April 17, 1956 J. PALMA, JR., ET AL 2,741,787

HAND SPONGE CLEANER AND WRINGER

Filed July 31, 1951

Fig. 1

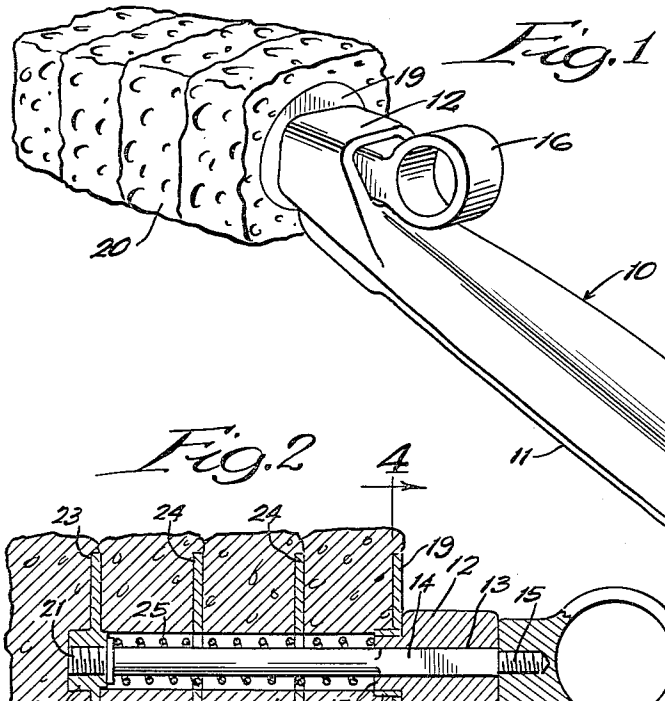


Fig. 4

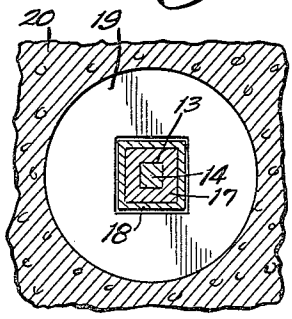


Fig. 2

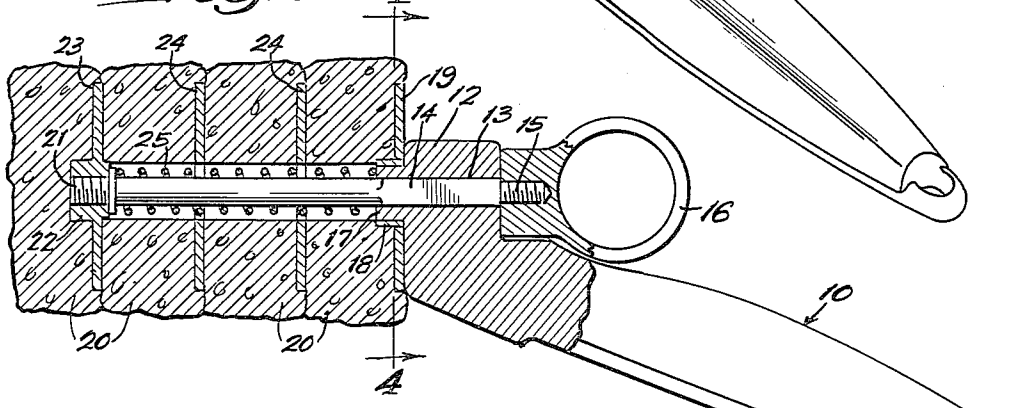
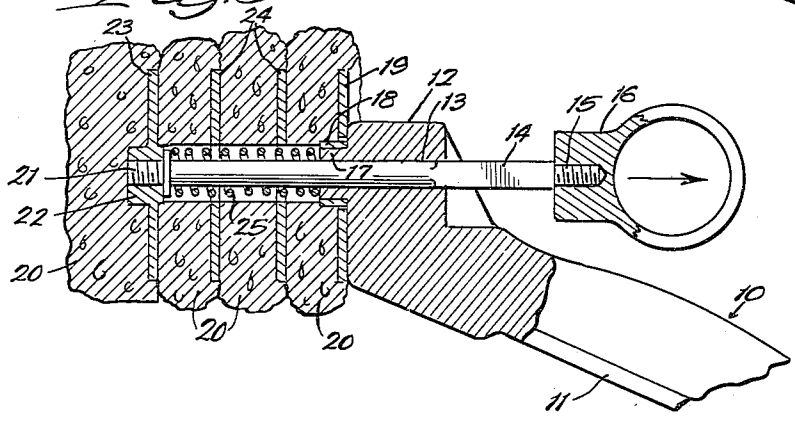


Fig. 3



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HAND SPONGE CLEANER AND WRINGER

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3 Claims. (Cl. 15—119)

This invention relates to a hand sponge cleaner and wringer.

An object of the invention is to provide a hand sponge cleaner and wringer therefor in which the sponge may be employed for cleaning purposes and then quickly flushed by manipulating a cleaner structure supported internally of the sponge body. A further object is to provide a segmental sponge body equipped with wringer members interposed between the segments of the sponge. A still further object is to provide a handle-equipped sponge which may be employed for cleaning dishes and other articles or surfaces while the handle is supported away from the liquid and while providing means adjacent the handle for flushing or wringing the sponge, as desired. Other specific objects and advantages will appear as the specification proceeds.

The invention is shown, in an illustrative embodiment, by the accompanying drawing, in which—

Figure 1 is a perspective view of a hand sponge cleaner embodying our invention; Fig. 2, a side view in elevation, a portion of the structure being shown in longitudinal section; Fig. 3, a view similar to Fig. 2 but showing the sponge in contracted position; and Fig. 4, a transverse sectional view, the section being taken as indicated at line 4—4 of Fig. 2.

In the illustration given, **10** designates a handle which may be formed of plastic, wood, composition material, or any other suitable material. The handle **10** comprises an inclined portion **11** adapted to be grasped by the hand and an offset forward portion **12** provided with a longitudinal aperture **13**. The aperture **13** is adapted to receive slideably a rod member **14** having a reduced threaded end **15** threadably engaging a threaded recess in the knob or ring member **16**. The rod **14** is preferably provided with square sides, as shown more clearly in Fig. 4, and the opening or passage **13** in the offset portion **12** is also formed with square sides for snugly receiving the rod **14** so that the ring knob **16** is held in a vertical plane for ready grasping when it is desired to pull the rod **14**.

The handle member **10** is provided at its forward end with a reduced portion **17** receiving thereon a collar **18** provided with a backing plate or flange **19** that is preferably integral but which may be a separate member. Forwardly of the flange **19** are the sponge segments **20**. The forward end **21** of rod **14** is threaded and received within a nut **22** equipped with an integral laterally-extending draw plate or plate flange **23**. The plate flange **23** is operative in conjunction with the stationary backing flange **19** to squeeze the sponge body interposed therebetween. The plate **23** is anchored to the outermost sponge segment **20** by adhesive or other suitable means and, since preferably sponge segments are used in lieu of a solid sponge body, centrally apertured discs **24** extend between the intermediate sponge segments **20**, as shown more clearly in Figs. 2 and 3. A compression spring **25** lies between the reduced handle portion **17** and the nut **22** and tends to hold the sponge segments in extended relation.

Operation

In the operation of the sponge, the handle **10** is grasped and the sponge is immersed in water and applied against dishes or other surfaces which are to be cleaned. Since the supporting structures for the sponge segments are located well within the interior of the sponge segments, the composite sponge may be used freely without bringing any of such supporting structure into contact with the surfaces being cleaned. When it is desired to squeeze the sponge, the member **16** may be drawn rearwardly to contract the sponge segments, as illustrated in Fig. 3. The plates **19**, **23** and **24** serve as bearing surfaces for compressing the sponge segments to squeeze the liquid from the sponge members. Upon release of the member **16**, the spring **25** urges the sponge segments back to the positions illustrated in Fig. 2.

In squeezing the sponge segments, the handle **10** may be grasped in one hand and the member **16** grasped in the other hand for effecting a squeezing of the sponge members; or, if desired, the handle **10** may be grasped in one hand and a finger of the same hand used for contracting the sponge members.

The handle **10** is inclined and has an offset portion **12** which enables the sponge device to be supported in any desired position. For example, in washing dishes, it is desirable to invert the structure from the position shown in Figs. 1, 2 and 3 so that the handle **10** is inclined downwardly and forwardly toward the mop body which will be immersed in the water. When, however, cleaning elevated surfaces, the handle **10** may be supported in the position shown in the figures.

While in the foregoing specification, we have set forth a specific structure in considerable detail for the purpose of illustrating one embodiment of the invention, it will be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of our invention.

We claim:

1. In a sponge cleaner and wringer device for hand operation, a handle equipped with an offset end portion having a longitudinal passage therethrough, a rod slidably mounted in said passage and equipped at its rear with a draw knob, a relatively flat backing plate secured to the forward end of said offset portion and being apertured to permit said rod to pass freely therethrough, a relatively flat draw plate carried by the forward end of said rod, a plurality of sponge segments interposed between said plates and a sponge segment carried upon the forward side of said draw plate, and a relatively flat plate interposed between adjacent sponge segments, all of said plates having substantially equal dimensions.

2. In a hand sponge cleaner and wringer, a handle extending rearwardly and being inclined downwardly at a relatively sharp angle and being equipped at its forward end with an upwardly-extending offset portion providing a substantially vertical forward wall and having a horizontal passage therethrough, a rod slidably mounted in said passage and extending forwardly therethrough and being equipped at its rear end with a draw ring, said draw ring being disposed in substantially abutting relation with said handle adjacent the forward end thereof, a relatively flat backing plate secured to the forward wall of said offset portion, a relatively flat draw plate carried by the forward end of said rod, a plurality of sponge segments interposed between said plates and a sponge segment carried upon the forward side of said draw plate, and a relatively flat plate interposed between adjacent sponge segments, all of said plates having substantially equal dimensions.

3. In a sponge cleaner and wringer device of the char-

acter described, a handle equipped with an offset end portion having a backing plate in abutting relation with the forward side thereof, a draw rod extending through said backing plate and being movable along its longitudinal axis and with respect to the backing plate and said handle, a draw plate anchored to said rod at the forward end thereof, a plurality of plates interposed between said backing plate and draw plate and slidably passing said draw rod therethrough, a plurality of sponge segments interposed between said backing plate and draw plate and being arranged so that one of said last mentioned plates is positioned between each of the adjacent sponge segments, a sponge segment carried by said draw plate on the forward side thereof and being secured thereto, and means biasing said draw rod forwardly so as to maintain said sponge segments in expanded condition.

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