W. Orcutt,

Washing Machine,

No. 59,444. Patented Nov. 6, 1866.

Fig. 1.

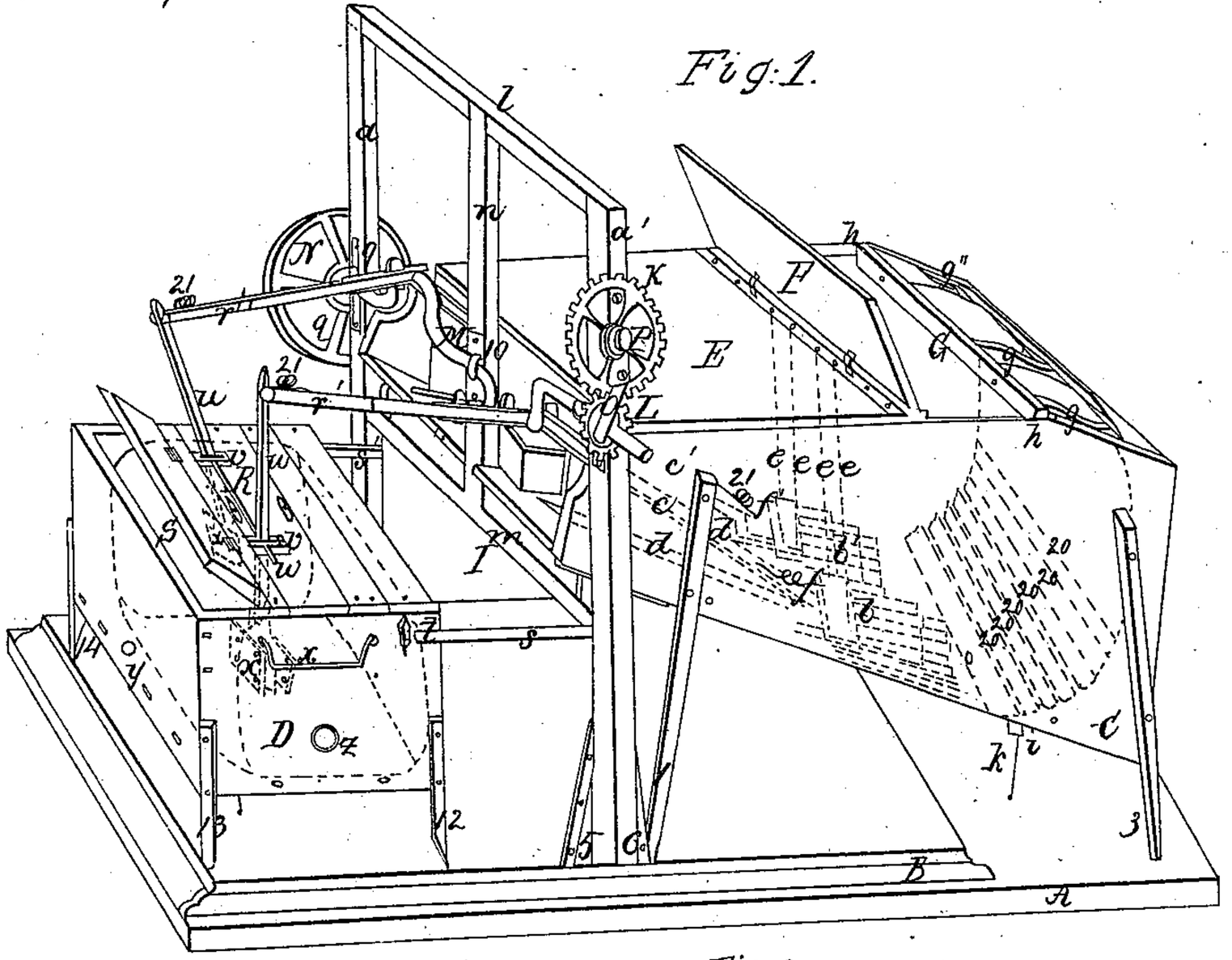


Fig. 2.

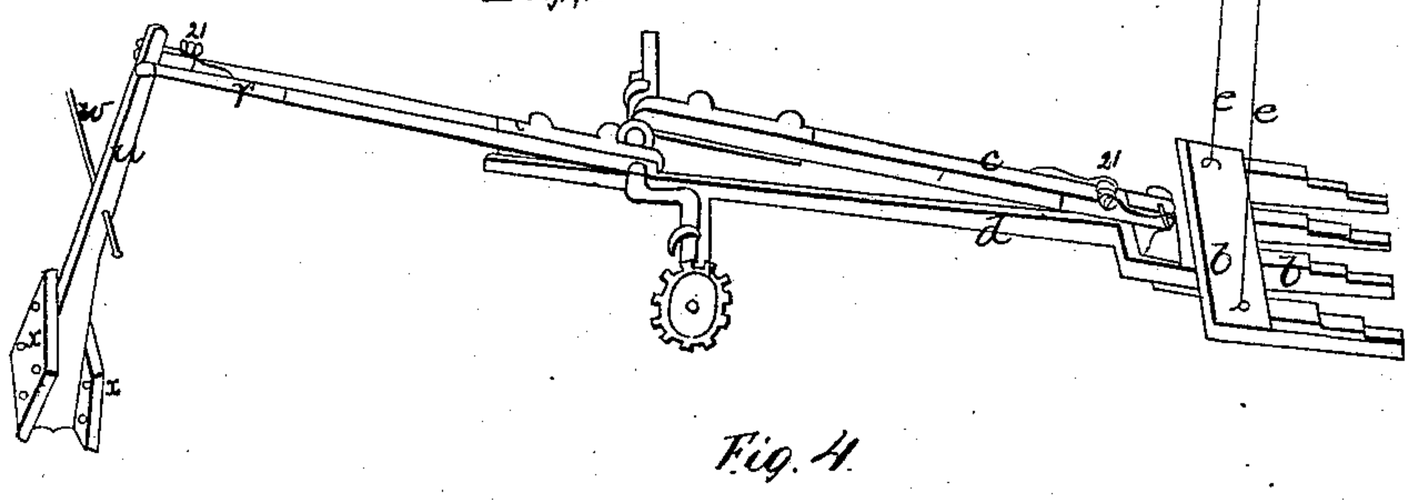


Fig. 3.

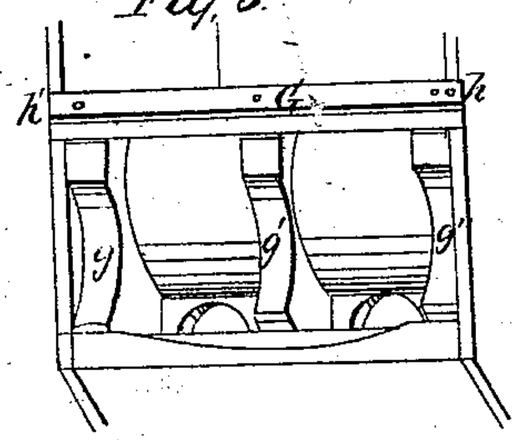
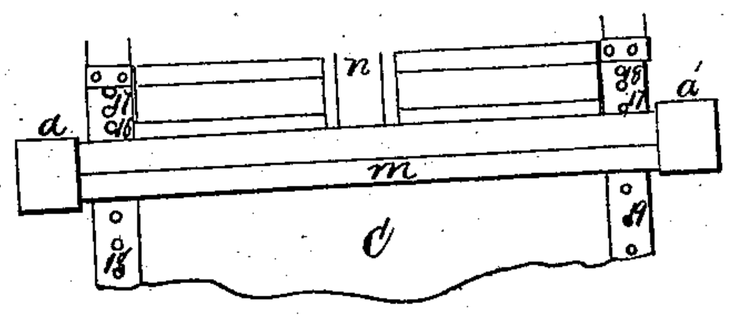


Fig. 4.



UNITED STATES PATENT OFFICE.

WILLIAM ORCUTT, OF CAMBRIDGE, ILLINOIS.

IMPROVED WASHING-MACHINE AND CHURN.

Specification forming part of Letters Patent No. **59,444**, dated November 6, 1866.

To all whom it may concern:

Be it known that I, WILLIAM ORCUTT, of Cambridge, Henry county, and State of Illinois, have invented a new and useful Device for Churning and Washing Clothes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective and elevated view of my machine, its construction externally and internally. Fig. 2 is a section of the machine, showing the operation of the churn-dashers and the washing-plungers as they are combined. Fig. 3 is a perspective view of the concave section and end of the box of the washing-machine. Fig. 4 is a view of the bottom of the elevated end of the wash-box and the cross-beam on which it rests.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my machine on the base or floor A, of dimensions sufficient to admit the entire structure. On this floor A is laid another platform, B, occupying a little more than half the length of A. On B stands the churn D, the upright posts *a* and *a'*, and the legs of the large wash-box C. The washing-machine consists of the large wash-box C, supported on the legs 1, 2, 3, and 4 at such inclination as to stand firmly on the platforms A and B. The upper surface of the box C is of irregular form, as is best suited for the appliance of lids E and F, and is of greater depth and altitude at the rear end than at that next the churn. The bottom on the inside is at such an angle of inclination that the water is retained, though the washing-plungers *b* and *b'* are constantly driving it toward the elevated left partially open for the ready action of the pitmen *c* and *c'*, and their guides *d* and *d'*, to which these plungers are attached.

The washing-plungers *b* and *b'* consist of pieces of wood or other suitable material, four in number, and each arranged parallel to the others. Two of these pieces are arranged to be continued in the long guides *d d'*, already referred to, and as shown by the section Fig. 2. These pass through the end of the wash-box C in a cavity.

The pieces of which the washing-plungers *b* and *b'*, as seen in Fig. 2, are composed diminish in size toward the reverse end from that by which they are connected with the pitmen *c* and *c'*, as shown.

On the upper surface of the washing-plungers, as seen in Fig. 2, are two suspending-rods, *e* and *e'*, fixed in staples, their upper ends being fastened to the cover of the box immediately above. These serve to keep the washing-plungers properly regulated.

The pitmen *c* and *c'* and the guides *d* and *d'* are jointed to each other by a hinge immediately over the washing-plungers at *f* and *f'*.

Near the hinder part of the box is the section shown in Fig. 3, forming the concave of the box C, and consisting of a metallic sheet attached to pieces of wood, or other suitable material, *g*, *g'*, and *g''*, fitted and suited to the box. The upper edge, G, of this section is of length sufficient to rest on the top of the side of the box at *h* and *h'*, to which it is secured by nails or screws.

Immediately under the section shown by Fig. 3 is a series of metallic slats, which with Fig. 3 form the inner concave surface shown by the blue lines in Fig. 1. These slats are so arranged on the bolts of a curvilinear form passing through them that the concave surface is thus continued toward the bottom of the box. At the rear end, near the bottom of the box, is a plug, *i*, for the removal of the water.

For the purpose of securing more steadiness to the box while operating, a rod, *k*, fixed by a staple to its under surface, extends to and is secured to the base A below.

The frame-work I consists of posts *a* and *a'*. At their lower ends are braces 5, 6, 7, and 8, which secure to them greater strength. Passing from the upper end of *a* to *a'* extends a cross-beam, *l*, and near their middle is another cross-beam, *m*. From cross-beam *l* to cross-beam *m* extends an upright beam, *n*, which is also parallel to *a* and *a'*. Resting on and attached to the cross-piece *m* is one end of the large wash-box C, securing to it steadiness.

The motive power is applied to the hand-crank *o*, or its equivalent. This hand-crank is

firmly attached to the wheel K, which is firmly fixed on a bolt or shaft, *p*, at a height convenient for the operator and to suit the parts in connection with it. In the wheel K works a pinion, L, which is fixed on and gives motion to a crank-shaft, M, secured firmly to the posts *a* and *a'* and the beam *n* by bearing 9 10 11. On the reverse end of the crank-shaft M to that on which is fixed the pinion is a fly-wheel, N, and to this, at *q*, is attached a hand-crank, for service when more than ordinary power is required. To the crank-shaft M are attached the pitmen *b* and *b'*, giving motion to the washing-plungers, as described above, also the pitmen *r* and *r'*, giving motion to the dasher-shafts of the churn.

The churn, its attachment, and machinery consist of the following, viz: the vessel for holding the cream, which is a metallic one, (indicated by the blue dotted lines in Fig. 1,) inside the box D, which is supported by four legs, 12 13 14 15.

The large churn-box is held securely in its place by means of the stay-rods *s* and *s'*. One end of each of these stay-rods is secured to posts *a* and *a'*; the other is secured to the sides of the box P at *t* and *t*.

The dasher-shafts U and U' pass downward through the cover R of the box P, and at the same place are pieces V and V', fitted to the cover R, through which the dasher-shafts also pass. Through these pieces V and V' is a long bolt, *w*, which serves as a fulcrum in the motion of the shafts.

The dasher-shafts U and U' widen toward the lower end, to each side of which are attached dashers, X X' X'' X''', as indicated by the red dotted lines in Fig. 1.

The vessel which contains the cream consists of sheet metal or other suitable material, (shown by the blue lines, Fig. 1,) around which hot or cold water may be poured through the aperture S, as is desired, to raise or lower the temperature of the cream within. The water is removed at the plug *y*; the buttermilk at the plug *z*.

For convenience, fixed at the end of the wash-box C, is the small box H, for holding the soap.

The springs 21 21 retain in place the bolts which constitute the joints by which the pitmen *r* and *r'* are connected to the shafts U and U', and pitmen *c* and *c'* to the guides *d* and *d'*. The ends of the springs, being bent at right angles, pass through eyes in the ends of the bolts.

The space in the box C designed for holding the clothes is enlarged or diminished by sliding the box backward or forward without disturbing any of the working parts of the machinery. In order to enlarge said space, the box is moved backward from the main crank-shaft M, and held in place by means of the pins 16 and 17, inserted into the holes 18 and 19. To make the space smaller the box is moved forward toward the crank-shaft and held in the manner described.

The shafts which operate the churn-dashers and washing-plungers are so constructed that they may be attached to or detached from the cranks, so that the operating of both machines at the same time may be dispensed with, if desired.

When a low speed is desired, the machines are operated by the crank on the wheel N, and the speed is increased by applying the power to the wheel K.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The crank-shaft M, pitmen *r* and *r'* and *c* and *c'*, guides *d* and *d'*, and springs 21 21, combined and arranged as and for the purpose set forth.

2. Adjusting and holding the washing-box C by means of the pins 16 and 17 and holes 18 and 19, as set forth, and for the purpose specified.

WILLIAM ORCUTT.

Witnesses:
O. C. PAGE,
J. S. HINMAN.