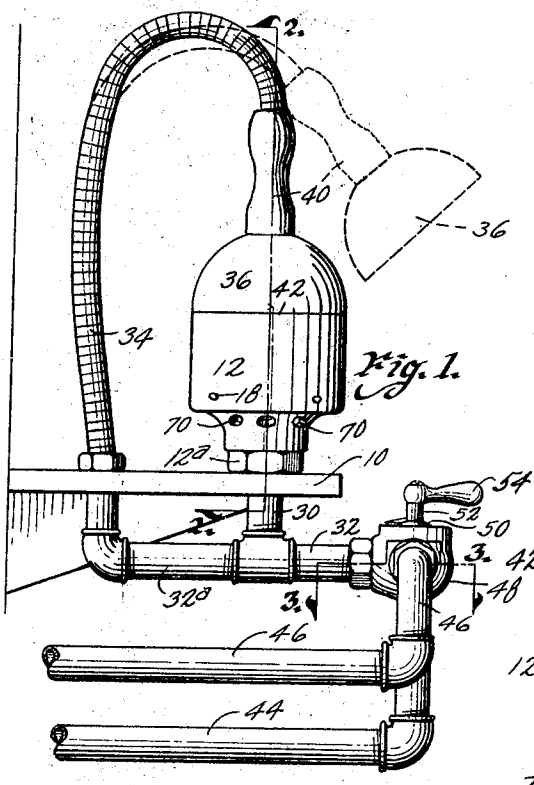
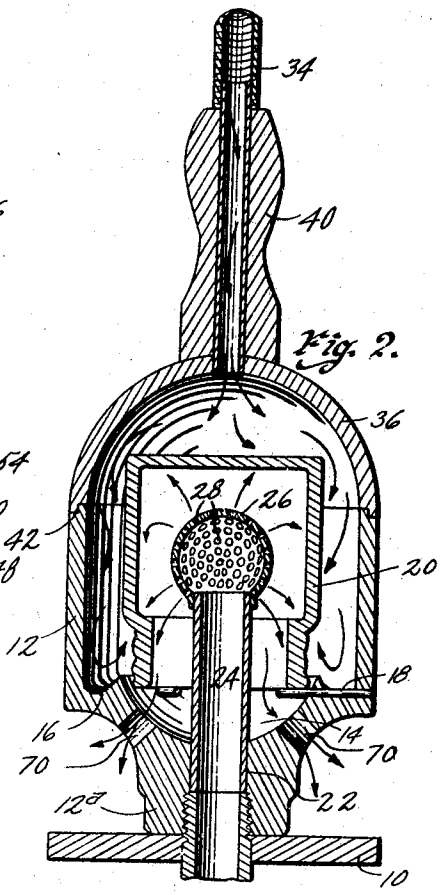
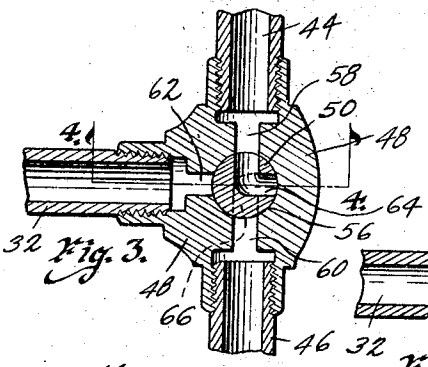
April 7, 1931. G. MORGAN 1,799,525

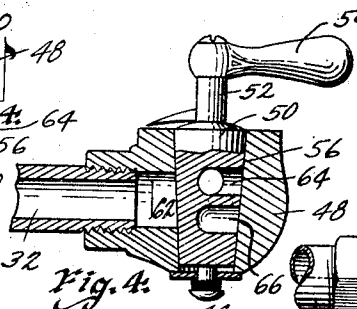
JAR WASHER

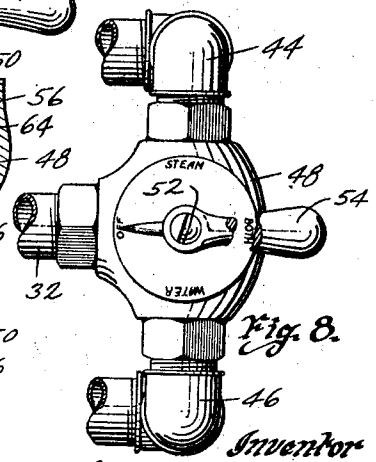
Filed Aug. 15, 1928

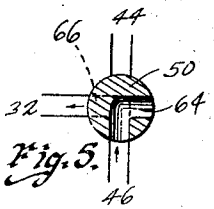


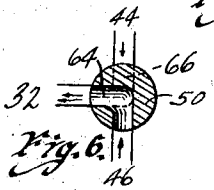


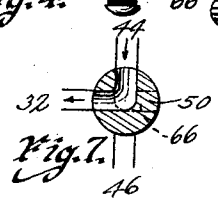












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UNITED STATES PATENT OFFICE

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JAR WASHER

Application filed August 15, 1928. Serial No. 299,685.

My invention has to do generally with a mechanism for washing jars and the like.

More particularly, it is the purpose and object of my invention to provide a washer, whereby jars, especially those which have contained cold cream or other oleaginous material may be quickly, easily and conveniently washed and cleaned inside and out.

Another object of my present invention is to provide such a washer having parts so constructed and arranged as to permit the ready assembly of the jars, bottles or other containers in proper position for subjecting them inside and out to the action of streams of steam and water driven against their surfaces.

Another purpose is to provide in such a device simple means for controlling the cleaning fluids.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my jar washer, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of an illustrative form of a jar washer embodying my invention.

Figure 2 is a vertical, detail, sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a horizontal, sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a vertical, sectional view taken on the line 4—4 of Figure 3.

Figures 5, 6 and 7 are sectional views through the valve, showing the valve in different positions of its adjustment; and

Figure 8 is a top or plan view of the controlling valve and pipes leading to and away from it.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally a support, which may be in the form of a table, board, bench or the like. The washer is supported on the table 10.

The washer consists of a lower member 12, having the downwardly projecting base 12*a*, which rests on the support 10.

The upper surface of the base 12*a*, which forms also the bottom for the lower washer member 12, is preferably in the form of the surface of about a quarter of a sphere. This concave portion is indicated generally at 14, and is of less total diameter than the interior of the main body of the lower washer member 12, so as to leave a channel-shaped shelf 16 at the upper edge of the concave bottom 14 adjacent to the outer wall of the member 12.

Projecting inwardly from the wall of the member 12 at the upper part of the concave bottom 14 is a series of pins or spaced supporting members 18 upon which a jar or bottle or the like 20 may rest.

A vertical passage 22 extends through the base 12*a*, as shown in Figure 2.

Inserted into the upper part of the passage 22 is a tube 24, which projects upwardly substantially above the supporting pins 18. On the upper end of the tube 24, which is the intake tube, is a hollow, spherical nozzle 26, having a considerable number of small outlet holes 28.

An intake pipe 30 extends from below the support 10, through that support, and is screwed into the lower part of the hole 22. The intake pipe 30 is connected with a supply pipe 32. The pipe 32 continues past the intake pipe 30, as indicated at 32*a* in Figure 1, and is connected with a flexible tube 34.

Connected with the end of the flexible tube 34 is a bell-shaped cover 36 forming the upper member of the washer, adapted to rest on and coact with the lower member 12. On the tube 34 adjacent to the cover or top member 36 and secured thereto is a suitable handle 40.

The coacting edges of the members 12 and

36 may be provided with suitable corresponding rabbets shown at 42 in Figure 2.

For supplying water and steam to the supply pipe 32, I provide the following means: 44 indicates a water supply pipe and 46 a steam supply pipe leading to opposite sides of a valve casing 48, as shown in Figures 1 and 3. Mounted vertically in the casing 48 in the particular form of valve structure here shown is a tapered rotary valve 50 having the upwardly projecting stem 52 on which is a controlling handle 54. The valve 50 is mounted in a suitable chamber 56 in the casing 48.

The casing 48 has a passage 58 leading from the water intake pipe 44 to the chamber 56 and another passage 60 leading from the steam intake pipe 46 to the chamber 56. The casing 48 also has a passage 62 of proper size leading from the chamber 56 to the fluid supply pipe 32.

The valve 50 has at one level an L-shaped water passage 64 extending through it and adapted in one position to register with the passage 58. At another level, the valve has the L-shaped passage 66 adapted in one position to register with the passage 60.

These various passages are so arranged that in one position of the valve, it will be closed to the water and steam passages 58 and 60.

In another position of the valve, the passage 64 may be moved to connect with the passages 58 and 62, allowing the flow of water through the valve.

In another position, the passage 66 will register with the passages 60 and 62 for allowing the flow of steam through the valve.

In still another position of the valve, both steam and water may be permitted to pass through it.

The passages 58, 60 and 62 are high enough vertically, so that they may register with either of the passages 66 or 64.

To go into this matter in slightly greater detail, it will be seen that by reference to Figure 3, the upper passage 64 will register at one end with the passage 58, but the other end will be closed by the wall of the valve casing. The lower passage 66 will register at one end with the passage 60 and the other end will be closed by the wall of the valve casing. The lower passage 66 is shown in Figure 3 in dotted lines.

By turning the valve a quarter turn to the left from its position shown in Figure 3, the passage 64 will be changed from its position shown in Figure 3 to its position shown in Figure 7 for permitting the flow of water. That quarter turn will have rotated the passage 66 from its dotted line position shown in Figure 3 to its dotted line position shown in Figure 7.

The passage 66 will then register at one end with the water passage 58, but the other end will be closed by the valve casing.

By turning the valve another quarter turn to the left, the passage 64 will be made to register at one end with the passage 62 and at the other end with the passage 60 for allowing steam to flow through the valve.

The passage 66 will then be in its position shown by dotted lines in Figure 6, where it will allow water to flow through the valve.

Thus water and steam can be supplied to the washer at the same time.

Another quarter turn of the valve will rotate the valve, until the passage 64 registers with the passages 60 and 62 for allowing steam to pass through the valve. At the same time, the passage 66 will have moved to position shown in Figure 5, where it will be inoperative.

In the practical use of my improved jar washer, the upper member or top 36 is lifted off the member 12 and the jar or bottle or the like 20 is placed upside down in the member 12 with its neck resting on the members 18 and with the tube 24 and nozzle 26 projected into the jar as shown in Figure 2.

Then the cover or upper member 36 may be replaced in its position shown in Figure 2, and the valve may be operated for supplying steam or hot water as may be desired or both for washing the jar.

The member 26 directs small streams of water in every direction against the interior of the jar. That is the part of the jar, which is most difficult to wash, because it has the cold cream and other such substance in it.

The channel-shaped member 16 is such that the steam and water flowing into the upper part of the washer through the tube 36 will flow downwardly around the jar and will be directed by such channel-shaped member 16 upwardly against the shoulder and neck of the jar.

When the cleaning operation has been completed, the valve may be closed, the member 36 lifted off, and the jar taken out.

It is not an easy matter to clean cold cream jars or other containers that have held oily substances. In a device of the kind herein shown, such jars and bottles can be thoroughly, quickly and easily cleaned.

At the finish of the cleaning operation, the operator may turn off the water, and allow the steam to flow to the jar. The heat of the steam will be such that when the jar is taken out, it will dry quickly.

The arrangement of the nozzle 26 as shown or in some equivalent form serves to direct fine streams of steam and water against the interior of the jar, so as to thoroughly clean out and remove any particles of cold cream or the like, which may adhere to the interior of the jar.

I have shown the device in the form of a

single unit, but it will, of course, be understood that it may be made in the form of batteries for cleaning a considerable number of jars at one time.

The base 12*a* is provided with outlet passages 70 for permitting the fluid to flow out of the washer.

I claim as my invention:

1. In a jar washer of the class described, a lower, concave washer member having above its bottom means for supporting a jar, a nozzle projected into said concave member so as to be received within the jar when it is resting upon said means, said nozzle having a plurality of openings for directing fluid against the interior of the jar to be cleaned, a cap for said washer member adapted to rest thereon and in conjunction with the washer member to form an enclosure for the jar while being washed, a flexible tube for supplying fluid to the interior of said cap, and means for supplying fluid to the nozzle and to the flexible tube.

2. In a device of the class described, a tubular washer member, means for supporting a jar therein, said washer member having near its lower part an upwardly opening channel adjacent to the wall of said first described washer member adapted to direct fluid flowing downward along the wall against a jar supported on the jar supporting means.

3. In a washer of the class described, a lower, hollow washer member open at its upper end and having container supporting and concave centering means in its lower part, a fluid conducting means projecting upwardly into said member, a removable top washer member and a flexible tube for supplying fluid therethrough.

4. In a washer of the class described, a lower, hollow washer member open at its upper end and having container supporting and concave centering means in its lower part, a fluid conducting means projecting upwardly into said member, and a removable top washer member, said first washer member and said top washer member forming, when coacting with each other, a closed chamber in which a jar may be centered and washed.

5. In a washer of the class described, a lower, hollow washer member open at its upper end, having container supporting and concave centering means in its lower part, a fluid conducting means projecting upwardly into said member, a removable top washer member, a peripheral upwardly opening channel surrounding the centering means, said channel being adapted to cause fluid to be directed against the article being washed.

6. In a washer of the class described, a two-part washer device comprising a lower, hollow member open at its upper end having therein jar supporting and centering means, a top member open at its lower end adapted to coact with and close the lower member, a fluid supply device projecting upwardly into the lower member and means for supplying fluid through said top member including a flexible tube and a handle on the top member for causing the top member to coact with the lower washer member and for holding it in such coacting position.

Des Moines, Iowa, May 15, 1928.

GOMAR MORGAN.