

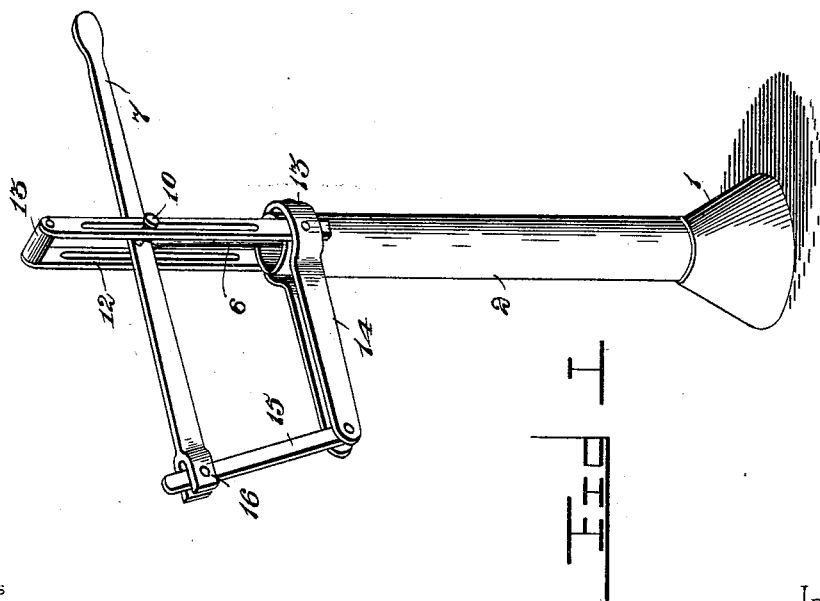
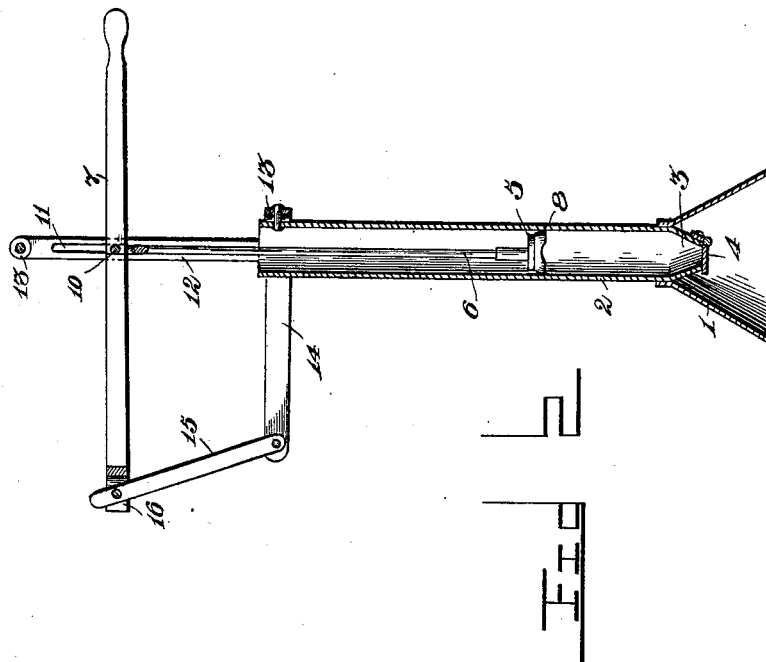
No. 646,637.

Patented Apr. 3, 1900.

J. T. CROW.
WASHING MACHINE OR CHURN.

(Application filed Oct. 9, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH T. CROW, OF KIEFERVILLE, OHIO.

WASHING-MACHINE OR CHURN.

SPECIFICATION forming part of Letters Patent No. 646,637, dated April 3, 1900.

Application filed October 9, 1899. Serial No. 733,041. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. CROW, a citizen of the United States, residing at Kiefferville, in the county of Putnam and State of Ohio, have invented a new and useful Washing-Machine or Churn, of which the following is a specification.

The invention relates to improvements in churns and washing-machines.

10 The object of the present invention is to improve the construction of churns and washing-machines and to provide a simple, inexpensive, and efficient construction adapted to effect the production of butter and the removal of dirt from clothes by forcing air through the milk and through the clothes.

15 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a device constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same.

25 Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a conical shell having a truncated upper end and connected with a vertical tube or barrel 2, forming a pump-cylinder and having its lower end 3 tapering or contracted and extending into and depending from the upper portion of the conical shell. The lower tapered end, which extends into the conical shell, is provided with a flap-valve 4, which is normally closed and which is adapted to exclude water or milk from the interior of the pump, whereby the combined churn and washing-machine is adapted to be operated in any depth which does not submerge the tube or barrel.

30 The operation of churning and washing is effected by means of forcing air through the clothes and through the milk, and within the tube or barrel is arranged a plunger consisting of a head 5, of less diameter than the said tube or barrel, and a plunger-rod 6, which is connected with an operating-lever 7. The plunger-head is provided with a valve 8, consisting of a disk of flexible material, such as

leather, of greater diameter than the tube or barrel, and when the plunger moves upward the air is permitted to pass the plunger-head readily, so that it will not interfere with such upward movement. When the plunger is moved downward, the valve spreads against the sides of the tube or barrel and forces the air through the lower end of the same into the conical shell. By this means air and suds are forced through the fabric being washed, and the operation of washing is rapidly and effectively performed without wearing, tearing, or otherwise injuring the clothes and at the expenditure of a minimum amount of labor. The production of butter is also rapidly effected by forcing air through the milk in this manner, and the machine is adapted to operate within an ordinary cream-crock or an analogous receptacle.

70 The upper end of the plunger-rod is bifurcated to receive an operating-lever, and it is pivoted to the same by a bolt or pin 10, which is arranged in vertical slots 11 of bars 12, which extend upward from opposite sides of the upper end of the tube or barrel. The bars 12 form guides for the pivot of the plunger-rod, and their upper ends are connected by a handle or grip 13. The lower ends of the bars 12 are arranged within a collar or band 13, the metal of which has its terminals extended to form arms 14. The arms 14 are spaced apart to receive a fulcrum bar or link 15, which is pivoted at its lower end to the outer terminals of the arms 14. The upper end of the bar or link 15 is pivoted within a fork or bifurcation 16 of the operating-lever, and as the operating-lever is oscillated the link moves inward and outward to permit the pivot or bolt 10 to move in a direct vertical plane. The clamping-collar and the lower ends of the bars 12 are secured to the upper end of the tube or barrel by any suitable fastening devices.

95 The machine is supported by grasping the grip or handle 13 with the left hand and operating the lever with the other hand, and it may be readily transferred from one portion of the tub or other receptacle to another, so that the entire contents of the receptacle may be operated on to the desired extent.

100 It will be seen that the machine is simple

and comparatively inexpensive in construction, that it is adapted for both churning and washing clothes, and that it is capable of operating in milk or water of any depth which does not submerge the barrel or cylinder.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A device of the class described comprising a conical shell having an opening at its top, a vertical tube having a contracted lower end extended into the top of the shell and depending therefrom, a valve mounted on the lower end of the tube and operating within the conical shell, a pair of bars extending vertically from the top of the tube, a handle connecting the upper ends of the said bars, a plunger, and a lever connected with the plun-

ger and guided by the bars, substantially as described.

2. A device of the class described comprising a shell, a tube extending upward therefrom and provided with a valve, a pair of bars extending vertically from the top of the tube, a handle connecting the upper ends of the bars, a band embracing the tube and the lower ends of the bars and extended from the former to provide elongated arms 14, a link pivoted at its lower end between the arms 14, a plunger, and a lever fulcrumed on the link and connected with the plunger and arranged between and guided by the vertical bars, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH T. CROW.

Witnesses:

AUDOLPH A. BRUGMANN,
JOHN CROW.