

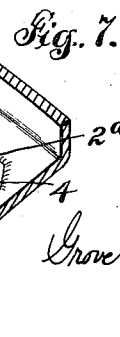
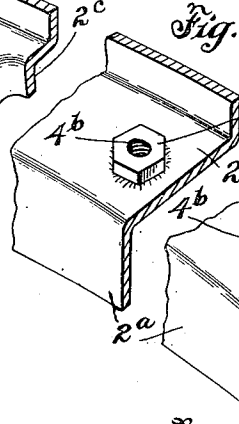
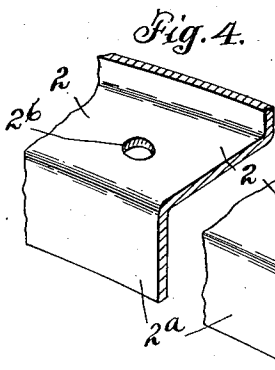
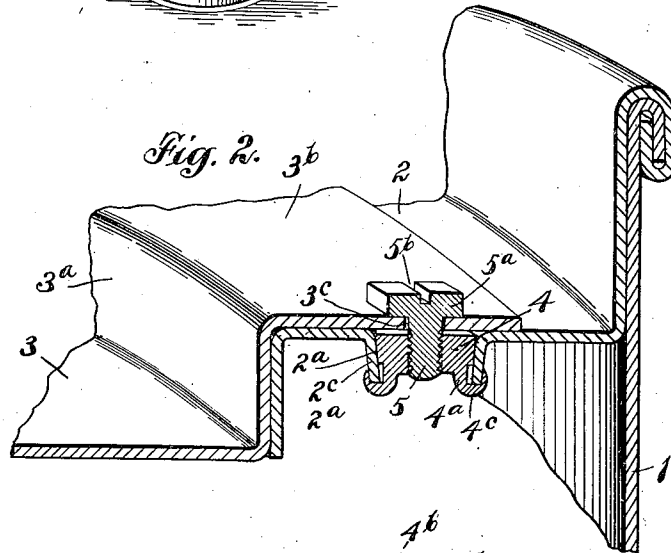
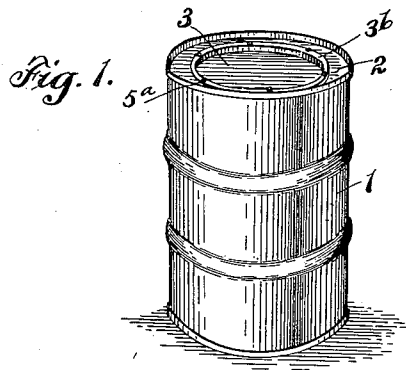
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1,479,358

G. F. BEHRINGER

METALLIC RECEPTACLE

Filed March 18, 1922



Inventor
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By

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UNITED STATES PATENT OFFICE.

GROVER F. BEHRINGER, OF DEFIANCE, OHIO, ASSIGNOR TO THE AMERICAN STEEL PACKAGE COMPANY, OF DEFIANCE, OHIO, A CORPORATION OF OHIO.

METALLIC RECEPTACLE.

Application filed March 18, 1922. Serial No. 544,731.

To all whom it may concern:

Be it known that I, GROVER F. BEHRINGER, a citizen of the United States, residing at Defiance, in the county of Defiance and State of Ohio, have invented certain new and useful Improvements in Metallic Receptacles, of which the following is a specification.

My invention relates to improvements in metallic receptacles or containers, the present embodiment of the invention relating to a receptacle or container particularly designed and adapted for use in the storage and transportation of liquids, such as oils, paints, and the like, which require a liquid tight container or receptacle.

The invention relates more particularly to improvements in fastening devices for the closure members or covers of such liquid tight containers designed not only to quickly and effectively close and secure the closure member in position and to permit of the ready and frequent removal of such closure but to effectively close and seal the receptacle as against leakage and particularly at the opening or perforation in the container wall necessitated by the insertion and securing of one of the fastening elements.

The primary object of the invention is to provide a generally improved fastening device of the class indicated which will be exceedingly simple in construction, cheap of manufacture, and efficient in use.

A further and very important object is the provision of an improved fastening element or member adapted to be inserted embedded and seated in the receptacle wall or head in an improved manner whereby such fastening element becomes a permanent part of the receptacle wall and effectively seals the fastener receiving opening therein.

A still further object is the provision of improved means of forming the fastener element receiving openings in the receptacle or container wall together with improved means for inserting and seating said fastening elements within such openings whereby to effectively prevent any relative movement between the parts.

The invention further relates to the specific form of the relatively fixed fastening element whereby the latter is adapted to be readily inserted in and secured within the receptacle or container wall.

With the above mentioned and other ends in view the invention consists in the novel

construction, arrangement and combination of parts hereinafter described, illustrated in one of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Fig. 1 is a perspective view of a metallic receptacle of the drum or barrel type equipped with a receptacle closure member and fastening element constructed in accordance with this invention.

Fig. 2, an enlarged fragmentary perspective view of a receptacle head and removable closure equipped with the improved fastening device, the parts being in assembled or closed relation.

Fig. 3, a side elevation of the relatively fixed fastening element or member before being inserted and embedded and seated in the receptacle wall or head to become a permanent part of the latter and to seal the fastener receiving opening therein.

Fig. 4, a fragmentary perspective view of the receptacle wall showing the initial formation of one of the fastener receiving openings.

Fig. 5, a similar view showing a successive step or stage in the formation of the same preparatory to the initial insertion and embedding therein of the relatively fixed or male fastening element.

Fig. 6, a similar view showing the initial insertion of the improved fastening element.

Fig. 7, a similar view showing the final insertion embedding and seating of such fastening element therein.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

While I have shown my improved fastening device applied to a metallic receptacle or container of the barrel or drum type for the purpose of illustration, it should be understood that the same may be readily incorporated in or used in connection with metallic receptacles or containers of varying forms or types.

In the present instance the cylindrical body 1, is provided with the usual heads 2, one of the latter being provided with a central opening provided with an inwardly extending flange 2^a.

The removable closure member or cover 3, is provided with an off-set annular shoulder

3^a, corresponding substantially in diameter to the diameter of the flanged opening to be closed, said closure 3 terminating in an annular horizontally extending rim 3^b, resting upon the marginal portion of the head surrounding the opening thereof. The overhanging rim 3^b may be provided with suitably spaced fastener receiving openings 3^c, to receive the removable fastening elements hereinafter referred to.

Referring now to the improved relatively fixed fastening element and the means of inserting embedding and seating the same in the receptacle wall (in the present instance the head member provided with the closure opening and closure) it will be seen upon reference to Fig. 4 that as an initial step in the formation of the fastener receiving opening a hole or perforation 2^b, is first formed, the surrounding marginal edges thereof being punched downwardly forming an annular flange 2^c, of a diameter corresponding substantially with the diameter of the tubular shaped portion or extension of the permanent fastening element to be inserted therein. The improved relatively fixed fastening element comprises an angular shaped head 4, provided with a tubular or ring shaped extension 4^a, adapted to extend within the flanged portion 2^c and to be beaded about the lower marginal edges of the flange 2^c as hereinafter referred to. In the present instance the angular shaped head 4^a is provided with a threaded opening 4^b, adapted to receive and contain the threaded shank 5 of the removable fastening element, which, in the present instance, is in the specific form of a cap screw having a head 5^a, and if desired, a slot 5^c, so that the fastening element may be readily turned by a wrench or a screw driver or similar tool.

As a convenient means of inserting embedding and seating the fastener element 4, the latter is initially placed within the flanged opening 2^c, as shown in Fig. 6 of the drawings and the fastening element is then punched down so that the angular head 4 will embed itself in the surrounding metal

forming a similarly shaped recess 2^d, within the walls of the head of the receptacle, as shown most clearly in Fig. 7 of the drawings.

By reason of this operation and the relation of the parts it will be seen that the angular shaped block or nut 4 will interlock with the adjacent parts and prevent turning, and as a means of holding the fastening element 4 against coming out, and particularly as a means of sealing the fastener receiving opening to prevent leakage, the tubular or ring shaped extension 4^a is made sufficiently long to extend slightly beyond the edges of the flange 2^c of the opening so as to be beaded or overturned as at 4^c thereby forming as a whole a very neat and efficient fastening device. When placed in the walls of a receptacle as described the same is not liable to disarrangement and cannot come out or become broken.

Having thus described one of the embodiments of my invention, without having attempted to set forth all the forms in which it may be made, or all the modes of its use, what I claim and desire to secure by Letters Patent is,—

1. In combination with the wall of a receptacle provided with an opening surrounded by an inwardly extending flange, a fastening element having an irregular shaped head embedded in and interlocking with said flange, said fastening element including a tubular portion extending from said head within said flange and beaded over the end of the latter.

2. In combination with an end wall of a receptacle provided with an opening having an inwardly directed flange, a fastening element including a head embedded in said flange and a tubular portion extending from said head within said flange, the end of said tubular portion being beaded over the end of said flange.

In testimony whereof I hereby affix my signature.

GROVER F. BEHRINGER.