

C. R. SMITH.
WASHING MACHINE.
APPLICATION FILED NOV. 24, 1908.

947,134.

Patented Jan. 18, 1910.

Fig. 1.

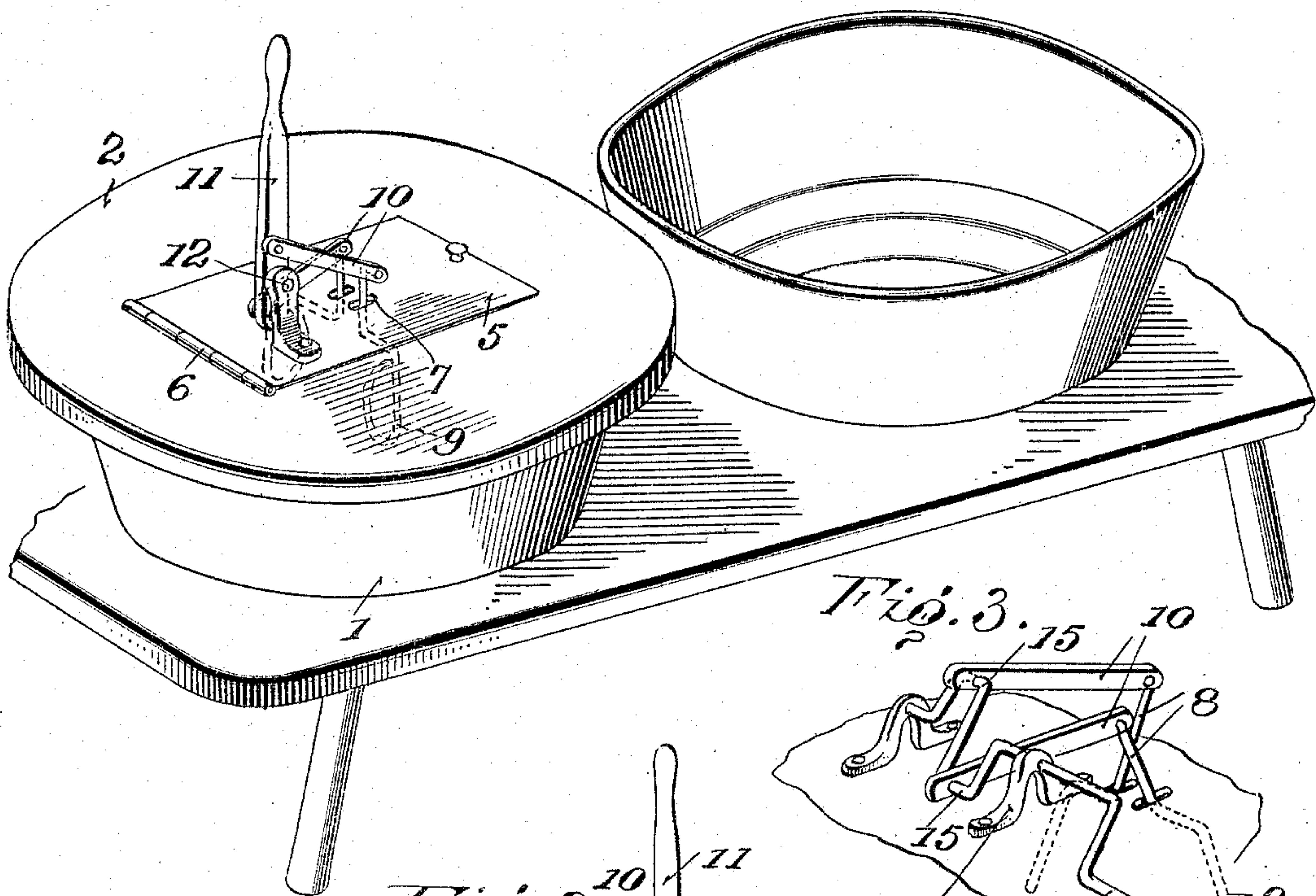


Fig. 3.

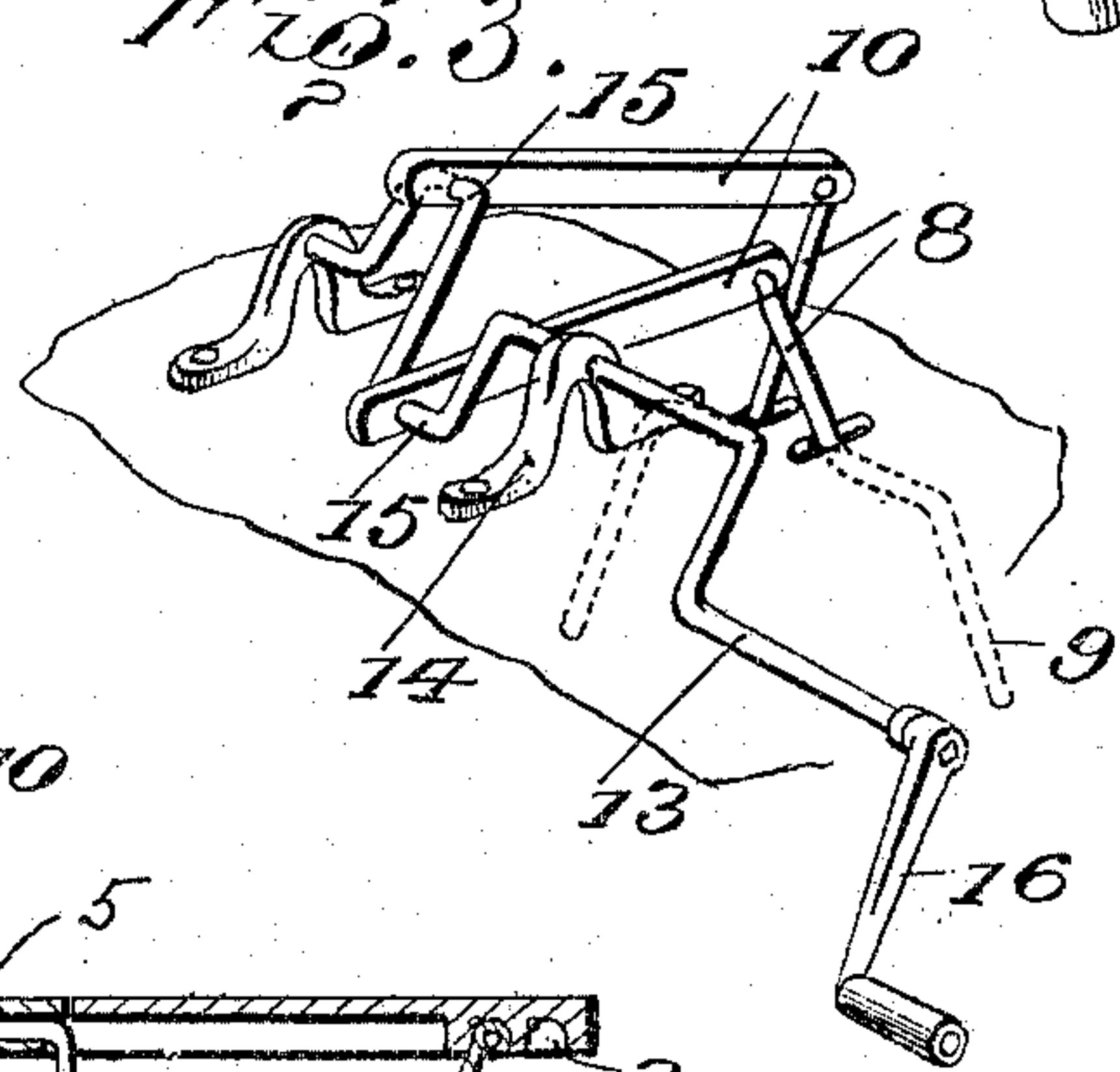


Fig. 4.

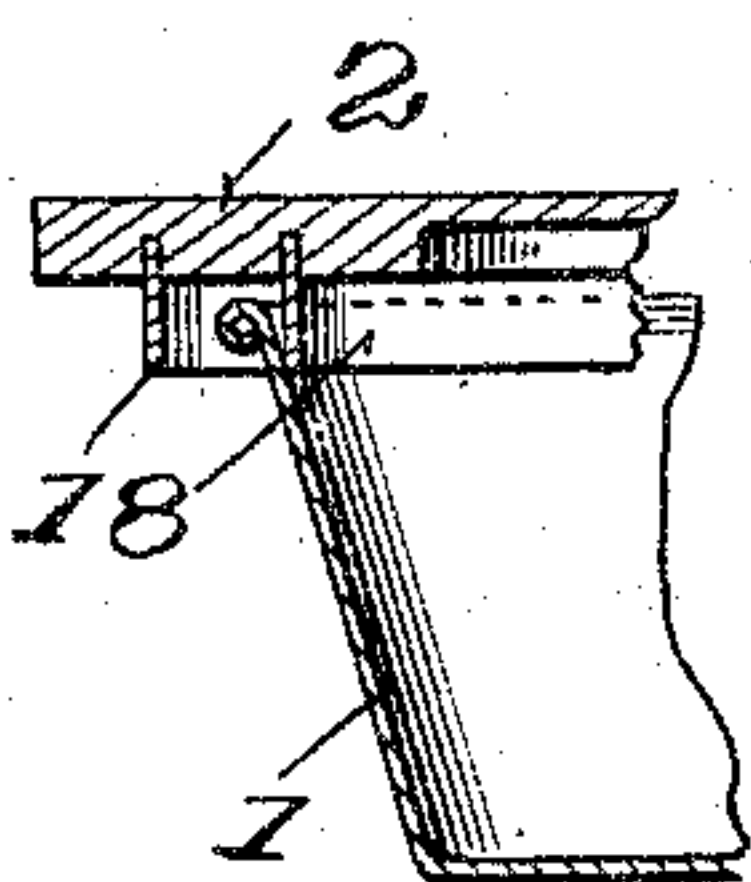
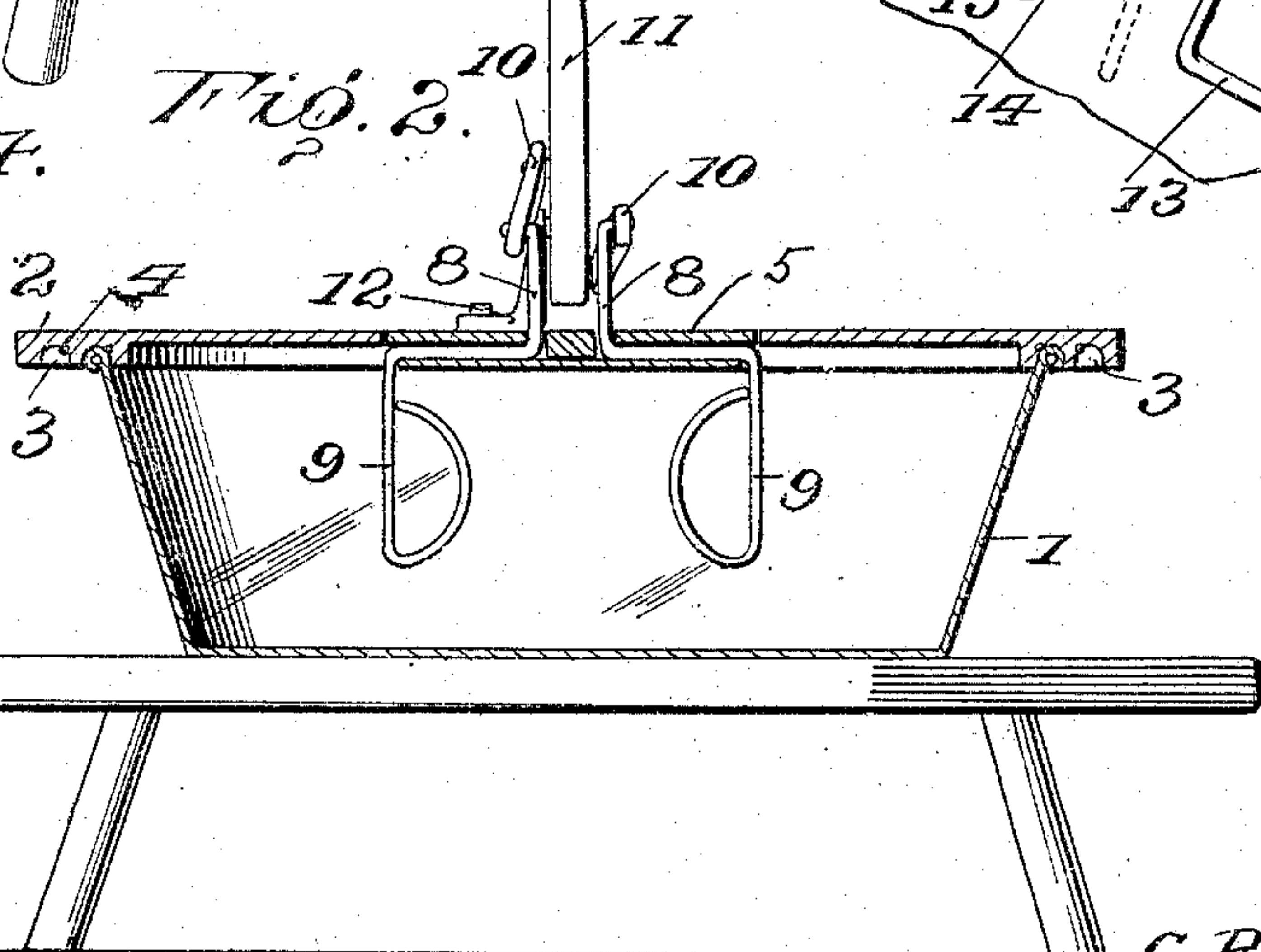


Fig. 2.



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WASHING-MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, COVERT R. SMITH, a citizen of the United States, residing at Freeport, in the county of Harrison and State of Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

The object of my invention is to provide a washing machine of a portable character wherein the several parts comprising the machine are constructed and arranged to secure an agitating or washing efficiency to the extent ordinarily obtained only by more pretentious and intricate devices.

The washing or cleaning efficiency of machines of this character is determined by the degree of violence with which the agitating members are operated to secure the necessary washing action, and the durability of the part or sections producing such action without injurious effect upon the articles under operation. With my present invention these features are combined in a constructively simple, cheap and durable machine particularly designed to secure the desired results in operation.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of the washing machine; Fig. 2 is a vertical sectional view thereof; Fig. 3 is a modification hereinafter described; and, Fig. 4 is a modification illustrating the water tight connection formed between the tubs and washer.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates an ordinary tub or receptacle adapted to contain a washing solution, and 2 designates the frame of the washing machine preferably circular to conform with the shape of the tub 1 and provided in its lower face with a series of annular grooves or seats 3 adapted to fit over the edge of tubs of varying sizes. A washer 4 composed of rope or other yielding material is preferably set in a smaller groove formed in the groove 3 to form a water tight joint with

the edge of the tub 1 and prevent the water in said tub from slopping over the sides when the machine is in operation.

The numeral 5 designates a rectangular lid or top section, one side of which is hinged to the frame 2 as shown at 6 and provided on its other three sides with a rabbeted edge coöperating with the rabbeted edge of the frame 2 to hold said lid flush with the frame, and to provide means for introducing or removing articles from the tub 1 without removal of the frame from the edge of said tub.

Working through rectangular slots or openings 7 in said lid are agitators 8 preferably composed of spring metal. These agitators have shanks projecting upwardly above the upper face of the lid 5 and pivotally connected to the operating links just above the surface of the lid. The agitating rods are bent horizontally so as to fit against the under surface of the lid, and then are extended downward and provided with looped end portions 9 adapted to extend within the tub and hold the articles during the washing operation. Said agitators are capable of a rocking motion which constitutes the washing action, produced by rocking bars 10 pivotally connected to the exposed end of said agitators and to a hand lever 11 at their opposite ends. The lever 11 is pivotally connected to a bracket 12 secured to the lid 5 in any desired manner and located upon the rear end of said lid.

The design, formation and number of the agitators used may be varied to secure the best results in operation and as illustrated in Fig. 3 of the drawings, the method of imparting motion to the agitators may comprise a crank shaft 13 mounted in brackets or bearings 14 secured to the lid 5, the cranks 15 of the shaft being connected to the ends of the rocking bars 10 and operated by a handle 16.

With reference to Fig. 4 of the drawings, a modified form of water tight connection or joint for the tubs and frame 2 is illustrated, and in lieu of grooves 3 as shown in Fig. 2, a series of flexible bands or hoops 18 are secured to the underside of said frame in such manner as to be brought into engagement with the rim of the tub 1, thus preventing the washing solution from slopping over when the machine is in operation.

With the arrangement of the several

parts as shown, the operation is as follows:—The frame 2 is placed upon a tub containing water prepared as the first washing solution and the lid 5 is opened by the extreme rear movement of the lever 11. The articles to be washed are attached to the looped ends of the agitators and the lid lowered in position upon the frame. The preliminary introduction of the articles in the water is followed by the agitating or rocking movement of the agitators 8 produced by the movement of the hand lever 11 or by the handle 16 when a crank shaft is employed, and transmitted to said agitators by the rocking bars 10 attached to said lever or shaft, and the agitators. This portion of the operation is continued until the articles are thoroughly washed and ready for the next water when the lid is raised and the articles removed and deposited in the adjacent tub.

The machine, being of portable type the operation as above specified is continued throughout the several stages of the washing operation by the removal of the machine from one to another tub as will be understood.

As before stated, the construction and number of the agitators 8 may be varied to secure the best results, but in practice it is found expedient to arrange the rocking bars 10 to impart a quick alternating motion to the agitators whereby the friction of the oppositely moving articles with the wash-

ing solution extracts the lint and dirt from the texture of the article.

Having thus described the invention, what is claimed as new is:—

1. A washing machine comprising a solid cover adapted to fit over a tub, said solid cover having a hinged lid therein, said lid being provided with slots, agitating arms projecting through said slots, the said arms below the lid being bent at right angles and fitting against the under side of said lid, and being then extended downwardly and looped, operating mechanism mounted on the lid, and links connecting said operating mechanism and said agitating arms.

2. A washing machine comprising a tub, a cover therefor, said cover having a hinged lid therein, said lid having opposed slots therethrough, agitating arms extending through said slots, the lower ends of the arms beneath the lid being bent oppositely to each other and then being bent downwardly and looped, a lever pivotally mounted on the center of said lid and forming a means whereby the lid may be raised or lowered and links connecting said lever with the upper ends of the agitating arms.

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

COVERT R. SMITH. [L. S.]

Witnesses:

E. T. ROMANS,
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