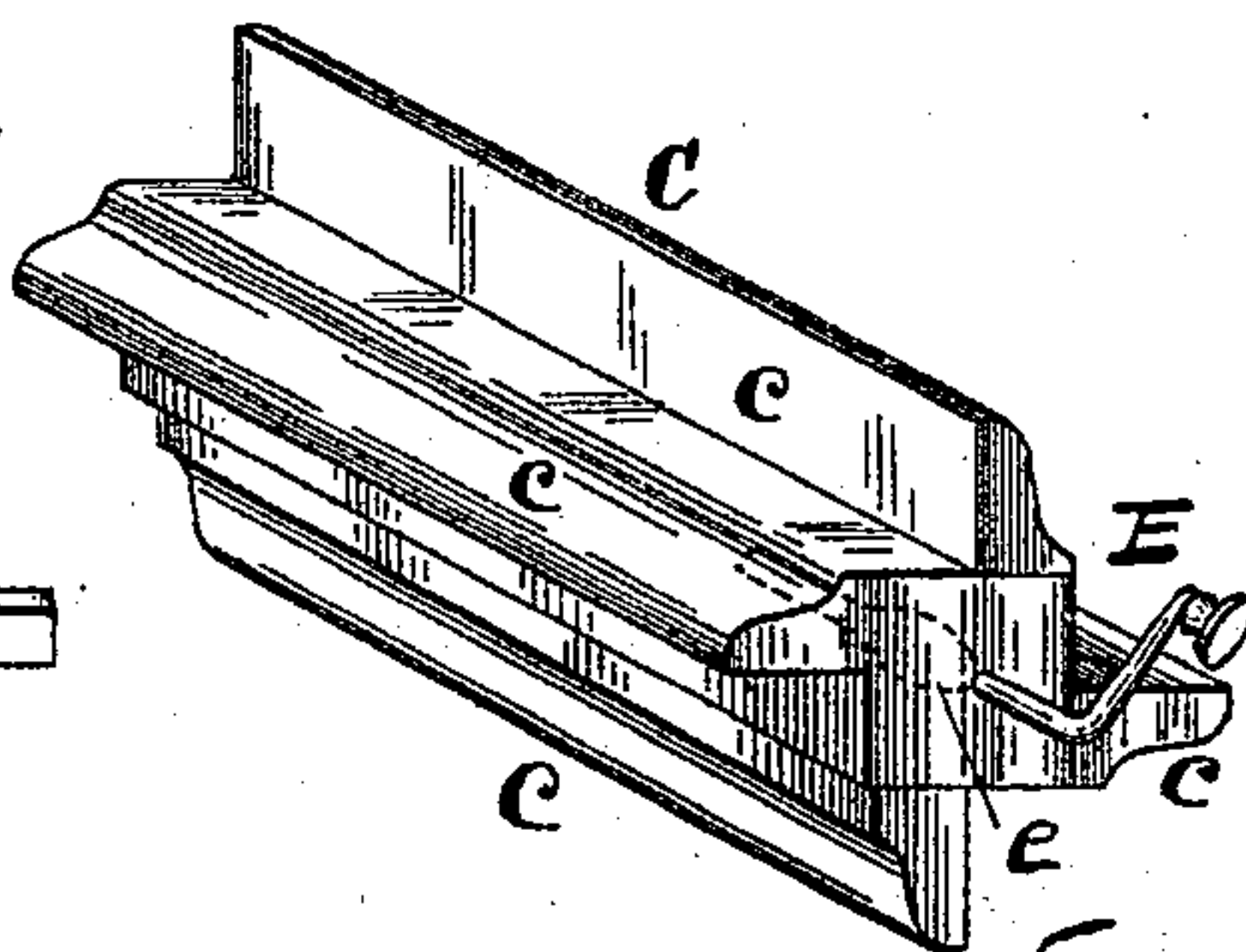
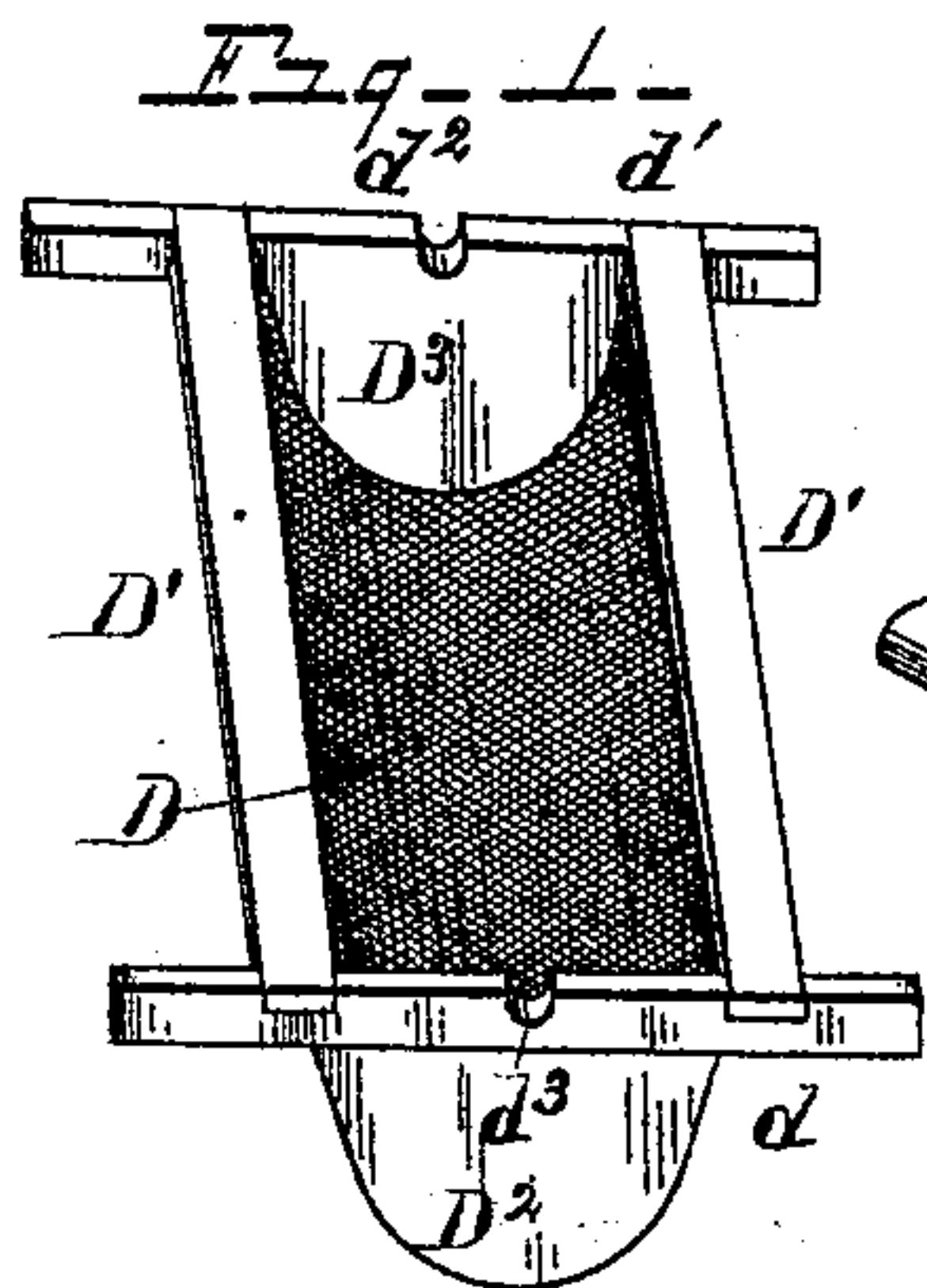
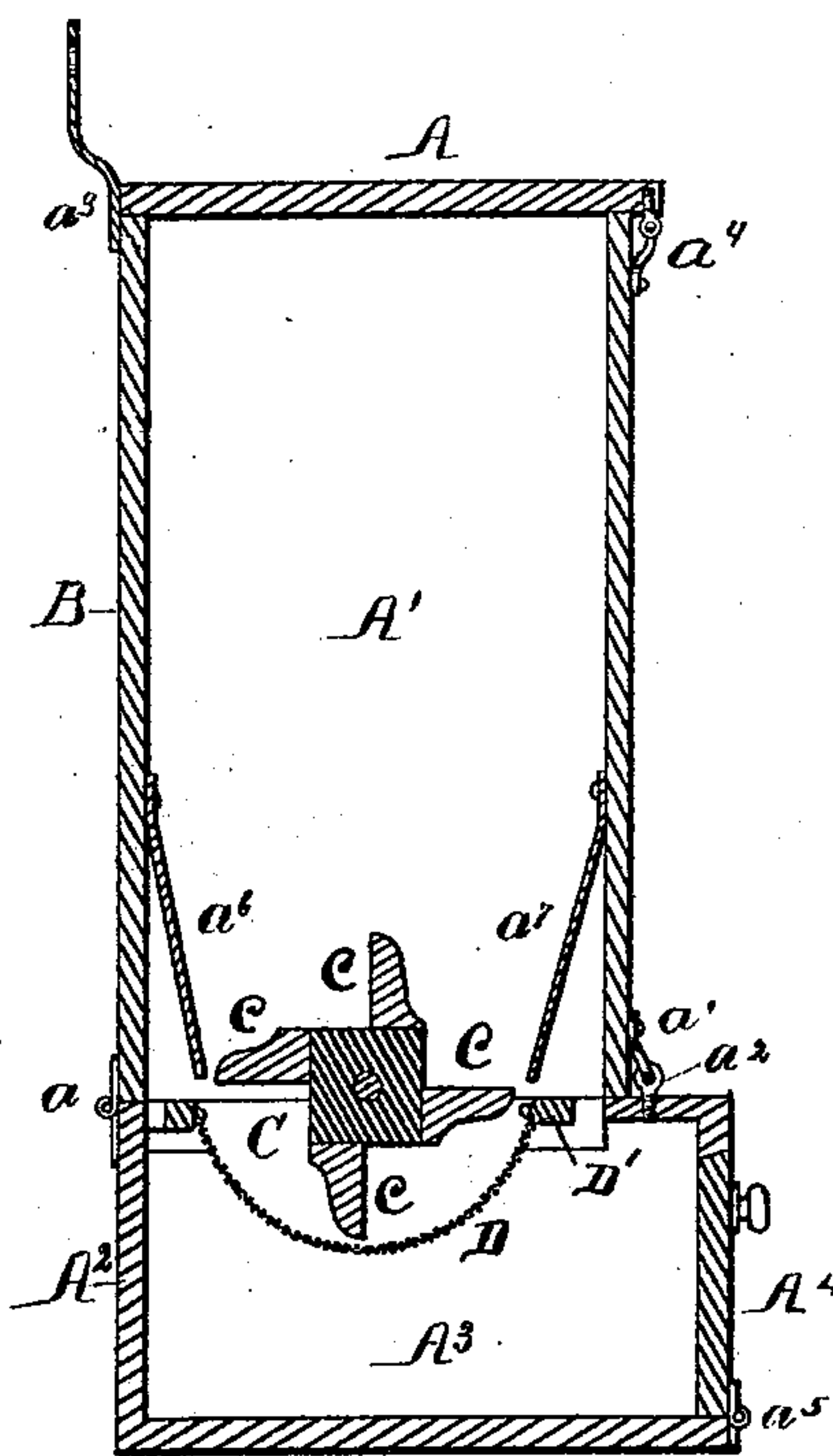
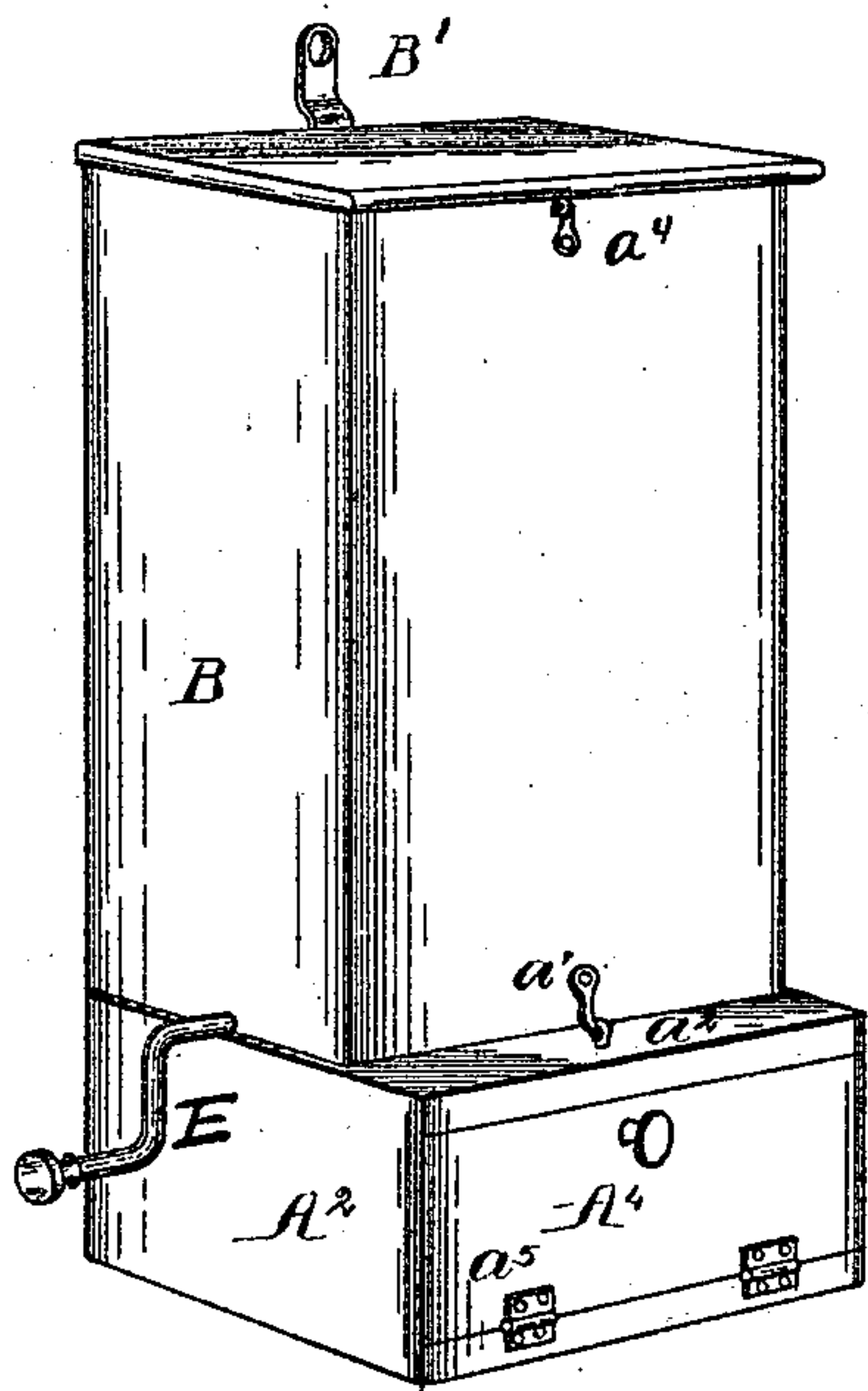


Fig. 3

Fig. 4

Witnesses

O. B. Baerzger  
John F. Miller

Inventors

Byron D. Cook  
William H. Cook  
By their Attorney  
Newell S. Wright.



# UNITED STATES PATENT OFFICE.

WILLIAM H. COOK AND BYRON D. COOK, OF HOMER, MICHIGAN, ASSIGNORS  
TO THE COOK FLOUR BIN COMPANY, OF CHICAGO, ILLINOIS.

## COMBINED FLOUR BIN AND SIEVE.

SPECIFICATION forming part of Letters Patent No. 516,367, dated March 13, 1894.

Application filed March 9, 1893. Serial No. 465,221. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. COOK and BYRON D. COOK, citizens of the United States, residing at Homer, county of Calhoun, State of Michigan, have invented a certain new and useful Improvement in a Combined Flour Bin and Sieve; and we declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to a certain new and useful improvement in a combined flour bin and sieve, designed for the convenient and ready sifting of the flour.

The object of our invention is to provide such an article of manufacture, of simple and economical construction, and of superior efficiency, which may be readily handled and operated.

To these ends our invention consists of the construction, combination and arrangement of devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective, showing certain features of our invention. Fig. 2 is a view in vertical section. Fig. 3 is a detail view in perspective of the sieve, and Fig. 4 is a similar view of the reel.

We carry out our invention as follows: B represents the upper portion of the case of the combined sieve and flour bin, forming an inclosed chamber A', for holding the flour to be sifted.

A<sup>2</sup> represents the lower portion of the inclosing case inclosing a chamber A<sup>3</sup>, in which is located a sieve, and into which the flour is received when sifted. The two portions of the case B and A<sup>2</sup> are hinged together on the back side of the case, as shown at "a," so that the upper portion B of the case may be tilted back off from its location upon the lower portion of the case. A latch or other suitable locking device "a'" may be located upon the front portion of the case B to engage a staple "a<sup>3</sup>" or other similar retaining device upon the portion A<sup>2</sup> of the case, to hold the two portions of the case firmly to-

gether. The upper portion of the case is provided also, with a lid A, which may be hinged, as shown at "a<sup>3</sup>," upon the case B, a locking device "a<sup>4</sup>" being provided to hold the lid securely upon the case B. The case B may also be provided with a suspending eye B', whereby the device may be hung up. The lower portion of the case A<sup>2</sup> is also preferably provided with a door A<sup>4</sup>, hinged to the base of the case, as shown at "a<sup>5</sup>," whereby access may be readily had into the chamber A<sup>3</sup>, to remove the flour therefrom. It will be understood that the cover A is to be opened to deposit the flour to be sifted into the chamber A'. The base of the chamber A' is provided with downwardly converging walls "a<sup>6</sup>," "a<sup>7</sup>," to direct the flour to the reel and sieve, the walls "a<sup>6</sup>," "a<sup>7</sup>" forming a hopper at the base of the chamber A'.

C denotes our improved reel, located at the base of the chamber A', said reel made rotatable and having a series of wings "c." It will be perceived that the walls "a<sup>6</sup>," "a<sup>7</sup>" forming the hopper, close off the lower portion of the chamber A', so as to prevent the flour from falling away from the reel, and from any escape from the chamber A', except as directed by the reel, and without being sifted.

D represents the sieve, constructed of concave form.

D' represents a screen frame, provided with supports at its ends, marked "d" and "d'." These end supports are preferably constructed with journal bearings "d<sup>2</sup>" and "d<sup>3</sup>," in which the reel is journaled. This frame, it will be understood, with the sieve thereto attached, is located in the upper portion of the chamber A<sup>3</sup>, and at the base of the chamber A'. Said frame with the screen thereto attached, is preferably removable, so that it may be readily cleaned, when required. By throwing back the upper portion B of the case, the reel may be first lifted out of position, and the screen with its frame. The reel and screen are thus readily detachable, and as readily placed in their proper location, when cleaned. The screen may simply be nailed or tacked upon the under surfaces of the screen frame. At the extremities of the sieve, we locate semi-circular or arc-shaped



end pieces  $D^2$  and  $D^3$ , to which the screen is also fastened. The wings of the reel project into the concavity of the sieve. We prefer to make the upper portion of the sieve flaring, or in other words, to gradually increase the radii of the circle on which the screen is made, toward the upper edges thereof, thus making the opening between the reel or agitator and the screen larger at the top than at the bottom of the screen. It will be obvious that as so constructed, the wings of the agitator or reel will practically wedge the flour against the screen, the wings of the reel gathering the flour into the screen at the upper portion thereof, and carrying it downward around the circle of the screen which decreases in size, in consequence of which the flour is wedged or forced through the perforations in the screen, without the need of the violent rubbing and scraping common in other forms of sieves.

E represents the crank, engaged with the reel, and whereby the reel is rotated. This crank we prefer to construct with an expanded portion "e," to be driven into the wood of the reel, to prevent the reel turning on the handle. The crank may thus form one of the journals of the reel.

The chamber  $A'$  may be made of sufficient capacity, to hold any desired quantity of flour, as for example, an ordinary sack of flour. The chamber may thus readily be made of a size to hold twenty-five, fifty or one hundred pounds of flour, or other quantity as may be desired. Thus the device may dispense with the frequent handling of the flour, as a sack or other desired quantity may be emptied into the bin when first delivered, and be stored therein until used up.

What we claim as our invention is—

1. A combined flour bin and sieve having in combination a case constructed with a lower portion  $A^2$ , and with an upper portion B forming interior chambers  $A'$  and  $A^3$ , and hinged together upon one side to permit the upper portion being tilted back from its normal lo-

cation over the lower portion, a screen frame D located at the upper edge of the lower portion  $A^2$  of the case and removable therefrom, a screen engaged with said frame, and a reel journaled upon said frame between the adjacent edges of the portions  $A^2$  and B of the case, whereby the reel and screen frame with its screen may be independently removed from the case when the upper portion B is turned back from over the lower portion, the chamber  $A^3$  extending below the screen and arranged to hold the sifted flour, substantially as described.

2. A combined flour bin and sieve having in combination a case constructed with a lower portion  $A^2$  and an upper portion B forming interior chambers  $A'$  and  $A^3$ , and hinged together upon one side to permit the upper portion B being tilted back from its normal location over the lower portion  $A^2$ , a screen frame D constructed with side bars  $D'$ , end supports "d," "d'" provided with journal bearings upon their upper edges, and with end pieces  $D^2$ ,  $D^3$  depending therefrom, a screen engaged with said side bars and end pieces, and a reel journaled in said bearings of said end supports between the adjacent edges of the portions  $A^2$  and B of the case, said screen frame D located at the upper edge of the lower portion  $A^2$  of the case and removable therefrom, the reel and screen frame being arranged to be independently lifted out of their respective locations when the upper portion B of the case is turned back from over the lower portion  $A^2$  thereof, the chamber  $A^3$  formed with a permanent closed base and arranged to hold the sifted flour, substantially as described.

In testimony whereof we sign this specification in the presence of two witnesses.

WILLIAM H. COOK.  
BYRON D. COOK.

Witnesses:

E. P. ALLEN,  
W. W. SNIDER.