

G. A. THODE.
MANUAL MOTOR.

(Application filed Mar. 15, 1901.)

(No Model.)

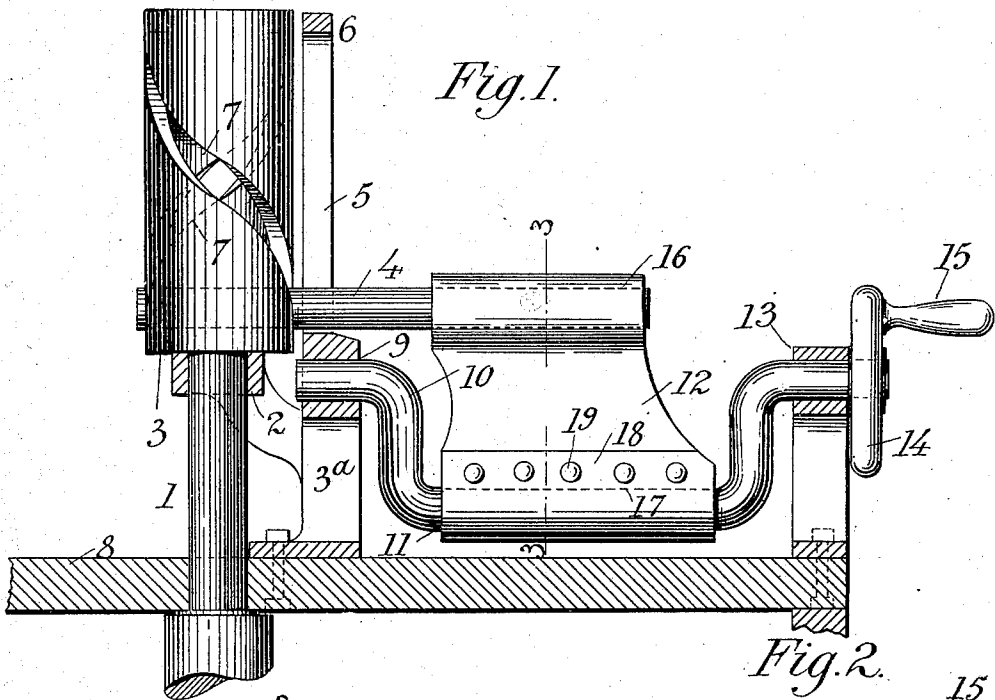


Fig. 1.

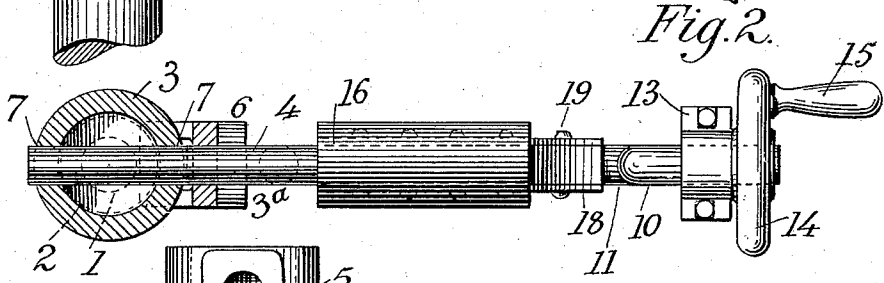


Fig. 2.

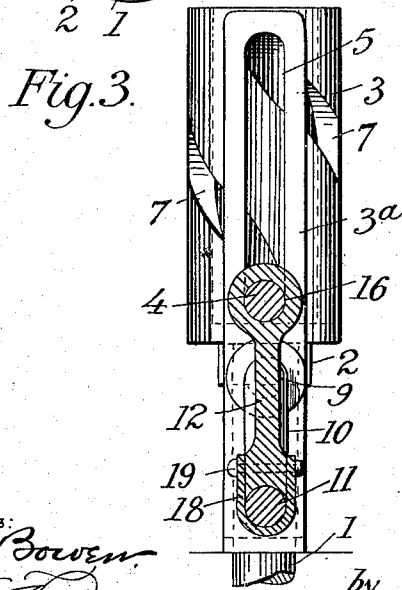


Fig. 3.

Witnesses:
J. S. Bowen
J. H. Riley

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UNITED STATES PATENT OFFICE.

GUSTAV A. THODE, OF BAZILE MILLS, NEBRASKA.

MANUAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 686,366, dated November 12, 1901.

Application filed March 15, 1901. Serial No. 51,369. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV A. THODE, a citizen of the United States, residing at Bazile Mills, in the county of Knox and State of Nebraska, have invented a new and useful Manual Motor, of which the following is a specification.

The invention relates to improvements in manual motors.

10 The object of the present invention is to improve the construction of manual motors and to provide one adapted for use in connection with washing-machines, churns, and the like and capable of reversely rotating a vertical shaft, whereby washing mechanism or a dasher may be rapidly operated at the expenditure of a minimum amount of labor.

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 vertical sectional view, partly in elevation, of a manual motor constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 1.

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

30 1 designates a vertical shaft journaled in a suitable bearing 2 of a bracket 3^a and provided with a cylindrical head 3, which is provided with a spiral way for the reception of an arm 4, consisting, preferably, of a rod which is guided in a vertical opening 5 of a guide 6 and which is moved vertically by the means hereinafter described, whereby the shaft 1 will be reversely rotated or vibrated. The cylindrical head, which may be solid, is preferably hollow, as shown, for lightness, and the spiral way is formed by a pair of spiral slots 7, through which the rod 4 extends, 45 as clearly shown in Fig. 2. The spiral slots terminate short of the top and bottom of the cylindrical head, and the vertical guide, which is arranged contiguous to the head 3, extends upward from the bearing-bracket 3^a, as clearly shown in Fig. 1 of the drawings. The bracket 50 is provided with a suitable base, which is secured to the upper face of the top or cover 8

of a receptacle for containing clothes to be washed or cream to be churned. The bearing 2, upon which the cylindrical head 3 rests, 55 is formed in an arm which extends upward from the bracket. The bearing-bracket is also provided with a bearing-opening 9, receiving the inner end of a crank-shaft 10, which is provided between its ends with a crank loop or bend 11, and the latter is connected by a plate or piece 12 with the vertically-movable horizontally-disposed rod 4. The outer portion of the crank-shaft is journaled in an outer bearing 13, and the outer 65 end of the shaft carries a wheel 14, having an eccentrically-arranged handle 15, forming a crank and adapted to be grasped by the operator; but an ordinary crank-handle may be employed, if preferred. The connecting plate 70 or piece is provided at its top with a transverse opening 16 to receive the rod, and it has a bearing-groove 17 at its lower edge for the reception of the crank-bend, which is secured to the connecting plate or piece by a 75 bearing plate or clip 18, approximately U-shaped in cross-section. The sides of the bearing plate or clip receive the lower portion of the connecting plate or clip and are secured to the same by suitable fastening devices 19, preferably consisting of rivets. By 80 this construction the parts may be readily assembled. The vertical shaft 1 depends from the top or cover of the body or receptacle, and it may be provided with washing 85 mechanism, or a churn-dasher may be applied to it. When the crank-shaft is rotated, the horizontal rod will be vertically reciprocated and will engage the spiral or cam edges formed by the slots or openings of the cylindrical head, and the latter will be rapidly 90 rotated. When the horizontal rod 4 moves upward, the cylindrical head will be rotated in one direction, and when the rod descends the cylindrical head will be reversed and rotated 95 in the opposite direction.

100 It will be seen that the manual motor is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that it is adapted to be applied to washing-machines and other uses and will enable the operation of washing to be rapidly performed at the expenditure of a minimum amount of labor.

What I claim is—

1. In a device of the class described, the combination of a bracket having a vertical guide, a vertical shaft journaled on the bracket and provided with a cylindrical head having a spiral way, a vertically-movable horizontally-disposed rod extending through the guide and the cylindrical head, a crank-shaft disposed horizontally and provided with means for rotating it, and a connecting-piece secured to the crank-shaft and to the horizontal rod, substantially as described.

2. In a device of the class described, the combination of a bracket having a vertical guide, a vertical shaft journaled on the bracket and provided with a hollow cylindrical head supported by the bracket and provided with opposite spiral slots forming a spiral way, a horizontal crank-shaft having a crank-bend and supported by the bracket, a connecting piece or plate secured at its lower edge to the crank-bend, and a rod or arm extending from the upper portion of the connecting-piece and passing through the guide and through the slots of the cylindrical head, substantially as described.

3. In a device of the class described, the combination of the bearing-bracket having a bearing-arm and provided with a vertical guide having a vertical opening, a vertical shaft mounted on the bearing-arm of the bracket and provided with a cylindrical head having a spiral way, a rod passing through the opening of the vertical guide and extending through the spiral way of the cylindrical head, a connecting piece or plate provided at its top with an opening for the rod, a horizontal crank-shaft having a crank-bend and supported by the said bracket, a bearing plate or clip secured to the bottom of the connecting-piece and receiving the crank-bend, an outer bearing for the crank-shaft, and means for rotating the latter, 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.

GUSTAV A. THODE.

Witnesses:

J. S. JACKSON,
W. C. CALEY.