

(No Model.)

B. F. SINGER.
DUMPING RECEPTACLE.

No. 428,731.

Patented May 27, 1890.

Fig. 1.

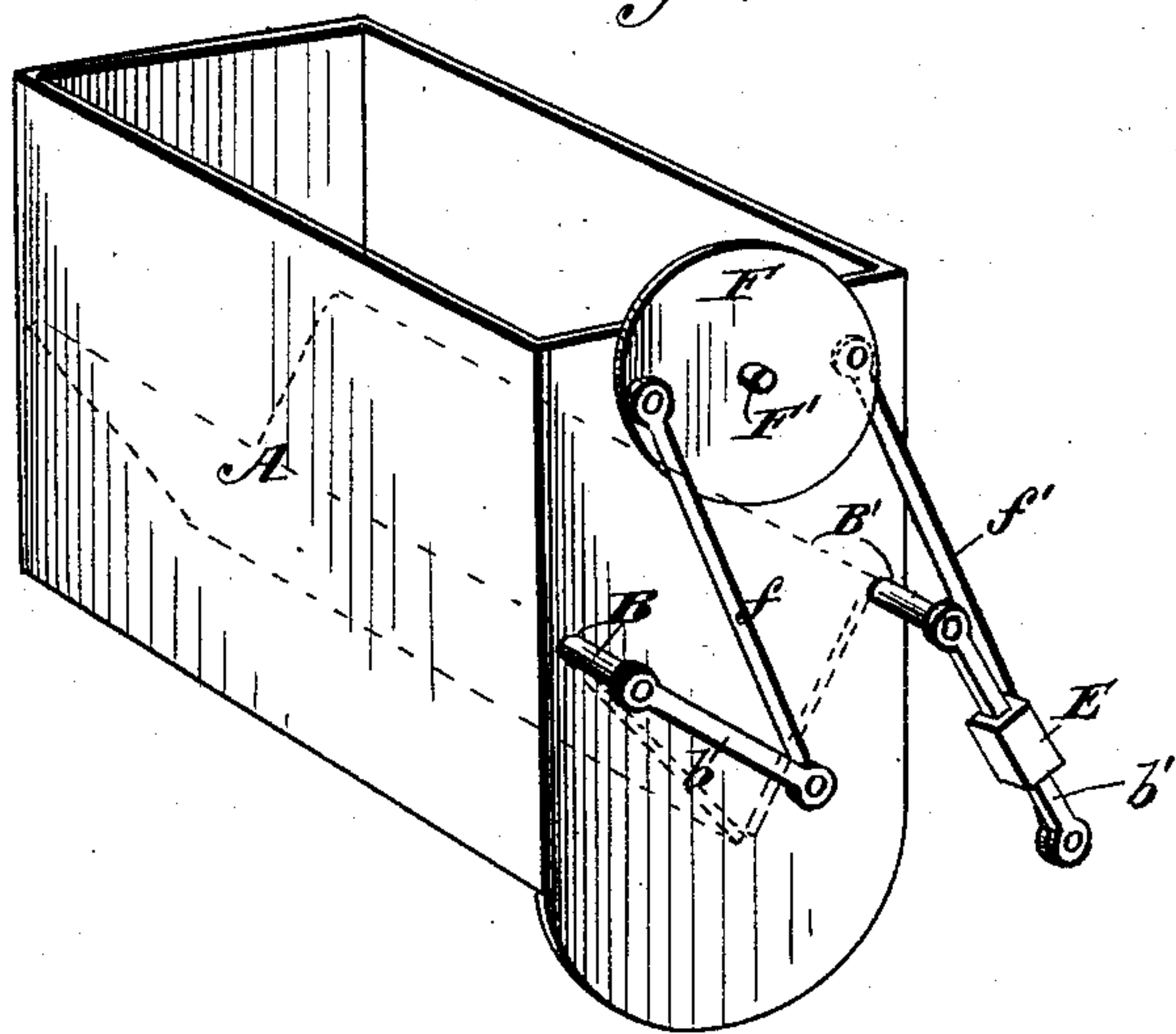


Fig. 2.

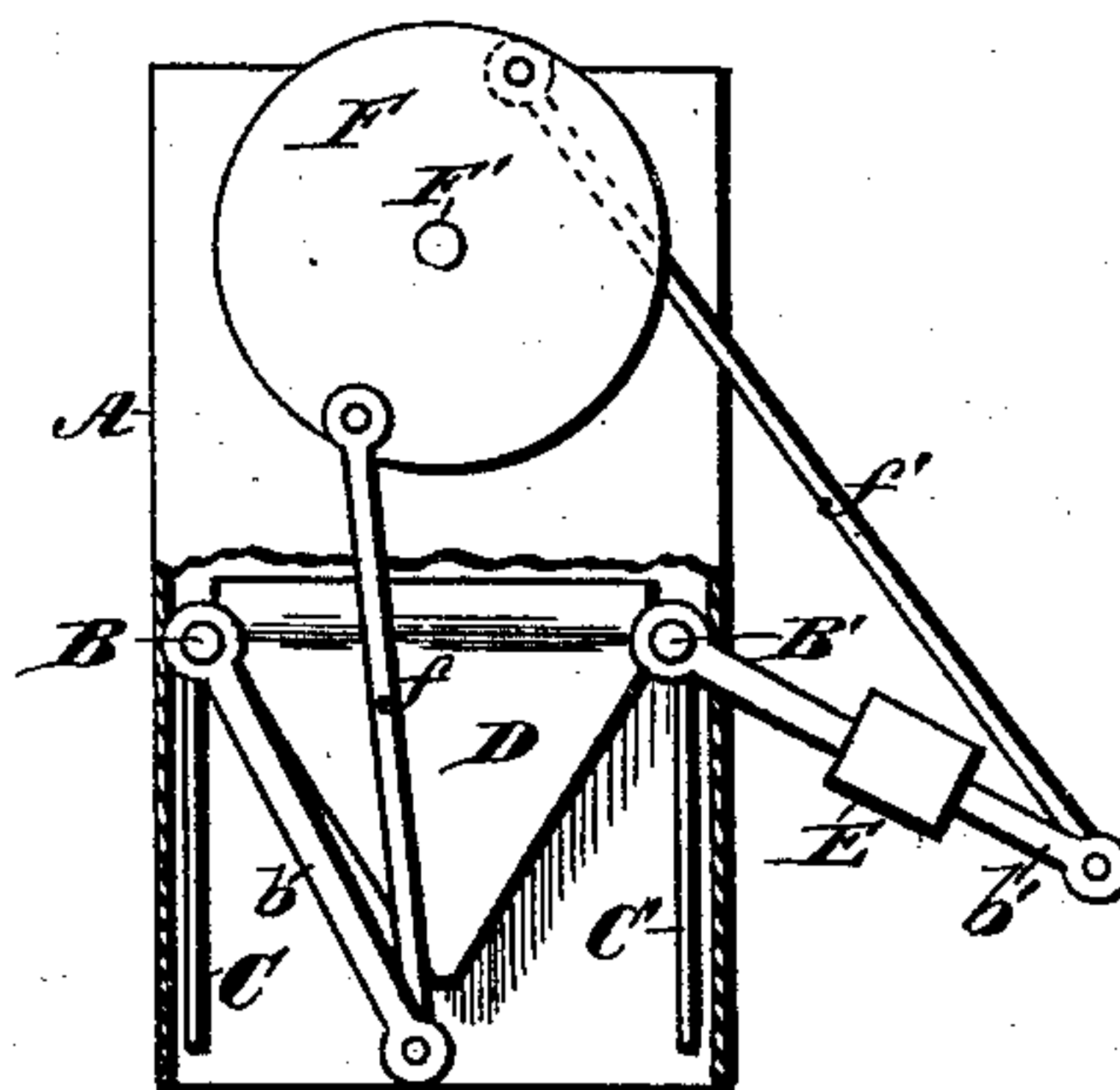


Fig. 3.

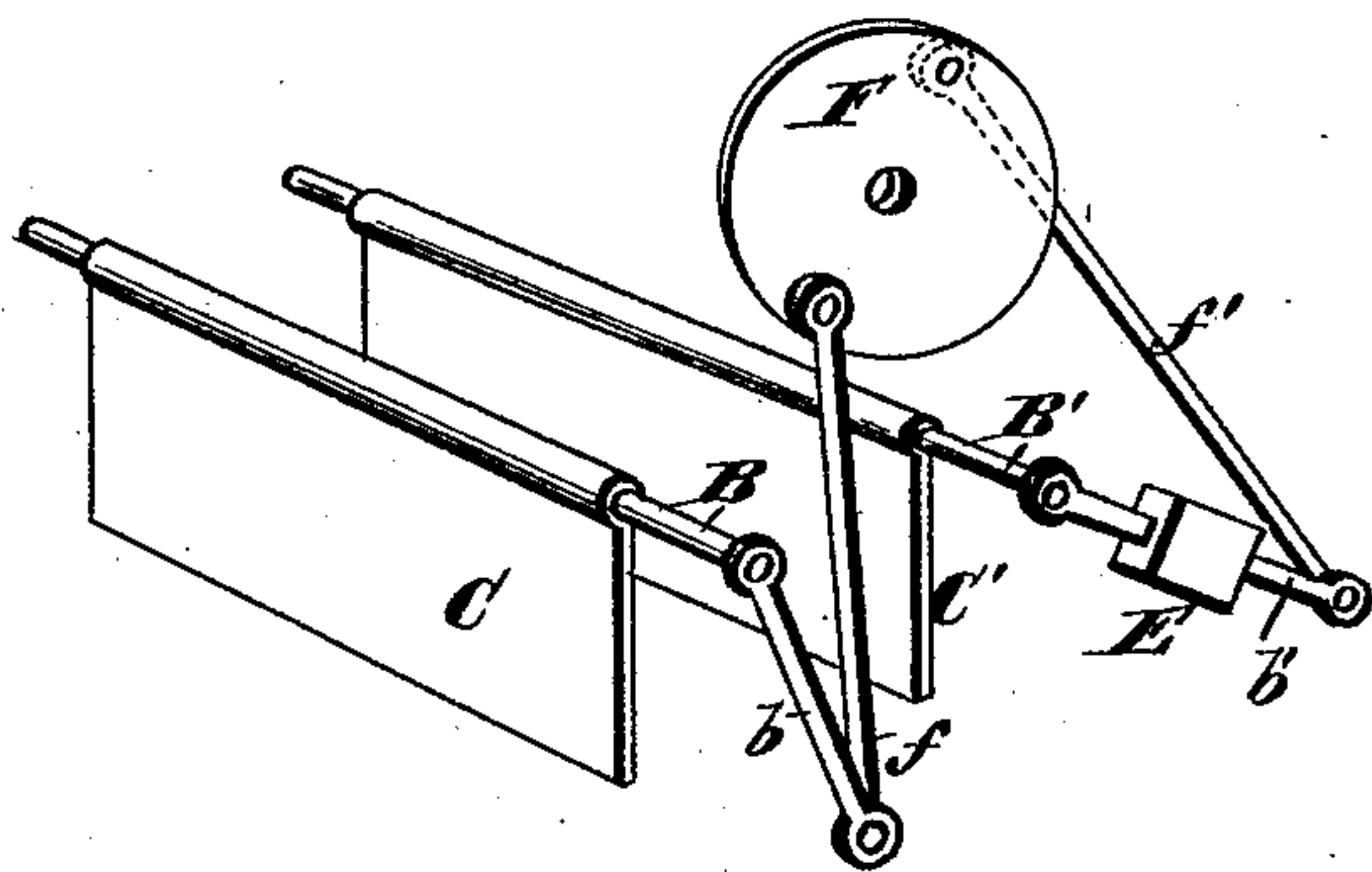
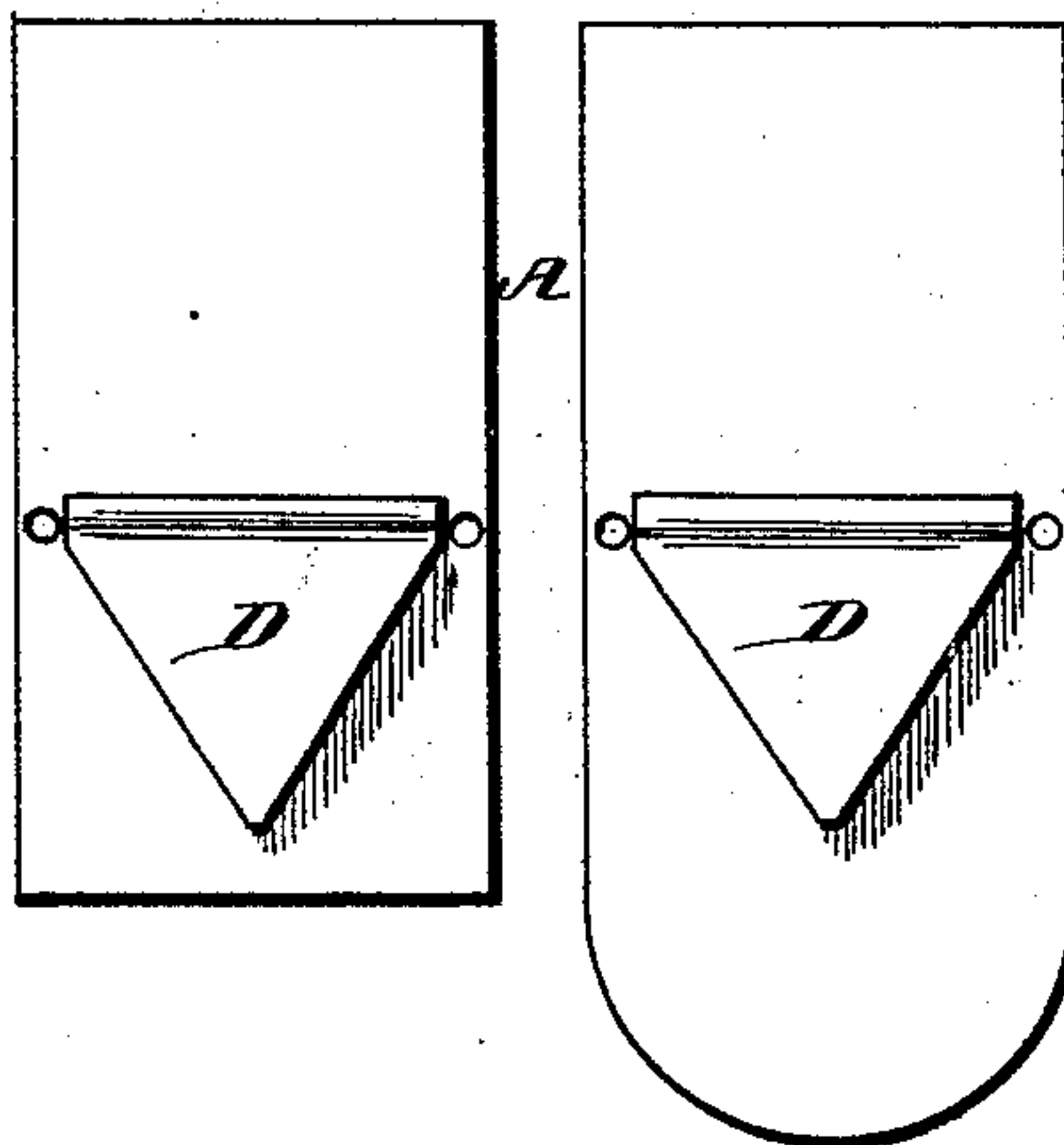


Fig. 4.



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by
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UNITED STATES PATENT OFFICE.

BENJAMIN F. SINGER, OF LANCASTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ROBERT M. SLAYMAKER, OF SAME PLACE.

DUMPING-RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 428,731, dated May 27, 1890.

Application filed January 13, 1890. Serial No. 336,806. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. SINGER, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Dumping-Receptacles; and I do hereby 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.

This invention is primarily an improvement on the subject-matter of Letters Patent No. 394,901; but is capable of a much wider range of use. In said patent, which is for a cigar-bunching machine, the tobacco passes through a chute constructed in two telescopic sections, the lower section being in effect a vertically-movable receptacle provided with an automatically-dumping bottom. It is essentially the same thing as a dumping-bucket for coal, grain, or any other article loaded or unloaded by such means.

The object of the present invention is to provide improved means for automatically opening the bottom of such a receptacle.

To this end my invention consists in the construction and combination of parts hereinafter particularly set forth and claimed.

In said drawings, Figure 1 represents a perspective view of a receptacle embodying my invention. Fig. 2 represents an end elevation, partly broken away, of said receptacle, showing the bottom gates or valves in their open position. Fig. 3 represents a detail perspective view of the said gates and the devices for operating them, the casing having been removed; and Fig. 4 represents an inner view of the end walls of said receptacle placed side by side.

A designates the receptacle, consisting of a rectangular metal casing, as shown, although the shape and material are unimportant. In the ends of this, at the sides, two shafts or rods B B' are journaled, these being provided with downwardly-extending plates C C', two in number, which close the bottom of the receptacle when turned against each other, and open it for dumping when turned the other way. They thus constitute bottom gates or valves for the receptacle. On the inner face

of each end wall of said receptacle a stop-plate D is formed, having a V shape to fit the space between said bottom gates or valves at the ends thereof. These plates D allow the said gates to be made a very little shorter than the interior of the receptacle, and thereby to avoid all possibility of friction against the end walls thereof, while not permitting the escape of any fine material between them and the end walls. The said plates D also, by acting as stops, prevent said bottom gates from bending or injuring each other. The shaft B has an oblique arm b outside of said receptacle, and the shaft B' has a similar arm b', the latter being provided with a weight E. These arms extend downward and toward the same side, the outer end of arm b' projecting far enough laterally to be struck by any upwardly-moving device arranged for this purpose, or to strike an immovable object without the body of the receptacle coming in contact with anything in either case. Connecting-rods f f' extend from the ends of these arms, as shown, obliquely upward to a disk F, which is free to turn on a stud F', projecting from the front or proximate end wall of said receptacle. These rods are attached to said disk on opposite sides of said stud, and preferably near the periphery. When said arm b' is moved upward by contact, as described, it rocks the shaft B', so as to open the gate C', mounted thereon, and also, by pressure transmitted through rod f', turns the disk F to the left. The downward pressure of this disk through rod f' rocks shaft B and opens gate C simultaneously with the opening of gate C'. On the cessation of the upward pressure against arm b' the weight E reverses all these motions, closing the bottom gates C C'.

The receptacle A may be used as the lower section of the chute described in the patent above named or as the corresponding part of any other cigar-machine; but it is equally well adapted to be used, if made of larger dimensions, for unloading coal or grain, for lifting mud from a river-bed and depositing it on a dredger, and in many other relations. Instead of a disk, any other form of wheel may be used or even a rocking bar pivoted at the middle.

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

1. In combination with a receptacle and a pair of bottom gates therefor, a pair of rock-shafts on which said gates are mounted within said receptacle, arms extending from said shafts, a disk which is free to turn, and a pair of rods connecting the said arms with said disk on opposite sides of the center of the latter, a part of said devices being extended laterally from said receptacle for contact with some external object, substantially as set forth.
2. In combination with receptacle A and bottom gates C C', the arms *b b'*, mounted on the shafts or pivots of said gates, the disk F, and the rods *f f'* connecting said disk, as shown, to said arms, the arm *b'*, and the rod *f'*, extending laterally beyond said receptacle, substantially as and for the purpose set forth.
3. In combination with a receptacle and a pair of bottom gates or valves therefor, a pair of arms on the shafts or journals of said gates,

connections between said arms compelling them to move together, and a weight which normally closes the said gates, substantially as set forth.

4. In combination with a receptacle and a pair of vibratory bottom gates therefor, a pair of arms rocking with said gates, a weight on one of said arms, a disk on a stud or shaft attached to said receptacle, and rods connecting said arms with said disk on opposite sides of its center, substantially as set forth.

5. The receptacle having V-shaped stop-plates on the inner faces of its end walls, in combination with the bottom gates closing against said stop-plates, the said end walls covering and protecting the ends of said gates, for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. SINGER.

Witnesses:

ALLAN A. HERR,
IRA H. HERR.