

# Thomas B Neill's Improvement in Washing Machines

PATENTED JUL 18 1871

117197

Fig 1

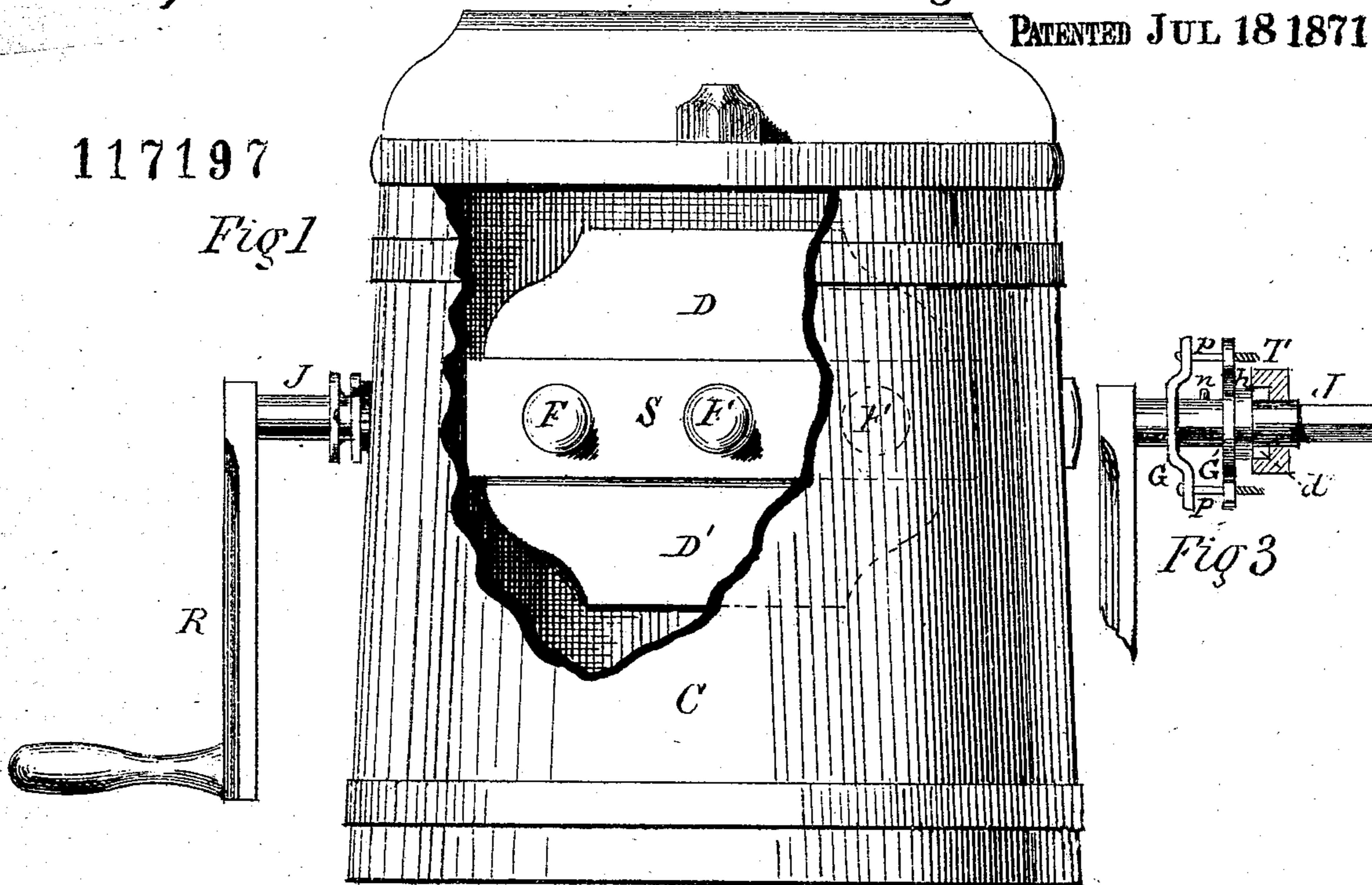


Fig 3

Fig 2

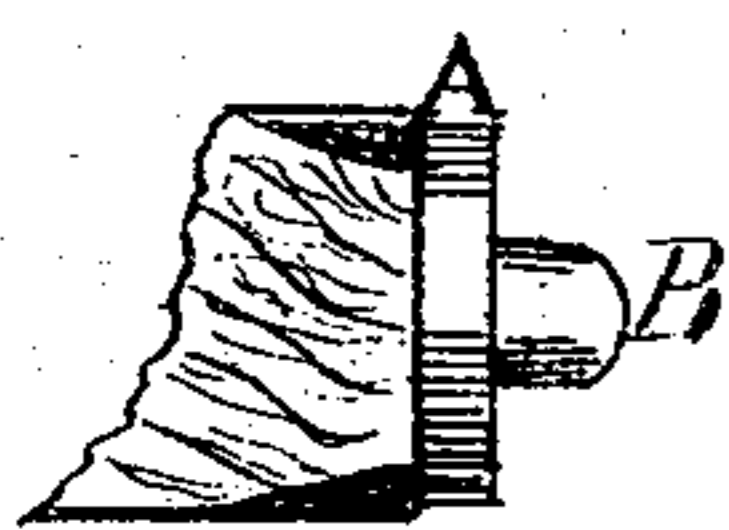


Fig 4

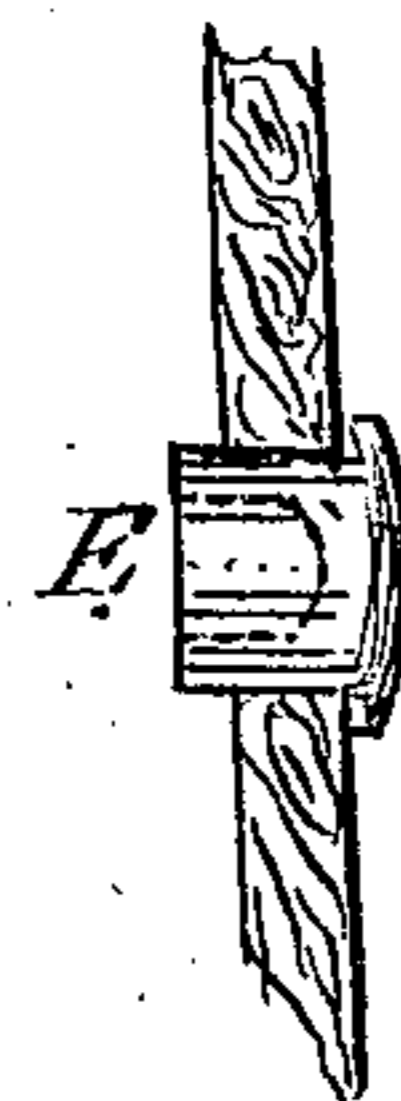
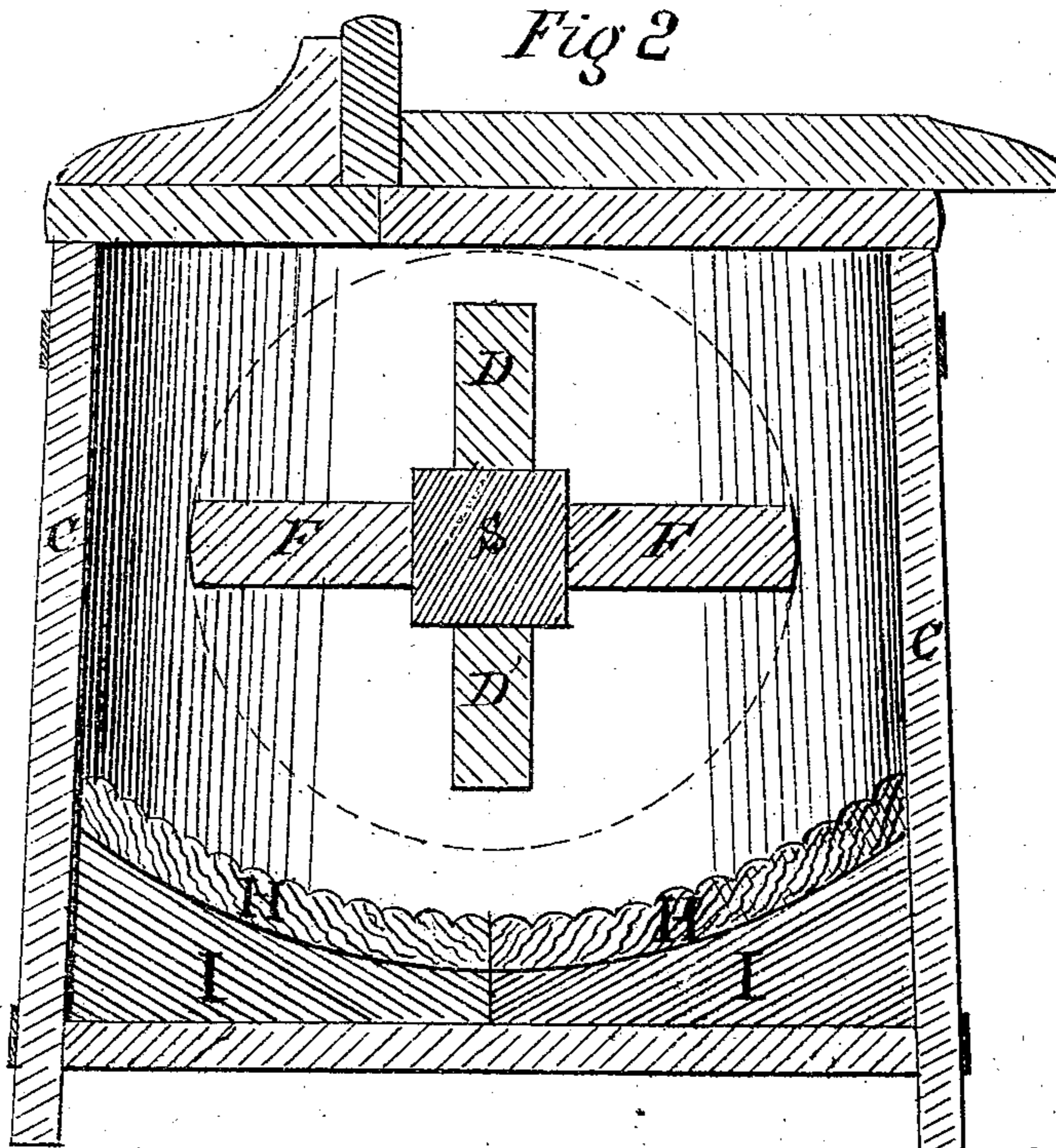


Fig 5

Witnesses  
John A. D. Schenck  
Geo. C. Nichols

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# UNITED STATES PATENT OFFICE.

THOMAS B. NEILL, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 117,197, dated July 18, 1871; antedated July 5, 1871.

*To all whom it may concern:*

Be it known that I, THOMAS B. NEILL, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines; 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 drawing and to the letters of reference marked thereon.

The object of my invention is to provide a washing-machine of a cheap and simple construction, and which will be easy of and effectual in operation.

Figure 1 is a side elevation of my invention with a portion of the outer casing broken away. Fig. 2 is a vertical section of the same. Figs. 3, 4, and 5 are detached views of various parts of the machine.

To enable those skilled in the art to make my invention, I will now proceed to describe it.

The casing C is made of a circular form, with the sides slightly tapering toward the top, and has placed within it a horizontal shaft, S, made of wood and of a square form. The said shaft is made somewhat shorter than the inside diameter of the casing C, and is mounted in appropriate bearings secured in the sides of the casing. On two opposite sides of the shaft S is secured a series of fingers, F F F, and on the two reverse sides are secured two blank flanges, D and D', all of which are made of wood and project out at right angles, and operate on the clothes when a rotary motion is imparted to the shaft. The journals on which the shaft S revolves consist of a flange, A, Fig. 4, secured to one end of the shaft, and provided with a cylindrical projection, B, which is inserted in a socket, E, Fig. 5; and the journal J, Fig. 3, has one end made square and is fitted in a socket formed in the opposite end of the shaft; and the bearing T, through which the journal passes, is fixed in the side of the casing, and is provided with an annular recess, *d*, for the reception of packing. Two flanges, G and G', are passed over the journal J, one of which has a circular projection, *h*, formed on it, which fits in the recess *d*; and the outer flange G is made with an offset, so as to allow a space between them for the passage of the pin *n*, which

permits the journal to turn, and, at the same time, prevents its working out and becoming detached. Two screws, P P, are passed through the flanges and into the wood-work of the casing, and are tightened up when it is desired to compress the packing and make the joint perfectly water-tight. A rotary motion is imparted to the shaft S through a crank, R, applied to the outer end of the journal J. In the bottom of the casing C are placed two curved pieces, H H, the upper surfaces of which are corrugated somewhat similar to an ordinary wash-board. These pieces are supported on cleats I I placed beneath them.

The operation is as follows: A sufficient quantity of water is placed in the machine to reach to about the height of the shaft S, and after the articles to be washed are inserted a rotary motion is given to the shaft, which causes the fingers F F F to take hold of the articles and carry them around and through the water with a rapid motion, and, at the same time, passes them over the corrugated surfaces of the pieces H and H. This operation of carrying the articles around rapidly and causing them, on entering the water, to strike with great force will thoroughly cleanse them. The flanges D and D', during the revolutions of the articles, will separate and prevent twisting or winding of them around the fingers. If desired, the pieces H H may be dispensed with.

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

1. The combination, with the shaft S, of the series of fingers F and blank flanges D D', substantially as and for the purpose described.

2. The shaft S, carrying the fingers F and flanges D D', and provided with flange A and projection B, in connection with the socket E and journal J, as and for the purpose described.

3. The combination, with the journal J, of the bearing T, recess *d*, flanges G G', projection *h*, and screws P P, substantially as and for the purpose described.

THOMAS B. NEILL.

Witnesses:

ISAAC R. OAKFORD,  
GEO. E. NICHOLS.