

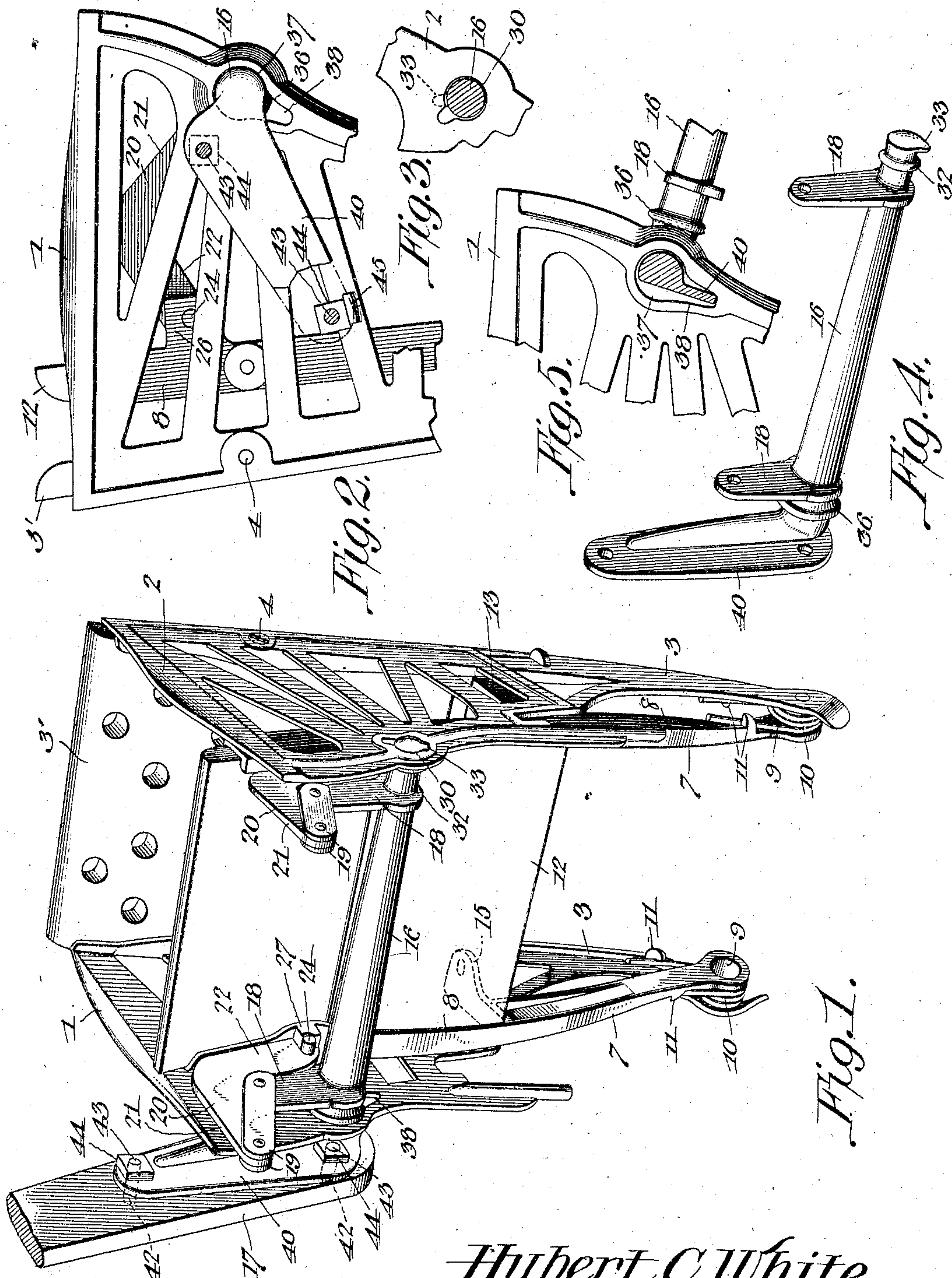
No. 780,693.

PATENTED JAN. 24, 1905.

H. C. WHITE.  
MOP WRINGER.

APPLICATION FILED MAR. 8, 1904.

2 SHEETS—SHEET 1.



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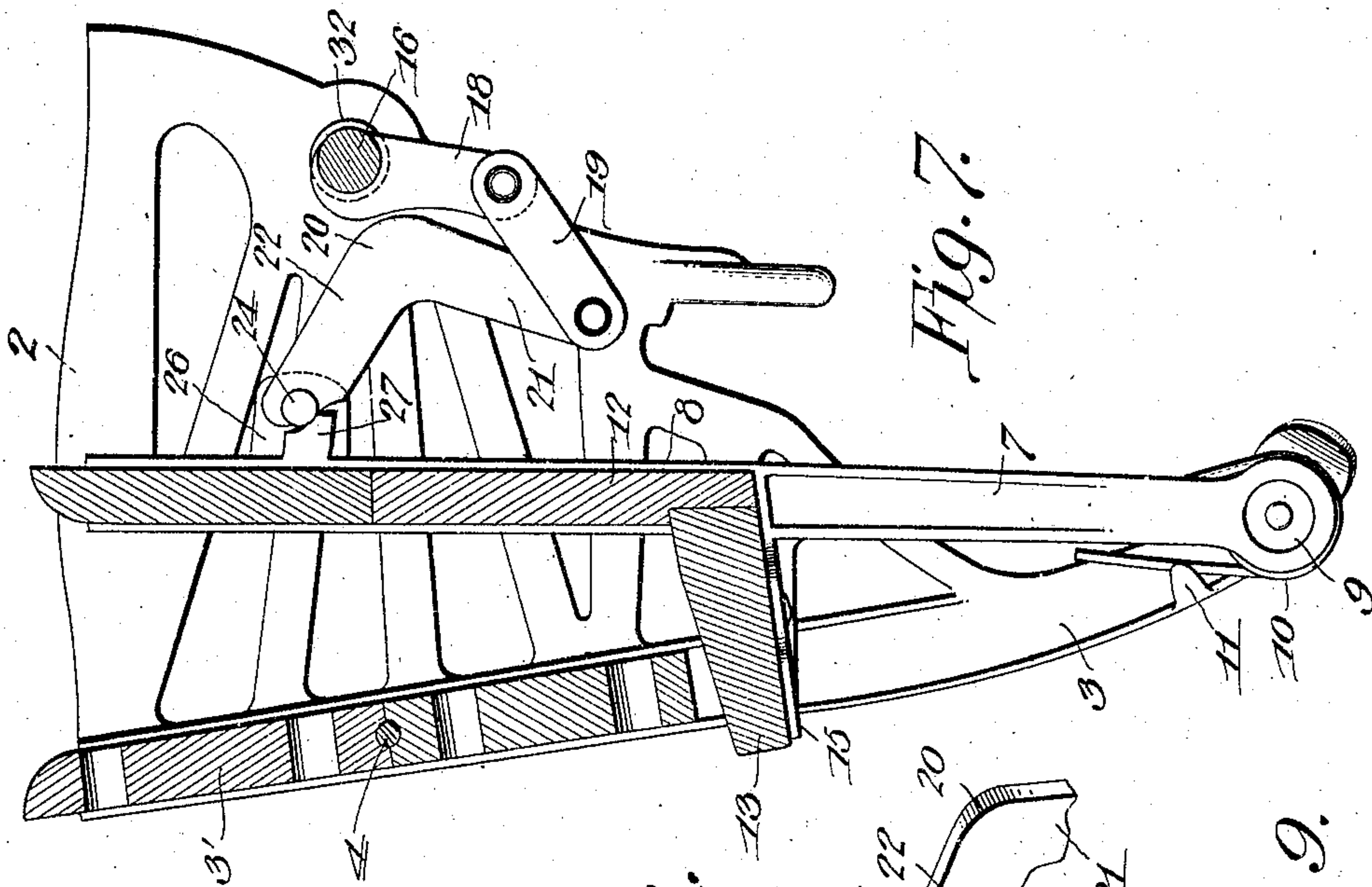


Fig. 8.

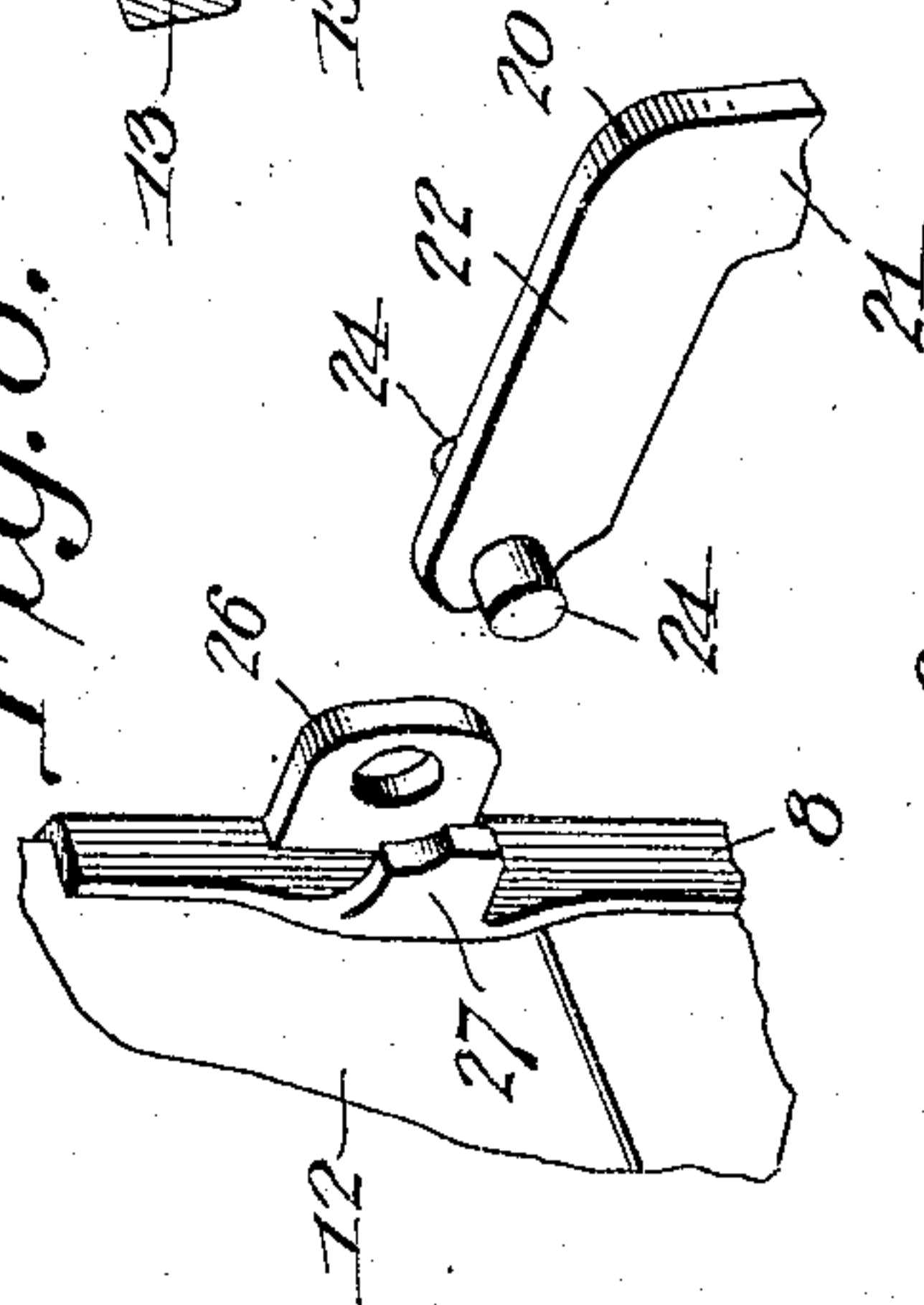


Fig. 9.

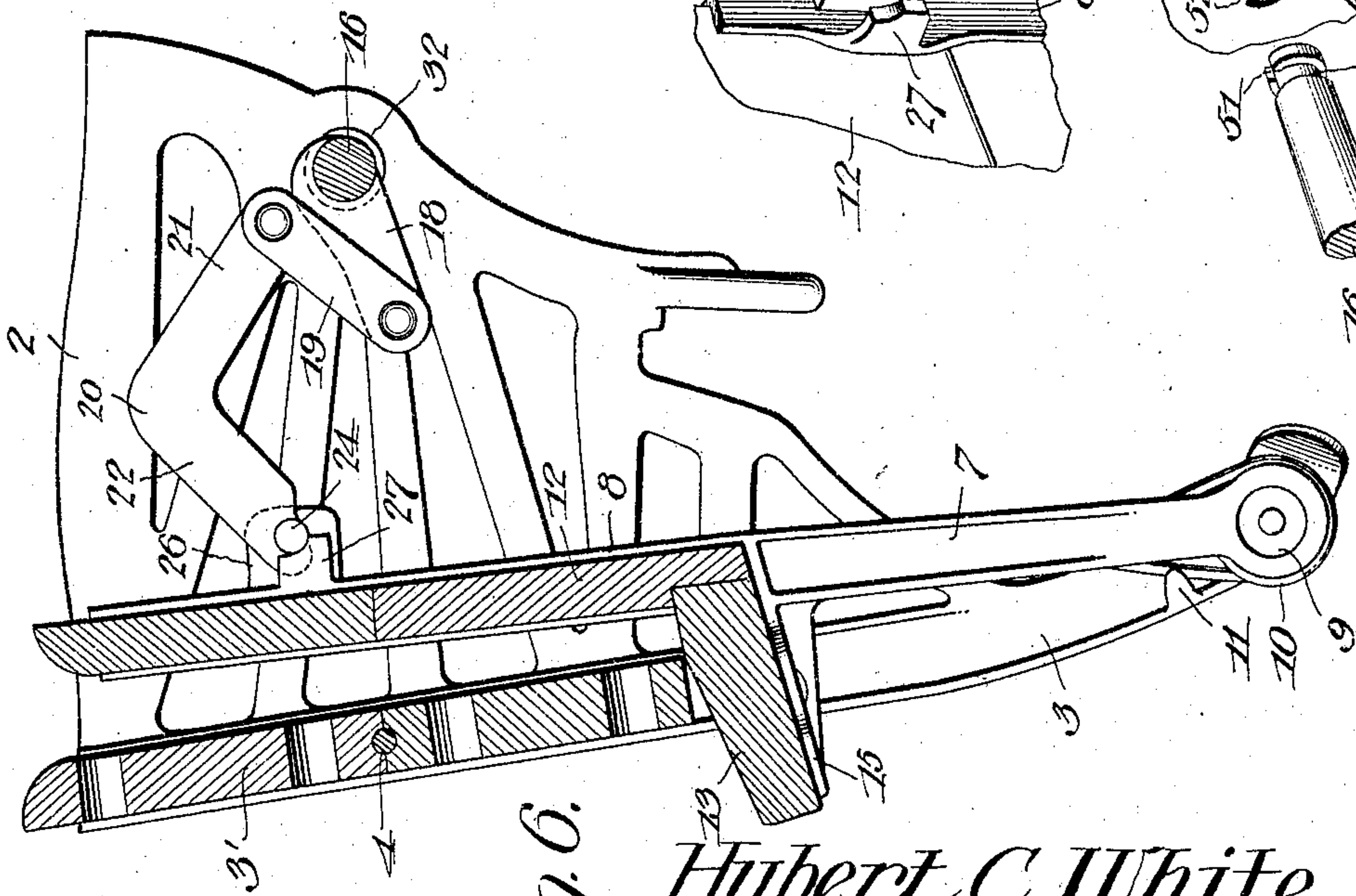
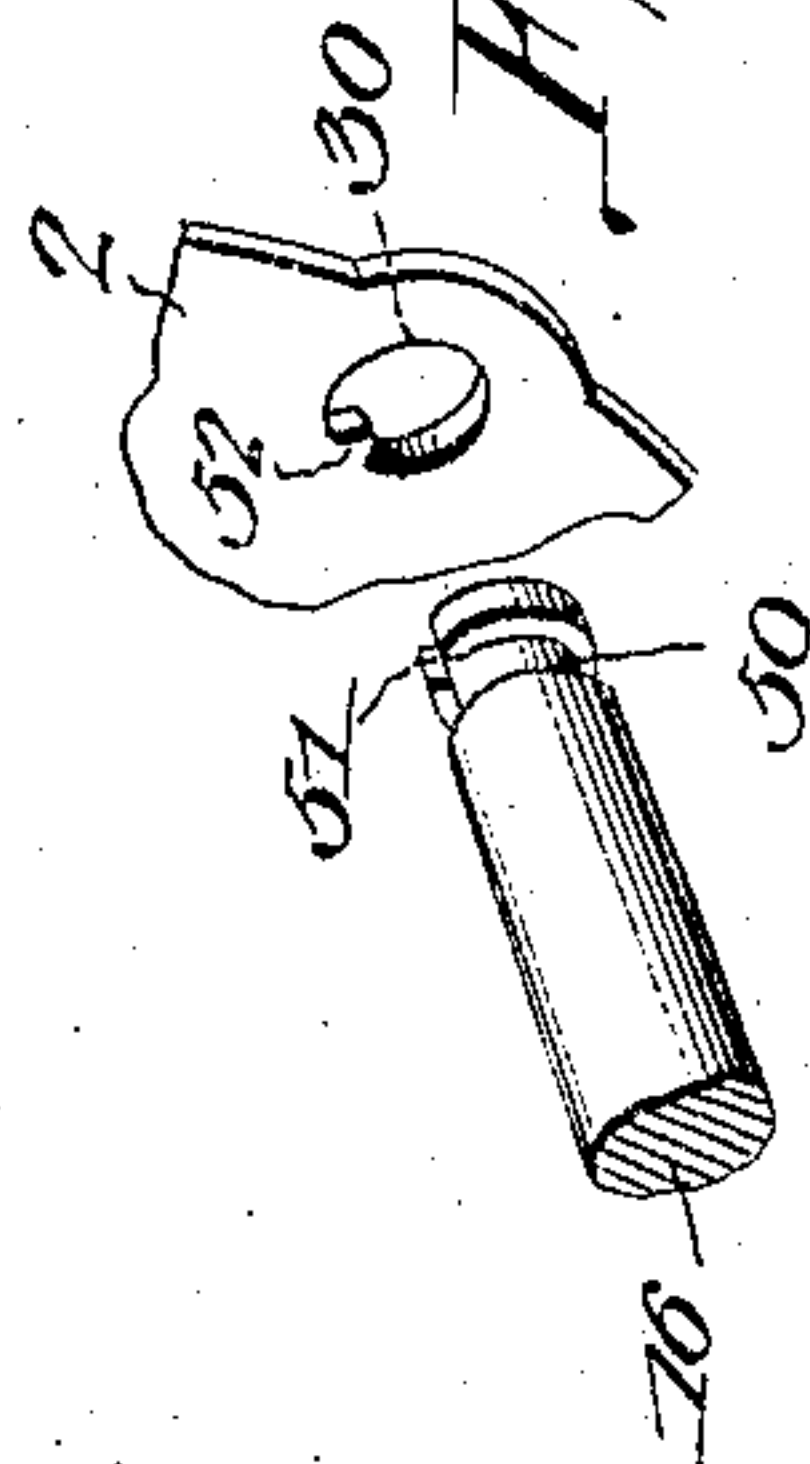


Fig. 6.

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# UNITED STATES PATENT OFFICE.

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## MOP-WRINGER.

SPECIFICATION forming part of Letters Patent No. 780,693, dated January 24, 1905.

Application filed March 8, 1904. Serial No. 197,096.

*To all whom it may concern:*

Be it known that I, HUBERT C. WHITE, a citizen of the United States, residing at Jamaica, in the county of Windham and State of Vermont, have invented a new and useful Mop-Wringer, of which the following is a specification.

This invention relates to improvements in mop-wringers, and has for its principal object to improve and strengthen the construction and at the same time simplify the assembling of the parts and reduce the cost of manufacture.

With this and other objects in view, as will more fully hereinafter appear, the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a mop-wringer constructed in accordance with the invention. Fig. 2 is a side elevation of a portion of the wringer, the operating lever or handle being removed. Fig. 3 is a fragmentary view of the opposite side of the wringer-frame, showing the operating-shaft in section. Fig. 4 is a perspective view of the rock-shaft detached. Fig. 5 is a fragmentary view looking from the handle side of the wringer, showing the method of inserting the operating-shaft, the handle-attaching arm of the latter being shown in section. Figs. 6 and 7 are transverse sectional elevations of the wringer, the parts being shown in different positions. Fig. 8 is a detail perspective view showing the connection between the movable presser-board and the power-transmitting lever. Fig. 9 is a similar view of a slightly-modified construction of shaft and frame.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The wringer shown in the present instance

includes a pair of side frames 1 2, both formed of cast metal or other suitable material and provided with pendent legs 3, the lower ends of which are turned inward in order to partly follow the contour of the inner surface of the bucket or other support to which the wringer is to be applied. One edge of each frame is provided with flanges for the support of a perforated stationary presser-board 3', which is held in position by a transversely-disposed bolt 4, passing from frame to frame.

To the lower ends of the legs 3 are pivoted the legs 7 of a pair of movable frames 8, and at the point of connection between the side frames and the legs 7 are arranged drums or spools 9 for the support of springs 10, the ends of which bear against lugs 11, formed on the legs and frames. The frames 8 carry a movable presser-board 12, which may be or may not be perforated, but preferably is of the imperforate type in order to prevent the water squeezed from the mop passing over the top of the bucket or other receptacle. To the lower portion of the frame is secured a movable bottom board 13, which rests on and is riveted or otherwise secured to arms or ribs 15, forming a part of said frame. The movable presser-board 12 moves toward and away from the stationary presser-board and is returned to open position when relieved from pressure by means of the springs 10.

The stationary frame members are provided with bearing-openings for the reception of a transversely-extending rock-shaft 16, having at one end an operating-handle 17. The shaft 16 is provided with a pair of rocker or crank arms 18, that are connected by links 19 to one end of a lever or link 20, having two arms 21 and 22 extending approximately at right angles to each other. Each arm 22 is provided with a pair of oppositely-disposed pins or lugs 24, one of which is received in an opening formed in a lug 26, that is integral with the frame 8, while the other bears against a shoulder formed on a lug 27. The space between the two lugs is sufficiently wide to permit the entrance of the end portion of arm 22, and when once placed in position the parts will be maintained by the connection of the arm 21



of the lever with the intermediate links. The end of the arm 22 is cut away at one side of the pivot pin or lug 24, so that if the arm be adjusted in the position shown in Fig. 7 it may be moved laterally and clear the lug 27, and thus remove the pin or lug 24 from the opening in the lug 26. This permits of the ready connection and, if necessary, the disconnection of the parts without the use of tools, and bolts, screws, or similar auxiliary securing devices are rendered unnecessary. Under ordinary circumstances the rock-shaft 16 cannot be turned to an extent sufficient to permit the parts to assume the position shown in Fig. 7, so that they will all remain properly connected while the wringer is in operation. The arrangement of the parts is such that by grasping and moving the operating-lever the rock-shaft and jointed levers will move the presser-board 12 in the direction of the stationary presser-board and effect the squeezing of the mop or other article inserted between the boards.

One end of the rock-shaft 16 is reduced somewhat in diameter and passes through an opening 30, formed in the frame 2, and immediately in advance of this reduced portion the rock-shaft has an annular rib 32, which bears against the inner face of the frame 2 and prevents inward movement of said frame. The wall of the opening 30 is notched to permit the passage of a lug 33, projecting radially from the reduced end portion of the rock-shaft, and when said rock-shaft has been turned to an extent sufficient to bring the lug into alinement with the notch the side frame 2 may be placed on or removed from the shaft. Near the opposite end of the shaft is an enlarged annular rib 36, and beyond this the shaft is somewhat reduced in diameter and fits in an opening 37 in the frame 1, the wall of said opening being notched or recessed, as indicated at 38. The end of the shaft is turned at a right angle to form an approximately flat rocker-arm 40, that is ribbed for a portion of its length and tapered in order to gradually decrease the thickness of the metal from the shaft end to the outer end of said arm. The opening 37 and notch correspond in general contour to the cross-sectional contour of this arm at the point of greatest transverse area, so that if the parts be in proper position the arm may pass through the notch and the opening and the shaft then turned so as to place the frame 1 in proper position against the annular rib or flange 36.

The handle 17, which is preferably formed of wood, is provided with a pair of openings 42, disposed at a distance from each other and adjacent to the opposite edges of the lever, so that the strength of the lever may be preserved to the fullest extent. Through these openings and through small openings in the rocker-arm are passed bolts 43, having nuts 44, the outer of which is adapted to come into

engagement with a lug 45, projecting from one side of the frame 1, and stop the movement of the lever when the movable presser-board has reached the limit of its squeezing movement.

It will be noted that the bolt-openings of the operating-lever are so disposed that nearly the full width of the lever will be available at the fulcrum-points represented by the bolts, and there is but little likelihood of breakage or splitting of the lever when in operation.

The lug 45 is engaged by one of the nuts 44 and not only prevents excessive forward movement of the presser-board 12, but also prevents turning movement of the rock-shaft to an extent sufficient to bring the lug of the rock-shaft in alinement with the notch in opening 30, so that the parts cannot separate accidentally.

It will of course be understood that the construction of the rock-shaft and the manner of connecting the same to the frame 2 may be modified, as shown in Fig. 9, by forming an annular groove 50 near the end of the shaft and providing said shaft with a notch 51 for the reception of a tongue or lug 52, projecting inward from the wall of the opening 30. In this construction the notch is alined with the lug until after the latter has entered the groove 50, and the rock-shaft is then turned to an extent sufficient to hold the parts together.

In assembling the parts the arm 40 of the shaft is first inserted through the opening 37, and the shaft is turned around until it is in a position at right angles to the side of the frame, after which the frame 2 may be placed on the opposite end of the shaft. The shaft may then be turned until the projecting lug 33 and the notch of the opening 30 are out of alinement with each other, so that it becomes impossible to again separate the frames until the lug and notch are again in alinement. The lugs 24 may be placed in position when the arms 20 are in the position shown in Fig. 7, and afterward when the shaft is turned to the position shown in Fig. 6 it would be impossible for the arm 22 to move laterally from the space between the lugs 26 and 27. The turning movement of the shaft to unlocking position is prevented by the engagement of one of the nuts 44 with the lug 45, so that it will be impossible for the parts to accidentally separate when the wringer is in use. Should it become necessary, however, the nuts and bolts may be removed and the shaft turned until lug 33 is in alinement with the notch of opening 30, and the parts may be readily separated.

Having thus described the invention, what is claimed is—

1. In wringer construction, a pair of side frames having openings provided with notched walls, a shaft having annular ribs or projections for engaging against the inner face of the frames, the opposite ends of the shaft be-



ing provided with radially-projecting portions adapted to pass through the notches, and, when turned out of alinement therewith, to prevent separating movement of the frames, and means for preventing movement of the shaft to unlocking position.

2. In wringer construction, a pair of side frames having openings provided with notched walls, a rock-shaft having ribs or projections for engaging against the inner faces of such frames and preventing inward movement thereof, the opposite ends of the shaft having radial projections adapted to pass through the notches, and, when turned out of alinement therewith, serving to prevent separating movement of the frames, an operating-lever secured to one of said projecting portions, and a stop carried by one of the frames and serving by engagement with a portion of the lever to prevent movement of the rock-shaft to unlocking position.

3. In wringer construction, a pair of spaced side frames having openings provided with notched walls, a rock-shaft having projecting portions adapted to pass through the notches and serving by engagement with the outer walls of the frames to prevent separating movement thereof, one of said projections being formed for attachment to a lever, an operating-lever, securing-bolts for holding the lever in position, and a stop arranged in the path of movement of one of said bolts and serving normally to prevent rocking move-

ment of the shaft to unlocking position, the removal of the bolt permitting the turning of the shaft to unlocking position.

4. In wringer construction, a pair of side frames having openings provided with notched walls, a shaft having at one end a projecting portion adapted to pass through one of the notches, an elongated radial arm rigid with the opposite end of the shaft and of a contour in cross-section corresponding to the opening and notch of the opposite frame, an operating-lever for attachment to the arm, removable bolts extending through the arm and lever, and a stop disposed in the path of movement of one of said bolts, substantially as specified.

5. In wringer construction, the combination with an operating-shaft having a rocker-arm, of an operating-lever, securing-bolts for connecting the operating-lever to the rocker-arm, the bolts being disposed through openings formed in the lever at points near the opposite edges thereof, the strain during operation being resisted by practically the full width of the lever at the fulcrum-points represented by said bolts.

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

HUBERT C. WHITE.

Witnesses:

JULIUS G. WHITE,  
C. C. ROBINSON.