

J. E. GRIBBEN.  
WASHING MACHINE.  
APPLICATION FILED AUG. 21, 1909

952,192.

Patented Mar. 15, 1910.

Fig. 1

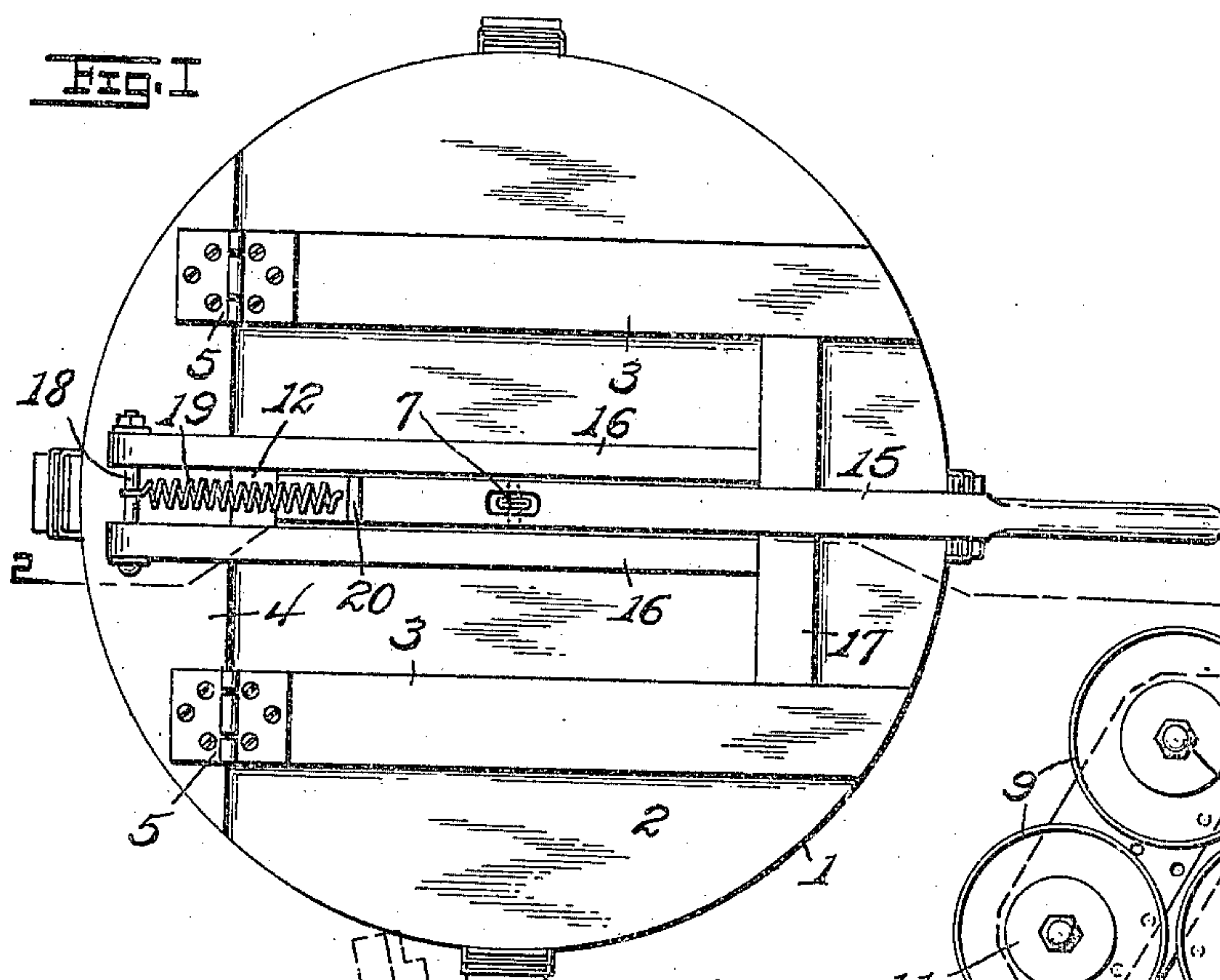


Fig. 3

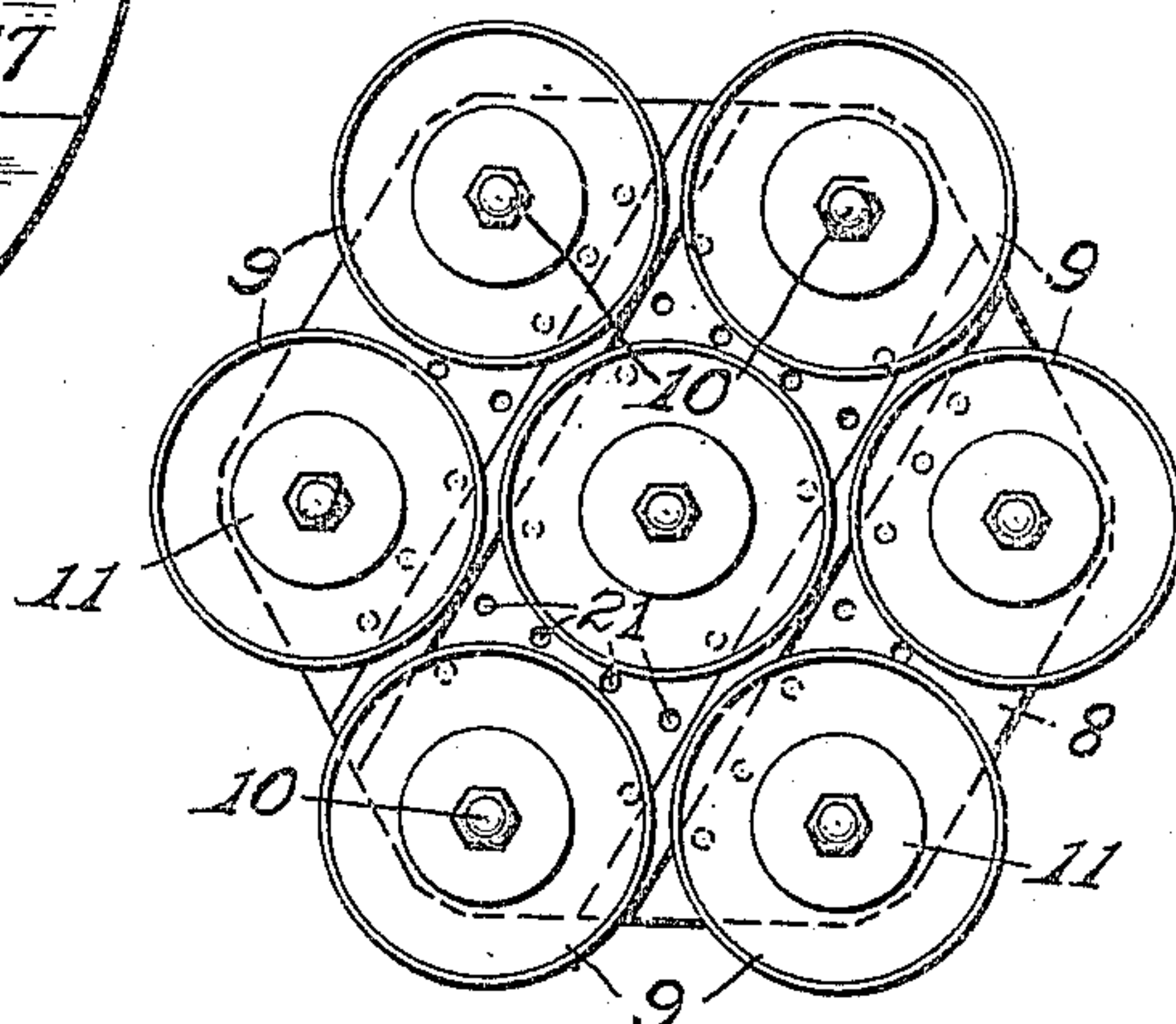
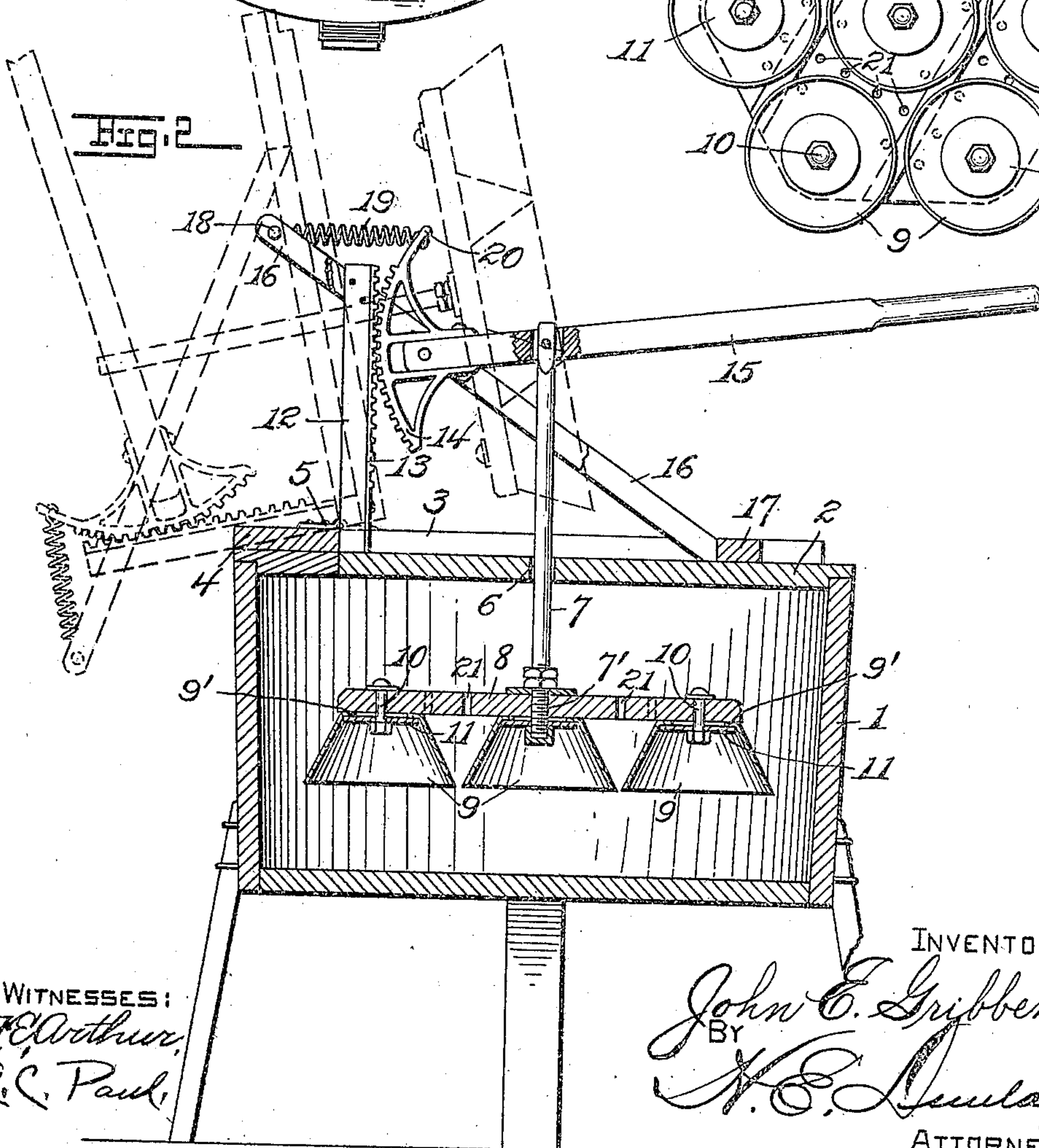


Fig. 2



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# UNITED STATES PATENT OFFICE.

JOHN E. GRIBBEN, OF MOUNDSVILLE, WEST VIRGINIA.

WASHING-MACHINE.

952,192.

Specification of Letters Patent.

Patented Mar. 15, 1910.

Application filed August 21, 1909. Serial No. 514,037.

*To all whom it may concern:*

Be it known that I, JOHN E. GRIBBEN, a citizen of the United States of America, and resident of Moundsville, county of Marshall, and State of West Virginia, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to improvements in washing machines, and it has for an object to provide a machine of extremely simple and comparatively inexpensive construction wherein clothes to be washed are subjected to a non-injurious pounding action.

A further object is to provide a machine of the character mentioned wherein inverted cups are employed as pounding elements, which cups serve as a medium for introducing air into the water in the tub for stirring the clothes.

With these and other objects in view, the invention finally consists in the particular construction, arrangement and combination of parts which will hereinafter be fully described, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a top plan view of a washing machine embodying my invention; Fig. 2 is a vertical section on the line 2—2, Fig. 1; and Fig. 3 is a plan of the under side of the pounder.

Referring to said drawings, in which like reference numerals designate like parts throughout the several views—1 indicates the tub, which may be of any preferred form, and 2 designates a hinged lid therefor, the latter having top battens 3 whose upper faces stand flush with a member 4, and said battens and member bearing the opposite leaves of the connecting hinges 5.

Extended through an aperture 6 in the lid 2 is a vertically movable dasher shaft 7 which has fixed upon its lower threaded end 7' a horizontal supporting plate 8 which carries on its under face a plurality of pounding cups 9, preferably made of metal or earthenware. Said cups are adapted to pound upon the clothes in the tub 1 as they are brought downward into contact therewith. While any appropriate means may be employed for mounting said cups upon the supporting plate 8, bolts 10 are preferably projected through said plate and the bases 9' of said cups, and nuts are threaded thereon against an interposed washer 11.

Mounted upon the lid 2 at a point adjacent to the member 4 and midway between the ends of the joint formed by the abutting lid and member 4 is an upright post 12 which carries upon its front face a metal gear-rack 13. A gear-segment 14 carried upon one end of an operating lever 15 to which, intermediate its ends, the shaft 7 is pivotally connected, is in meshing engagement with said rack, so that when said lever is moved up and down, a reciprocating motion will be communicated to said shaft.

The post 12 is firmly held by means of a pair of parallel inclined braces 16 whose front ends are fixed against a cross-batten 17 carried by the lid 2, and whose opposite ends extend rearward behind and above the post 12. Connected to a pin or bolt 18 carried in the rear end of said braces is one end of a coil spring 19 whose opposite end is connected to an extension or horn 20 carried by or formed integral with said gear-segment 14, as shown. Said spring not only serves to maintain said gear-segment in a meshing position with relation to the gear-rack 13, but also serves to elevate, or to assist in elevating, the operating lever 15 and the elements depending therefrom. Further, owing to the extensibility of said spring, adjustment of said gear segment to a higher or lower position with relation to said rack may be readily effected.

In operation, water is placed in the tub only to such a level that when the cups 9 are elevated with the upward movement of the operating lever, they will be wholly withdrawn from the water. Consequently, when the cups are again forced downward into contact with the clothes in the water, each cup carries therein a quantity of air which, under the pressure of the water, escapes therefrom and bubbles forth, assisting in the cleansing operation in a manner well understood.

A plurality of openings or perforations are provided in the supporting plate 8 to allow the water to rise therethrough and consequently to diminish the resistance offered by the water to depression of said plate.

What I claim is—

1. A washing machine comprising a tub, a vertically movable shaft, a supporting plate carried by the lower end of said shaft, flared pounding cups mounted on the under side of said plate, an operating lever to which the upper end of said shaft is pivot-

ally connected, a gear segment carried by one end of said lever, a stationary vertical gear-rack with which said segment meshes, and a coil spring whereby said lever is elevated after each lowering thereof.

2. A washing machine comprising a tub, a vertically movable shaft, a supporting plate carried by the lower end of said shaft, flared pounding cups mounted on the under side of said plate, an operating lever to which the upper end of said shaft is pivotally connected, a gear segment carried by

one end of said lever, a stationary vertical gear-rack with which said segment meshes, braces for said gear-rack, an extended horn carried by said gear-segment, and a coil spring between said braces and said horn.

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

JOHN E. GRIBBEN.

Witnesses:

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W. S. KEYSER.