A. A. CLARK.

WASHING MACHINE.

APPLICATION FILED MAY 28, 1920.

1,424,154.

Patented Aug. 1, 1922.

2 SHEETS—SHEET 1.

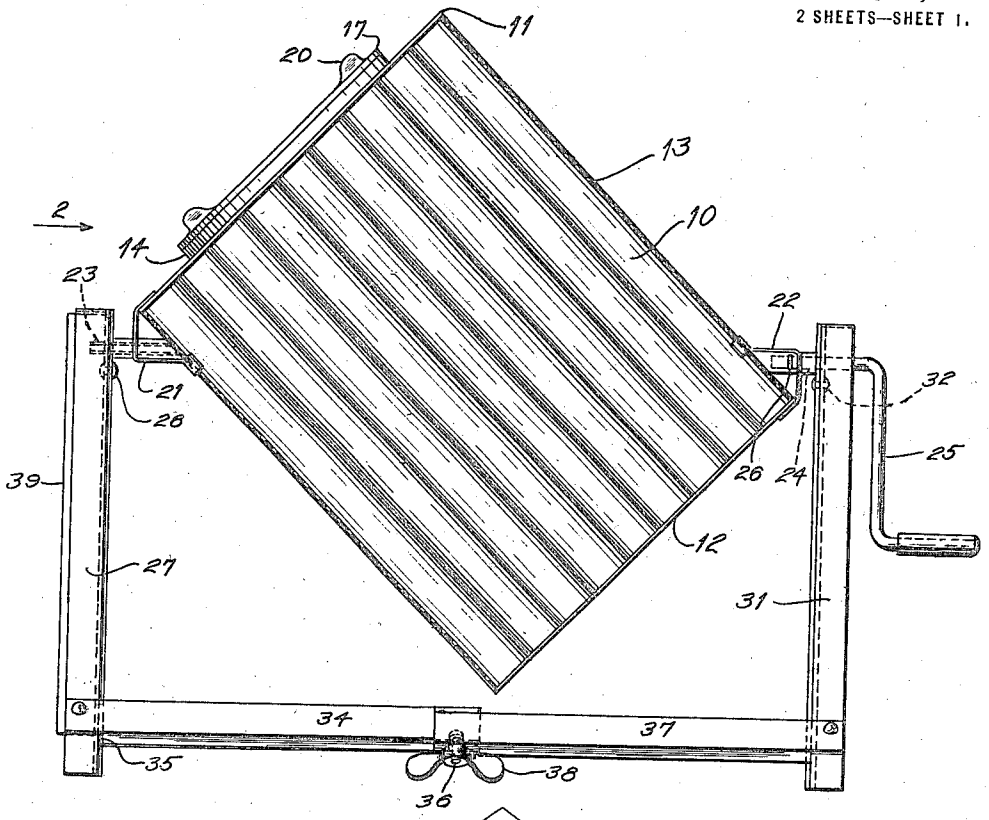


Fig. 1

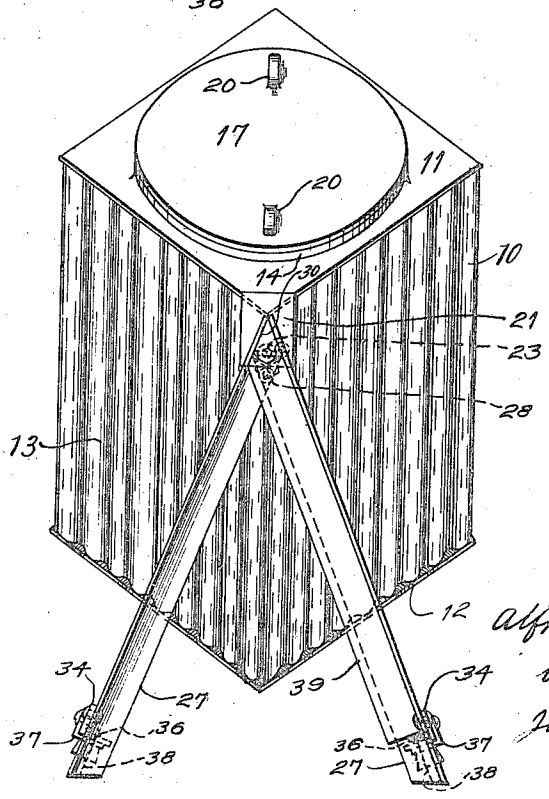


Fig. 2

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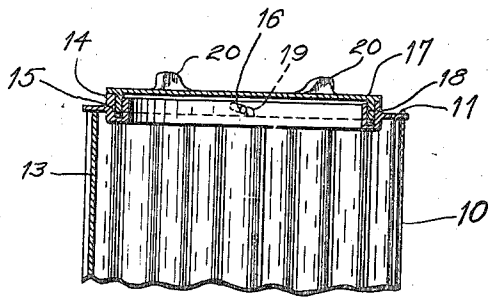


Fig. 3

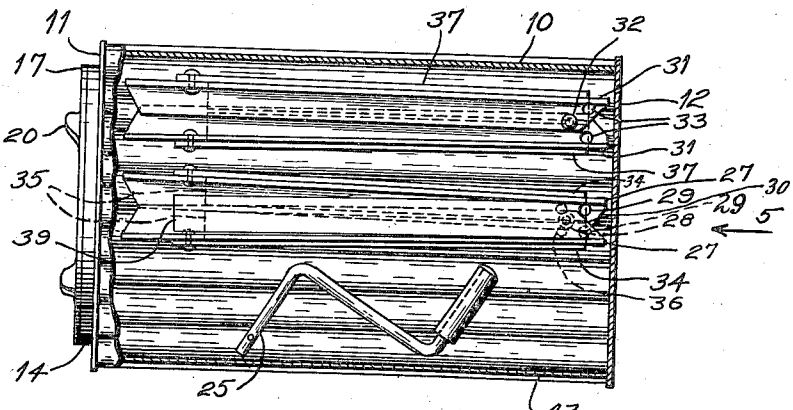


Fig. 4

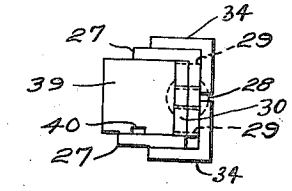


Fig. 5

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UNITED STATES PATENT OFFICE.

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WASHING MACHINE.

1,424,154. Specification of Letters Patent. Patented Aug. 1, 1922.

Application filed May 28, 1920. Serial No. 384,801.

To all whom it may concern:

Be it known that I, ALFRED A. CLARK, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Washing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to washing machines.

Among the objects of my invention are:—

To produce a washing machine in which the articles being washed will be subjected to practically the same kneading action as if they were washed upon an ordinary washboard.

To produce a washing machine in which the kneading action upon the articles to be washed shall be efficient for the purpose of washing the articles but shall be carried on in such a manner as to preclude any possibility of injury to the articles.

To produce a washing machine and a supporting stand therefor mutually arranged so that the latter may be folded and placed inside the former when the operation of washing is completed.

To produce a container for a washing machine and a supporting stand therefor so that the former may be readily removed from the latter and placed upon a stove or other source of heat, thus enabling the container to be used as a boiler.

To produce a simple, cheap and efficient washing machine especially suitable for washing small batches of articles.

In carrying out my invention I make use of the instrumentalities illustrated in the accompanying drawings, in which:

Figure 1 is a side view of my improved washing machine.

Fig. 2 is a view of the washing machine shown in Fig. 1 looking in the direction of the arrow 2 in said figure.

Fig. 3 is a partial central section of the container showing the means for making a water-tight joint around the top of the container and the lid.

Fig. 4 is a central section of the container showing the stand for supporting the container folded and the handle for turning the container, both stored within the latter.

Fig. 5 is an enlarged view of the legs 27 shown in Fig. 4 looking in the direction of the arrow 5 in said figure. The screws 36 and wing nuts 38 are omitted for clearness.

In the drawings:—

10 represents the container which may be of any approved shape and size. The container 10 has the top 11, bottom 12 and conjoining wall 13.

In the drawings, the top and bottom are shown square and the wall 13 is shown corrugated, but it is to be understood that the top and bottom may be of any shape and the wall 13 may be smooth or provided with any desired form of rough surface. However, I prefer to use the container made as shown in the drawings as I find that such a form gives highly satisfactory results.

The top 11 is provided with the U-shaped flange 14 and packing 15 is introduced within the limbs of the U. There may be any number of pins such as 16 extending across the limbs of the U. The lid 17 is provided with a flange 18 which extends down between the limbs of the U and said flange is provided with obliquely disposed slots 19, equal in number to the number of pins 16.

When the flange 18 is introduced between the limbs of the flange 14 the lid is to be turned by the handles 20—20 until the slots 19 embrace the pins 16 and further turning forces the end of the flange 18 against the packing 15, thus forming a water-tight joint. The pins 16 and slots 19 together form substantially a bayonet joint.

The brackets 21 and 22 are secured upon diagonally opposite corners of the wall 13, the former being secured near the top 11 and the latter being secured near the bottom 12. The former supports the hollow pintle 23 and the bracket 22 supports the pintle portion 24 of the handle 25.

The pintle portion 24 fits snugly within a hole provided in the bracket 22 and a pin 26 passing through said bracket and the pintle portion 24 serves to removably secure the handle 25 to the container 10 so that the former may turn the latter.

It is to be noted that the pintle 21 and the pintle portion 24 are in line and are so disposed with reference to the container 10 that the axis of revolution about which the latter turns is obliquely disposed to the conjoining wall and that it does not pass through the top or bottom of the container. By this construction, I am enabled to obtain a greater displacement of the articles within

the container during each revolution than if said axis passed through the junctions of the top and bottom with the conjoining wall.

As another advantage of this construction, the bracket 22 is above the lower surface of the bottom 12; hence, the container may set flat upon a stove or other source of heat and the container can be used as a boiler, the steam passing through the hollow pintle 23.

My improved stand for supporting the container 10 consists of a pair of legs 27—27 joined together by the pin 28 and each leg is provided with a hole 29 adjacent to the pin 28, the holes in the two legs being in alignment when the legs are in the position shown in Figs. 1 and 2, so that said holes may serve as a bearing for the pintle 23.

Each leg 27 is preferably formed of angle iron as shown in Fig. 5 and one leg of each pair has a surface such as 30 diagonally disposed so that when the legs are unfolded as shown in Fig. 2, said surface will rest against the inside of one of the limbs of the angle iron as shown in said figure, thus preventing the bottoms of said legs from moving further apart than shown therein.

A similar pair of legs 31—31 is joined together by the pin 32 and otherwise made the same as the legs 27—27 so that the holes 33—33 therein may serve as bearings for the pintle portion 24 of the handle 25.

Trusses 34—34 formed of angle irons are hinged to the legs 27—27 and one of the limbs of each of said angle irons is cut as at 35 so that said cut-away portion will rest against the leg 27 when the parts are in the positions shown in Fig. 1, thus preventing the right hand end of said trusses from moving below the position shown in said figure.

A screw such as 36 is secured in each of the trusses 34 and said screws are passed loosely through holes in the trusses 37—37 and wing nuts such as 38 secure the ends of said trusses together. The trusses 37—37 are formed similarly to the trusses 34—34.

The pintle 23 is made hollow so that the steam that may be evolved during the washing operation may escape therethrough. In order to prevent the water which occasionally accompanies said steam from splashing upon surrounding objects, I secure the drip cup 39 upon one of the legs 27 and provide the inner wall of said cup with a hole through which the left end of the hollow pintle 23, (see Fig. 1), projects into the interior of said cup. The cup 39 is completely enclosed excepting for the hole through which the pintle 23 projects and the hole 40 in the top of said cup. The hole 40 is for the purpose of draining said cup after the operation of washing is completed. When the pintle 23 and the pintle portion 24 are introduced within the holes 29—29 and 33—33 they prevent the corresponding legs from being folded together.

The manner of use of my improved washing machine is as follows:—

The articles to be washed are to be introduced within the container 10 and the lid 17 secured in place.

The pintle 23 is then introduced within the holes 29, the pintle portion 24 is passed through the holes 33 into the hole in the bracket 22 and then the pin 26 is passed through the hole in said bracket and the hole in said pintle. The handle 25 is then to be revolved and during the revolution of said handle, the articles within the container are moved upwardly and then dropped downwardly, and during the upward and downward motion said articles are kneaded against the corrugations of the wall 13 and furthermore, are splashed into and through the liquid within the container, thus ensuring a thorough kneading of the articles and an intimate penetration and saponification of the same by the water and cleansing compounds within the container.

After the handle has been turned for a sufficient length of time, said handle is to be removed and the container is to be removed from its supporting stand and the bottom 12 placed upon the stove or other source of heat in order to boil the articles. The articles can then be rinsed and blued in the usual manner.

When the washing operation is completed, the wing nuts 38—38 are removed, the trusses 37 are separated from the trusses 34 and then folded upon the legs 31 and 27, respectively; said legs are then to be folded together and the legs, trusses and the handle are then to be introduced within the container as shown in Fig. 4.

While I have shown my improved washing machine as arranged for washing small batches of articles, it is to be understood that it may be of any desired size and may be provided with any approved filling and emptying devices.

Furthermore, while I have shown one embodiment of my invention, it is to be understood that many changes may be made therein without departing from the spirit thereof.

I claim:—

1. The combination with a container for washing machines comprising a bottom, a top, a conjoining wall, said top having an opening to provide access to the interior of said container, of a pintle and a pintle socket for revolubly supporting said container, said pintle being secured to said wall near said top and said socket being secured to said wall, near said bottom and terminating above the plane of said bottom, and a crank handle mounted in said socket.

2. The combination with a container for washing machines comprising a bottom and a top, said top having an opening to provide access to the interior of said container,

a pintle secured to said container adjacent said top and having a hole therethrough to provide a vent to the interior of said container, and a pintle socket secured to said container adjacent said bottom in alinement with said pintle and wholly above the plane of said bottom.

3. The combination with a container having a pair of aligned pintles, of a stand for supporting said container, said stand comprising two pairs of folding legs, a pivot joining the legs of each pair together, a bearing in each leg, the bearings in the four legs being in alignment when said legs are unfolded for use, whereby when each of said pintles is introduced within the bearings of one pair of legs, said legs are locked in the unfolded position.

4. The combination with a container comprising an opening, a removable lid therefor and pintles secured thereto, of a stand for supporting said pintles, said stand comprising folding legs and folding trusses joining said legs together in pairs, said trusses and legs when folded together being circumscribed within such limits that they will pass through said opening and of such lengths that said lid may be secured to said container when said legs and trusses are therein.

In testimony whereof, I affix my signature.

ALFRED A. CLARK.