Nov. 26, 1929. A. SCHROEDER 1,737,028

ATTACHING MEANS

Filed Feb. 1, 1924

FIG. 1.

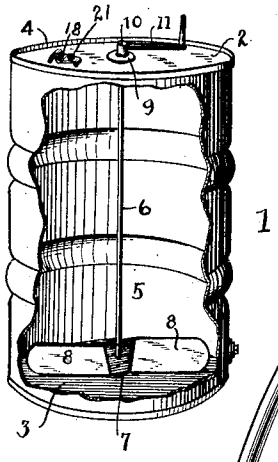


FIG. 2.

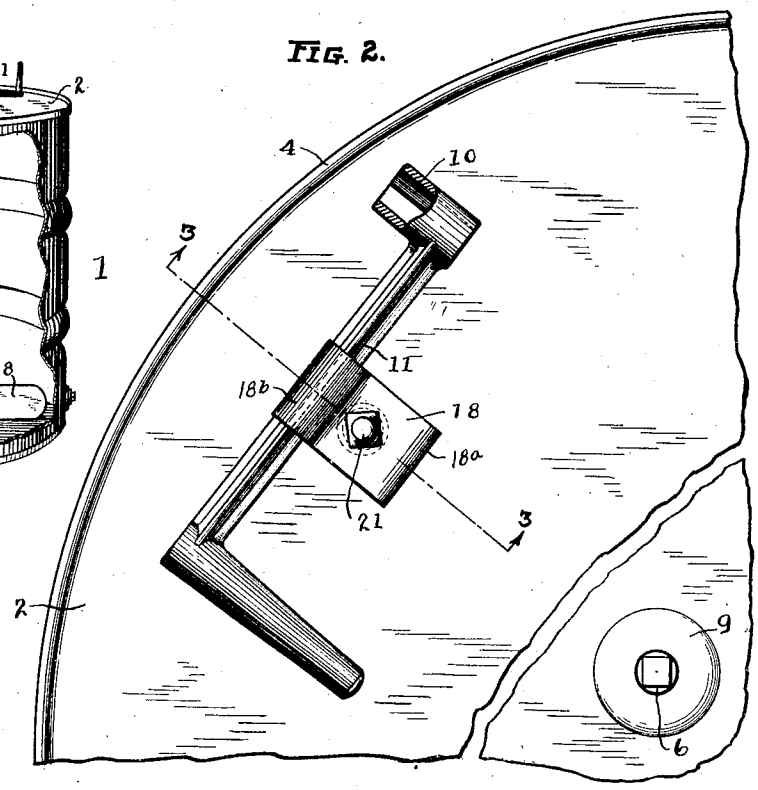


FIG. 3.

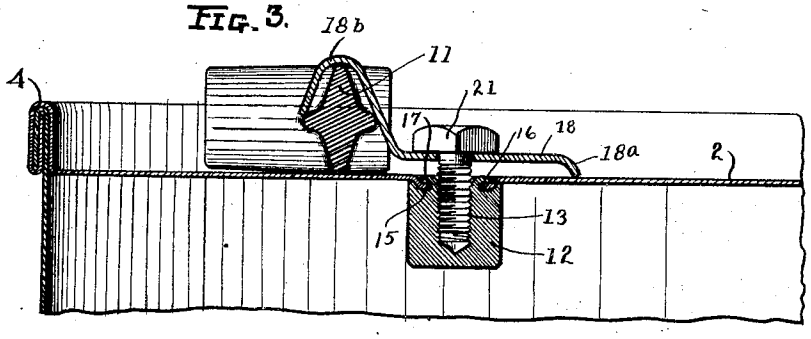


FIG. 4.

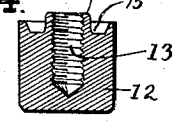
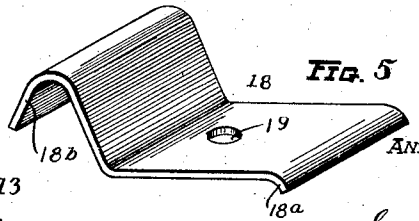


FIG. 5



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UNITED STATES PATENT OFFICE

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ATTACHING MEANS

Application filed February 1, 1924. Serial No. 690,091.

This invention relates to an attaching means for tools and other bodies. For illustrative purposes, I have applied my invention for use in connection with sheet metal containers, or barrels, where it is desirable to furnish with each container or barrel a tool or accessory for the convenience of the person who is to open or close the container or to empty or use the contents thereof.

One object of the invention is to provide an improved means for attaching a tool or other device to the head of a container, whereby the tool or device is securely attached thereto and may be readily detached and re-attached at will.

Another object of the invention is to provide an improved means for detachably supporting a tool or other device on a wall of a container without danger of leakage therefrom.

Other objects of the invention will be apparent to those skilled in the art to which my invention relates from the following description taken in connection with the accompanying drawings, wherein

Fig. 1 is a perspective view of a container having a tool attached to one head thereof by means embodying my invention, a part of the container being broken away to illustrate the interior thereof.

Fig. 2 is an enlarged fragmentary plan view of the head for the container, tool and tool attaching means.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view of the nut before it is connected to the container head.

Fig. 5 is a perspective view of the tool engaging or clamping plate.

In the drawings, 1 indicates a container or barrel of suitable construction but preferably having heads 2, 3, formed from sheet steel. By preference, the body of the container is rolled up from a section of sheet steel and then the heads 2, 3, are applied and connected to the ends of the body by double seamed joints, which make the latter liquid tight and provide chimes 4. The chimes 4 may be reinforced, if desired.

My invention relates to the attaching means for a tool, accessory, or other device which is to be used in connection with the container. For illustrative purposes, I have shown in Fig. 1 a container having mounted within it a stirring means 5, so that the contents of the container 1 can be agitated or mixed from time to time to prevent their settling and hardening. The stirring means 5 may comprise a shaft 6 mounted at its lower end in a suitable socket 7 in the head 3 and a paddle 8 fixed to the shaft near its lower end. The upper end of the shaft extends through and has bearing in a bushing 9 mounted in an opening formed in the head 2, the free end of the shaft being squared to fit a socket 10 of a crank or tool 11 by which the shaft 6 is rotated.

12 indicates a nut having a screw threaded bore 13 extending inwardly from one end of the nut but terminating at a point remote from the opposite end so as to leave the latter closed. That end of the nut in which the bore 13 is formed is reduced, as shown at 14, to form a shoulder 15 and the reduced portion 14 is projected through an opening 16 formed in the head 2 at some suitable point near the chime 4, so that the metal forming the wall of the opening lies flat against the shoulder 15, and then the metal of the reduced portion 14 is swaged over on the upper surface of the metal forming the wall of the opening 16, as shown at 17—see Fig. 3, thereby clamping the metal of the head around the opening between the shoulder 15 and swaged over metal 17. As a result of this operation, the nut 12 is permanently fixed to the inner surface of the head 2 and the joint therebetween is liquid tight, and as the inner end of the nut 12 is closed, it will be seen that all openings through which the liquid in the container 1 can pass are eliminated. To avoid projecting surfaces on the head 2, I prefer to provide a recess in the shoulder 15 surrounding the reduced portion 14 and to slightly depress the metal of the head surrounding the opening 16, so that when the reduced portion is swaged down thereon, as shown at 17, the swaged down metal is counter-sunk. 18 indicates a plate arranged to engage the crank 11 at one end and the head 2 at its other end. Intermediate its ends the plate 18 is formed with an

opening 19 through which a bolt 21 extends to engage the screw threaded bore 13 in the nut. That end 18^a of the plate 18 which engages the head 2 is preferably bent laterally to form a fulcrum, whereas its opposite end is shaped to form a hook 18^b capable of engaging the body section of the tool 11. In attaching the tool 11 to the head 2, the plate 18 is disposed in engagement therewith with its opening 19 in registry with the bore 13, then the bolt 20 is inserted and screwed down until it acts through the plate 18 to firmly and rigidly secure the tool 11 in place. By making the plate 18 of resilient metal, the bolt 20 can be tightened and plate 18 clamped in position without danger of stripping the threads of the bolt or nut.

In the form of construction shown, I utilize a minimum number of elements and provide a relatively economical form of construction particularly in view of the fact that but one nut and one bolt are required and the nut is permanently positioned in a simple manner with a resulting liquid tight joint without carrying out a welding process or operation. The attaching means is such that the tool can be attached and detached repeatedly and in a rapid and easy manner by means of a wrench or spanner. Only two separable parts are required and one thereof—the bolt—can be replaced in a very simple manner.

Aside from the simplicity and economy of the attaching means, it is advantageous in that it enables the merchant to ship with each container, a tool, accessory or other device to be used in connection therewith, thereby providing a complete equipment and enabling the receiver or customer to readily open the container, agitate its contents, or empty the container, without damaging the latter, according to the construction of the container. The plate 18 that is shown in the drawings, is shaped to provide a hook 18^b, but it may be otherwise shaped according to the construction of the device to be secured to the container wall. Where the device to be attached to the container is relatively large, a plurality of attaching means may be provided or a single engaging plate modified in construction and held in position by a plurality of nuts and bolts may be provided.

To those skilled in the art to which my invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope thereof. My disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

What I claim is:

1. The combination with a metallic container having a flat head, of a holder for a tool adapted to lie flat upon the head, and formed with an intermediate body section, consisting of a plate of resilient material formed at one end with a hook adapted to overlie the said intermediate section of the tool and engage with the same on opposite sides thereof, a screw bolt passing through the plate by which the latter may be adjusted and held, and a screw-threaded seat for the bolt secured to the head of the container.

2. The combination with a wall, of means for removably securing a body on said wall, said means comprising a plate having one end inturned and engaging said wall and shaped at its opposite end to engage the body, and means engaging said plate intermediate its ends and said wall for removably securing said plate in operative relation thereto and co-operating with said inturned end to maintain its opposite end in engagement with the body, said plate being formed of resilient material whereby it yieldingly holds the body against said wall and adjusts itself to the height thereof.

3. The combination with a wall formed with a threaded opening, of means for removably securing a device on said wall, said means comprising a plate having one end inturned and engaging said wall and shaped at its opposite end to engage the device, said plate being formed intermediate its ends with an opening adapted to register with the opening in said wall, and a bolt extending through the opening in said plate and threaded into the opening in said wall to removably secure the plate thereto and co-operating with said inturned end to maintain its opposite end in engagement with the device, said plate being formed of resilient material whereby it yieldingly holds the device against said wall and adjusts itself to the height thereof and yieldingly engages the head of said bolt to prevent it from becoming loose.

4. The combination with a metal wall, of a member for removably holding a body on one side of said wall, said member comprising a resilient plate yieldingly engaging the body at one end, and detachable means for removably mounting said member on said wall, said means comprising an opening formed in said wall, a device on the opposite side of said wall and having at its outer end a neck extending through said opening, the outer end portions of the neck being riveted over on the metal of the wall surrounding said opening to form a liquid tight joint and said neck being formed with a threaded bore extending inwardly from its outer end and terminating within said device, whereby the inner end of said device is closed, and an element having a threaded shank removably fitting said bore and engaging said member intermediate its ends to hold it in fixed relation to said wall.

5. The combination with a metal wall, of a resilient member one free end portion of which is arranged to yieldably and removably hold a body upon one surface of said wall, and means for detachably securing said mem-

ber in fixed relation to said wall, said means comprising an opening formed in said wall, a device having a threaded bore registering with said opening and terminating within said device and a bolt having its shank extending through an opening formed in said member intermediate its ends and threaded into said bore and its head engaging said member and means for securing said device to said wall.

In testimony whereof, I have hereunto subscribed my name.

ANTHONY SCHROEDER.