April 19, 1932. W. M. BELL 1,854,730

SHIPPING CONTAINER

Filed May 31, 1930

Fig. 1.

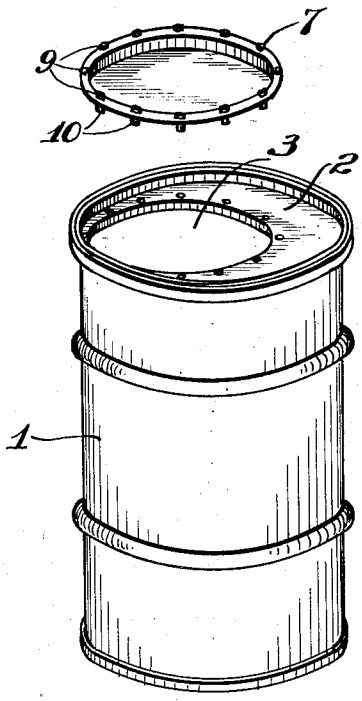


Fig. 2.

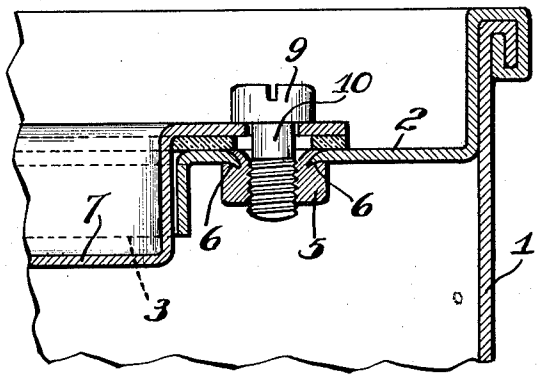
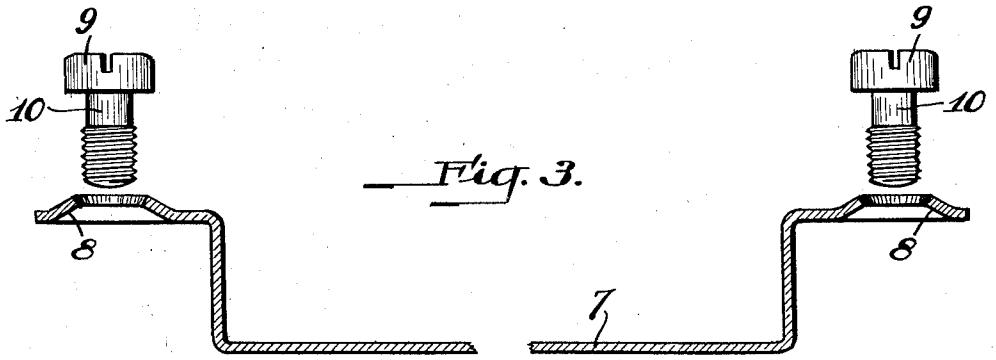


Fig. 3.



WITNESSES

A. B. Wallace.

Charles G. Cooper

INVENTOR

William M. Bell

By

Brown + Critchlow

His Attys.

Patented Apr. 19, 1932 1,854,730

UNITED STATES PATENT OFFICE

WILLIAM M. BELL, OF PORTSMOUTH, OHIO, ASSIGNOR TO WHEELING STEEL CORPORATION, OF WHEELING, WEST VIRGINIA, A CORPORATION OF DELAWARE

SHIPPING CONTAINER

Application filed May 31, 1930. Serial No. 458,073.

This invention relates to shipping containers, usually of drum shape, of the type in which one end of the container is formed with a relatively large opening through which the substance to be shipped may be loaded or unloaded, the opening being covered by a closure attached by bolts.

Solids, semi-solids, or fluid substances, such as greases, molasses, lubricating oils, etc., are frequently shipped in containers of the above mentioned type, the most common means of securing the closure to the container end being simply to bolt it down. However, considerable inconvenience and difficulty has been experienced in this connection, owing to the fact that by carelessness or accident the bolts are often, during the closing or opening of the container, dropped into and lost in the contents of the latter. Various attaching devices have been proposed with a view to avoiding this difficulty, but their expensiveness, and the fact that their use generally necessitates alteration of the form of the container end and the closure, has greatly restricted the adoption thereof.

The object of this invention is to provide a shipping container of the above type which will be at once simple and economical of manufacture and convenient of use, and which will obviate the above-named difficulty without material alteration of the container end or the closure.

By way of example, I have described one form of shipping container constructed in accordance with my invention in the following specification and shown the same in the accompanying drawings, in which:

Fig. 1 is a perspective view of the container and closure, the latter being shown as lifted from the container;

Fig. 2 is a fragmentary section of a top side portion of the container, with the closure attached to same; and

Fig. 3 is a cross section of the closure, prior to the securing of the bolts therein, showing the method of mounting the bolts.

The drawings show a metal drum shipping container 1, having an end 2, provided with a relatively large opening 3 through which the shipment may be loaded or unloaded. The container end is formed with a plurality of holes which surround the opening 3, and have secured therein bolt-receiving nuts 5, the latter being formed with grooves 6 in which the metal of the container end is gripped in a well known manner. The effect, of course, is that of providing the container end with a plurality of threaded holes for receiving the closure bolts.

In carrying out the present invention, the metal closure 7, employed for covering the opening 3, has the bolts 9 revolubly and irremovably attached thereto at their outer or head ends, thereby leaving their inner ends free to enter the nuts 5. To this end, the bolts 9 have reduced portions 10 formed directly beneath their heads, which reduced portions constitute necks into which the metal of the closure enters.

In order to secure the bolts 9 in the above named manner in the closure 7, the latter has holes formed therein of the diameter of the reduced portions 10 of the bolts, and the metal of the closure is struck up at the parts thereof immediately surrounding the holes in the manner illustrated in Fig. 3, where the struck up portions are indicated at 8. The resulting distortion of the metal is sufficient to enlarge the holes to a diameter permitting passage of the threaded ends of the bolts therethrough. The threaded ends of the bolts are passed through the holes and the metal is then pressed back to its original form, whereupon the metal engages in the reduced portions 10 of the bolts, the latter being thereby revolubly mounted and at the same time securely held against removal from the closure in either direction. This construction has the advantage that the parts are easily made and readily assembled, and the further, and important, advantage that defective bolts may be speedily replaced. As to the last, the defective bolt is hammered at its inner end, which has the effect of upsetting the metal again to a shape like that shown in Fig. 3, permitting withdrawal of the bolt. A new bolt is then inserted and is hammered at its outer or head end, thereby straightening the

metal and causing the latter to enter the reduced portion 10 of the bolt.

From the fact that the closure bolts are held against removal, it results that the difficulty and inconvenience encountered in the common constructions of containers of this character, incident to the bolts becoming lost or dropping into the contents of the container, is eradicated. At the same time, the securing of the closure bolts at their outer or head ends, permitting their inner ends to enter the nuts as usual, allows a closure of the broad type which has been found convenient in the art still to be employed, and avoids recourse to special constructions which may be expensive or inconvenient, or both.

I claim:

A metal shipping container having an end provided with an opening and with a plurality of bolt-receiving holes surrounding said opening, nuts attached to said end in registration with said holes, a closure for said opening, said closure having holes therein, and bolts carried by said closure, said bolts having reduced portions corresponding in diameter with said last-named holes and rotatably seated therein, whereby the portions of said bolts beyond said reduced portions prevent removal of said bolts from said closure.

In testimony whereof, I sign my name.

WILLIAM M. BELL.