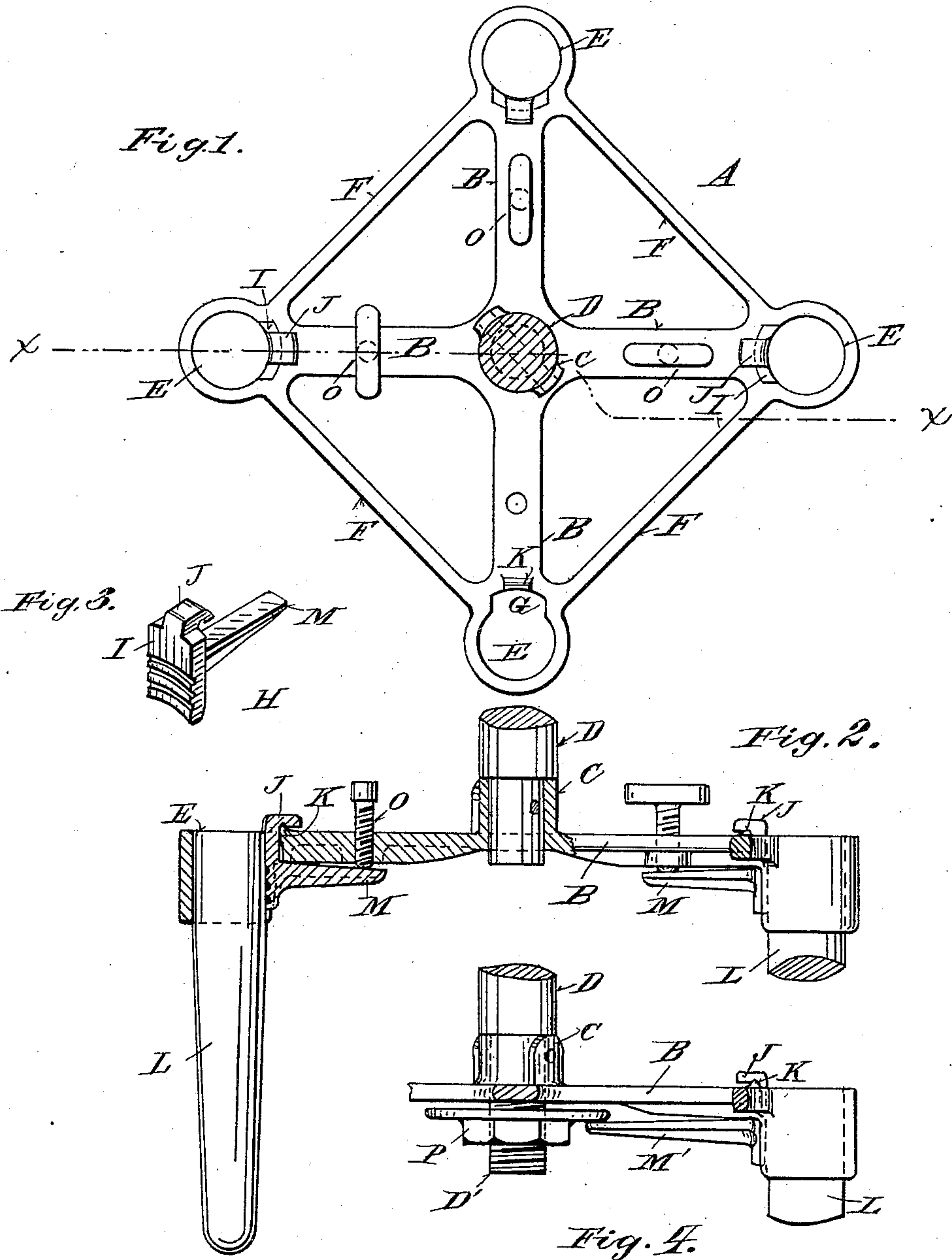


(No Model.)

J. W. HAMILTON.  
WASHING MACHINE.

No. 427,859.

Patented May 13, 1890.



WITNESSES:

*H. M. Plaisted.*  
*Warren Hull,*

INVENTOR

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BY *H. A. Soulemin*  
HIS ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHN W. HAMILTON, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE CHAMPION  
SHELF MANUFACTURING COMPANY, OF SAME PLACE.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,859, dated May 13, 1890.

Application filed February 6, 1890. Serial No. 339,414. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. HAMILTON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings:

This invention relates to certain new and useful improvements in washing-machines, and the object is to provide a simple means of securing the beaters in the revolving head thereof, the peculiarities of which will be more fully described, and pointed out in the claims.

In the accompanying drawings, forming a part of this specification, and in which like reference-letters indicate corresponding parts, Figure 1 represents a plan view of the revolving head and the shaft thereof in section; Fig. 2, a section on the line *xx* of Fig. 1; Fig. 3, a perspective view of the hinged portion forming a clamp or bent lever, and Fig. 4 a modification showing another way of operating the clamps.

The letter A designates the skeleton frame of the revolving head having arms B radiating from the hub C, in which the central shaft D is secured by a pin extending through said hub or by other suitable means. Sockets E are formed on the ends of the arms B, which are stayed by the braces F. A vertical slot G is formed in the inner wall of each of said sockets E, in which is adjustably fitted a clamp H, consisting of a plate I, having a curved portion J, by which said clamp is pivoted or hung to a projection K on the arm B, so as to swing inward about the point K as a center or fulcrum and reduce the size of said socket. The plate I is corrugated or grooved, so as to firmly hold the beaters L, which are preferably made of wood, in their adjusted positions. The plate I has an extension or arm M, extending under the arm B and engaging with a screw-threaded piece O, so as to be depressed thereby and cause the plate

I to compress the beater L the strongest at a point between the ends thereof.

It will be readily seen that the longer the arm M the greater the leverage obtained by the screw-threaded piece O and the more firmly the beaters are held in their sockets. The shape of the beaters is not limited to that shown, but may be of any convenient form.

In Fig. 4 the inner ends of the arms M are engaged by a flange on a nut P, turning on a screw-threaded extension D' of the axle D below the arms B. By this means all the arms M are uniformly depressed by the flanged nut P. The preferred form, however, is by the set-screws O, as by this means each clamp can be adjusted independently of the others.

While I have shown and illustrated the clamp in combination with the revolving head of a washing-machine, I do not wish to limit myself to this use or form, but may apply it to other machines having sockets which are to be diminished in size. Thus it will be seen that by this simple and effective arrangement of a plate forming a part of the socket and having an extension by which the leverage is increased and a bent lever formed with said plate, whereby the beaters may be firmly secured in the sockets, any shrinkage or play is readily taken up, and the beaters are easily and cheaply replaced in case of breakage.

I do not limit myself to the exact form or construction of my device shown herein.

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

1. A clamp consisting of a plate that forms a part of a socket and an arm integral with said plate and forming therewith a bent lever, and a projection supporting the plate in the said socket and acting as a fulcrum for the lever.

2. The combination, with a skeleton head and sockets in said head, of beaters adjustably secured in said sockets, a side portion of each socket pivoted so as to swing inward and reduce the size of said sockets, and means



to adjust said portion so as to secure said beaters.

3. The combination of a skeleton head having radiating arms, a socket in the end  
5 of each arm having a slot in the side thereof, a clamp having arms and supported in the slot and fulcrumed so as to form a bent lever, a screw-threaded piece acting on one arm of

the lever, and beaters fitting said sockets and gripped by said clamps. 10

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. HAMILTON.

Witnesses:

H. M. PLAISTED,  
WARREN HULL.