

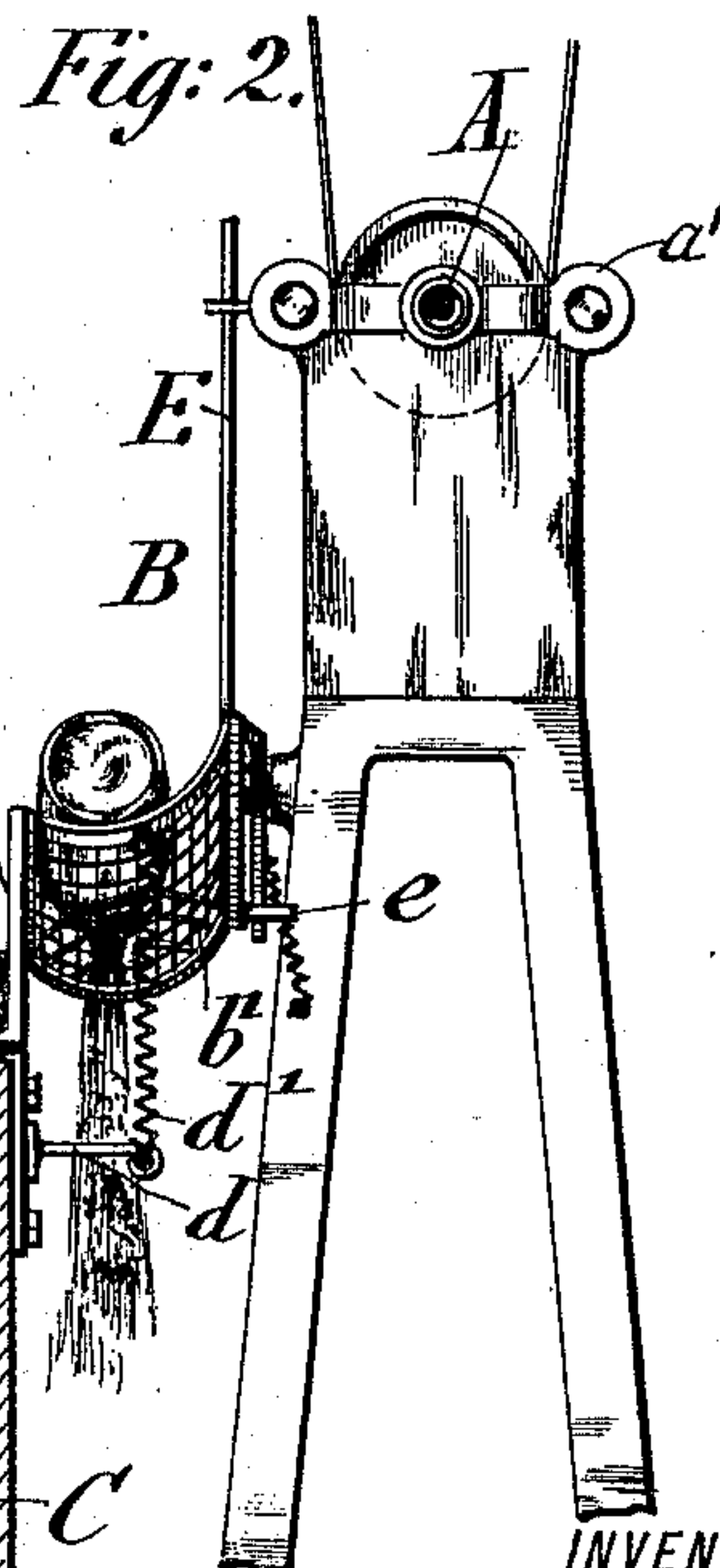
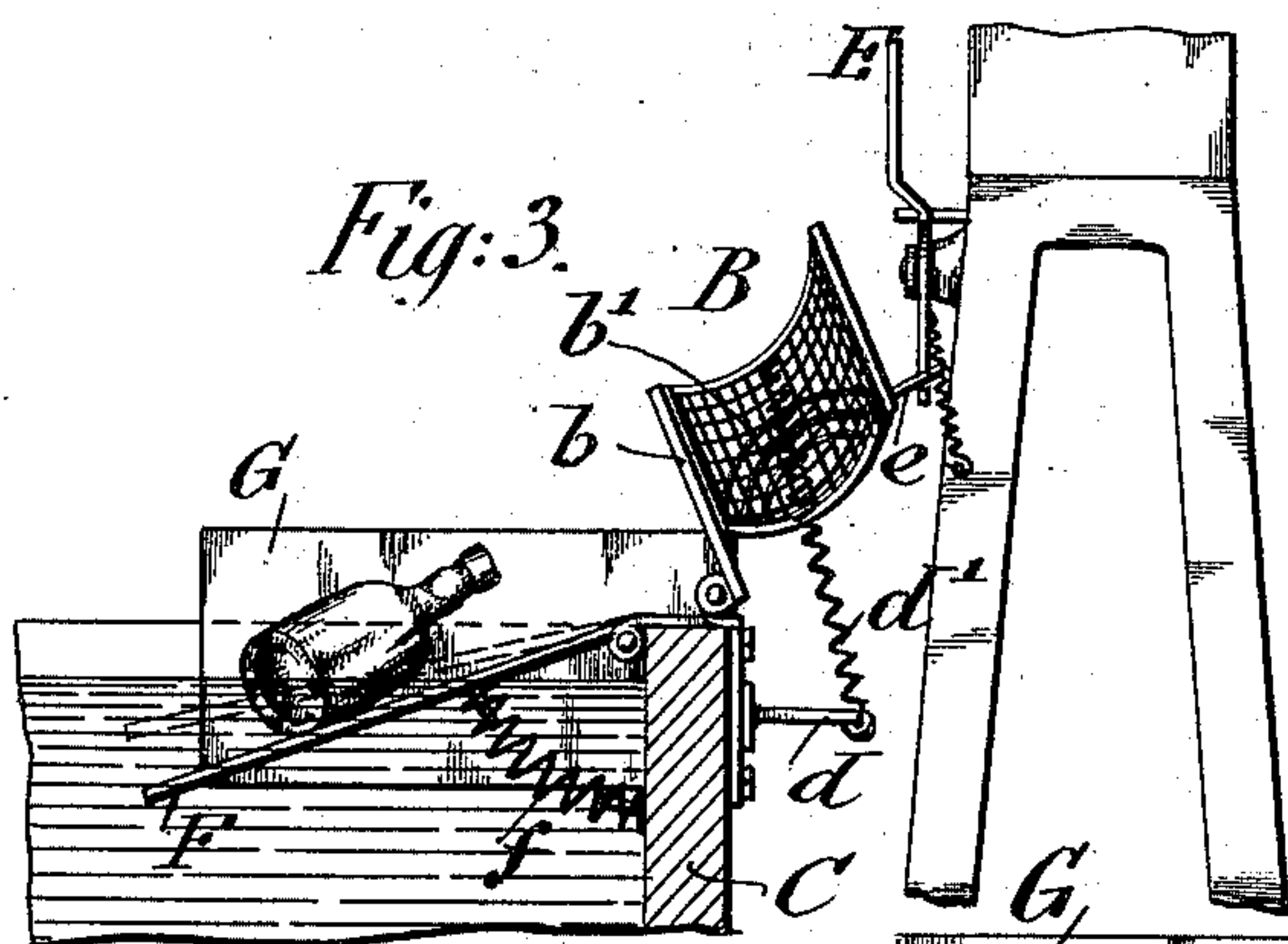
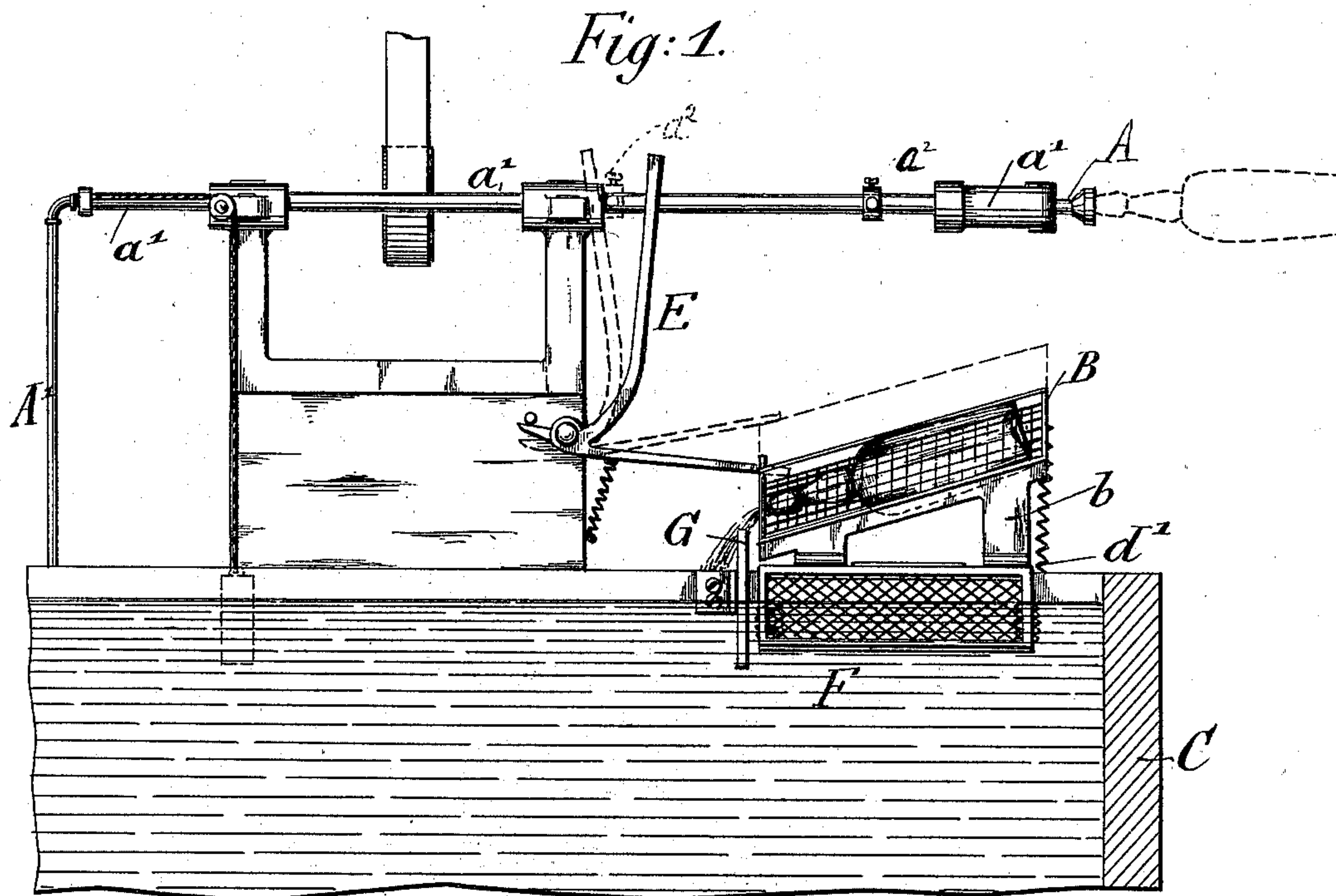
(No-Model.)

R. KUF'S.

ATTACHMENT FOR BOTTLE WASHING MACHINES.

No. 560,904.

Patented May 26, 1896.



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RICHARD KUFUS, OF BROOKLYN, NEW YORK.

ATTACHMENT FOR BOTTLE-WASHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 560,904, dated May 26, 1896.

Application filed March 13, 1896. Serial No. 583,079. (No model.)

To all whom it may concern:

Be it known that I, RICHARD KUFUS, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Attachments for Bottle-Washing Machines, of which the following is a specification.

This invention has reference to an improved attachment for bottle-washing machines, in which the bottle, after being subjected to the rotary brush of the washing-machine, is transferred onto a draining-basket arranged alongside of the bottle-washing machine, from which it is automatically transferred into the washing-tank for final cleaning.

In the well-known bottle-washing machines generally used the bottle is subjected to the action of a rotary cleaning-brush that acts on the interior surface of the bottle and supplies jets of water to the same. From the bottle-washing machine the bottle was heretofore transferred directly into a tank filled with water, in which the exterior of the bottle was cleaned, it being then transferred to a suitable draining and drying stand. The direct transfer of the bottles to the washing-tank has the disadvantage that the water in the bottle is not drained off, but is transferred with the bottle into the tank, so that the water in the same becomes rapidly soiled and has to be replaced, as all the liquid in the bottle, together with the impurities in the same, is discharged into the water in the washing-tank.

The object of my invention is to do away with the direct transfer of the bottles from the bottle-washing machine to the tank and to support the bottle for a short time on an intermediate drain-basket, so that the water and impurities in the bottle are drained off and the drained-off bottle then transferred from said basket automatically into the washing-tank. For this purpose the invention consists of the combination, with the bottle-washing machine and the tank, of a drain-basket suitably supported at a point intermediate between the bottle-washing machine and the tank, said draining-basket being connected by suitable mechanism with the reciprocating frame of the washing-machine, so as to be raised during the backward mo-

tion of the same and lowered during the forward motion, so that the bottle supported on the draining-basket is transferred onto a hinged inclined and spring-cushioned plate, along which the bottle is transferred into the washing-tank.

The invention consists, further, of certain details of construction which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of a bottle-washing machine and washing-tank, with my improved bottle-draining attachment to the same shown in side elevation. Fig. 2 is a front elevation, partly in section, through the washing-tank and bottle-washing machine and the draining attachment; and Fig. 3 is a front elevation of the draining attachment, showing the basket in raised position in the act of transferring the drained bottle into the washing-tank.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the rotary spindle of a bottle-washing machine of any approved construction, to the end of which the usual brush is applied, said spindle being made hollow, so as to be connected with a suitable supply of water under pressure through pipe A'. At the time when the bottle is placed over the brush against the mouthpiece of a suitably-guided reciprocating frame a', placed upon the rotary brush, water is supplied to the interior of the bottle, and thereby the inner surface of the same is cleaned. From the rotary spindle and brush of the bottle-washing machine the bottle is transferred onto an inclined draining-basket B, which is supported on upright straps b b, that are hinged to the adjacent wall of the washing-tank C. The draining-basket B is preferably oblong and somewhat larger than the size of the bottles to be drained and is made of galvanized wires in concave form, the lower end of the basket being provided with curved cross-wires b', so as to prevent the bottle from slipping out of the basket in downward direction. The straps b b are hinged to the side wall of the tank, so that the basket can swing on said hinges in partly-tilted position, it being returned into normal

position on the tank by a helical spring d' , that is attached to the higher end of the basket and to a stationary arm d , attached to the side wall of the tank C. The lower front end of the draining-basket B is provided with a pin e , with which engages one arm of a fulcrumed elbow-lever E, the upper arm of said lever being placed in the path of the reciprocating frame a' of the bottle-washer and being tilted rearwardly during the backward motion of the same by the nut a^2 thereon when the bottle is passed over the rotary brush, whereby the draining-basket is raised against the tension of the spring d' , so that the bottle supported on the same is delivered onto an inclined and spring-cushioned plate F, which is also hinged to the side wall of the washing-tank C. The hinged plate F is lowered by the weight of the bottle transferred to the same to permit the ready downward sliding of the bottle over it, as shown in Fig. 3, and also to conduct the bottle into the water of the washing-tank without its being subjected to violent shocks and breakage during its transfer from the draining-basket to the tank. A vertical guide-plate G is attached at right angles to the side wall of the washing-tank C, as shown in Figs. 1 and 2, and serves to guide the bottle along the hinged inclined and spring-cushioned plate F into the tank. For cushioning the hinged plate F a helical spring f is used, which is slightly curved and slatted at its ends over stationary pins, one at the under side of the plate F and the other at the inside of the washing-tank C, as shown clearly in Fig. 2.

My improved draining attachment for bottle-washing machines operates as follows: After the bottle is cleaned at its inner surface by the rotary brush of the bottle-washing machine it is transferred by the attendant in downwardly-inclined position onto the draining-basket B, as shown clearly in Fig. 1. During its position on the draining-basket it is retained by the curved guard-wires at the lower end of the latter, so that it cannot shoot off from it. During its inclined position, with head downward, the water in the bottle, together with any impurities or sediment dissolved and washed off by the same, is drained off onto the floor of the washroom. The next bottle is then applied by the attendant to the rotary brush of the washing-machine, which causes the reciprocating frame and there-through the elbow-lever to be actuated, so that the basket is raised into the position shown in Fig. 3 to such a height that the bottle on the same can easily pass from the basket onto the inclined plate F, which latter is then lowered by the weight of the bottle against the tension of the spring, so that the bottle passes along the guide-plate G and the inclined spring-cushioned plate F into the washing-tank without being liable to injury or breakage during its passage from the draining-basket into the tank. During the forward motion of the reciprocating frame the next

bottle is removed from the washing-machine and placed on the draining-basket, which has been returned by the action of its spring into its normal position. (Shown in Figs. 1 and 2.) At the next return motion of the reciprocating frame the draining-basket is again raised, so that the bottle on the same, which has been in the meantime permitted to drain off, is transferred into the tank, and so on.

The advantages of my improved draining attachment for bottle-washing machines are:

First. That the impure water in the bottle is drained off before the bottle has passed into the washing-tank for final cleaning, so that the water in the tank is kept clean for a long time and does not require as many renewals as when the bottles are directly transferred from the washing-machine to the tank.

Secondly. By the provision of the inclined spring-cushioned plate no breakage of bottles takes place, which is frequently the case when the bottles are dropped directly from the washing-machine into the tank.

Thirdly. By the draining off of the water and impurities in the bottles any chance of retaining the dirt or impurities in the same is absolutely prevented and a much better and more reliable cleaning of the bottles is obtained.

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

1. The combination with a bottle-washing machine and a washing-tank, of a bottle-draining attachment located intermediately between said washing machine and tank, means for raising said draining attachment during the backward motion of the reciprocating frame of the washing-machine, means for returning the draining attachment into its normal position and means for transferring the bottles delivered by the draining attachment into the tank, substantially as set forth.

2. The combination with a bottle-washing machine and a washing-tank, of an inclined draining-basket hinged to said tank, means interposed between the bottle-washing machine and the basket for raising or lowering the same by the backward and forward motion of the reciprocating frame means for returning the basket into normal position and an inclined and spring-cushioned plate hinged at the inside of the tank adjacent to the draining-basket, so as to permit the transfer of the drained bottle from the basket into the tank, substantially as set forth.

3. The combination with a washing-tank, of an inclined draining-basket, provided with guard-wires at its lower end, upright straps attached to the basket and hinged to the side wall of the tank, a helical spring connecting the basket with a stationary arm on the tank, and an inclined spring-cushioned transfer-plate hinged to the inside of the tank along-side of the draining-basket, substantially as set forth.

4. The combination with a washing-tank,

of an inclined draining-basket, provided with guard-wires at its lower end upright straps for supporting said basket and hinged to the tank, a spring connecting said basket with a stationary arm on the tank, a vertical guide-plate attached to the tank and extending at right angles from the tank near the lower end of the basket, and an inclined and spring-cushioned transfer-plate hinged to the inside of the tank alongside of the basket, said guide-

plate and inclined plate serving for transferring the bottle from the basket into the tank, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

RICHARD KUFS.

Witnesses:

PAUL GOEPEL,
GEO. W. JAEKEL.