Sept. 15, 1953 C. G. NELSON ET AL 2,652,168

TEMPORARY OUTLET BOX MOUNTING
FOR USE WITH CONCRETE FORMS
Filed May 6, 1949

Fig. 1.

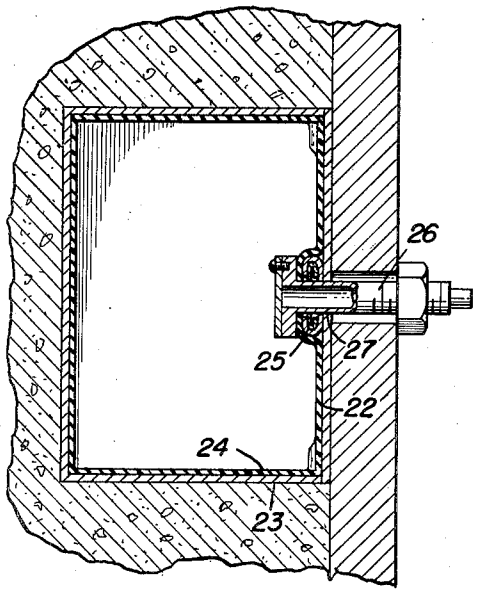


Fig. 2.

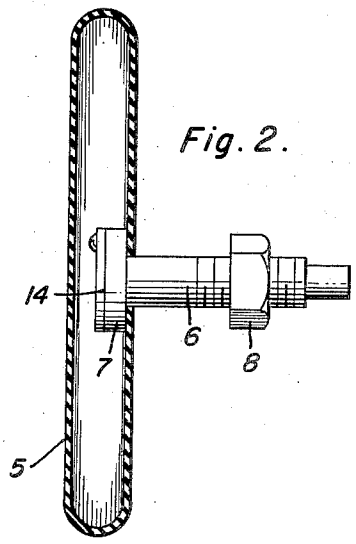


Fig. 5.

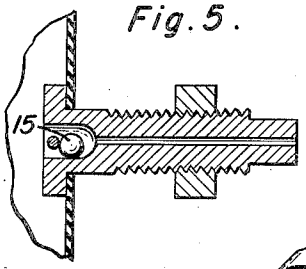


Fig. 4.

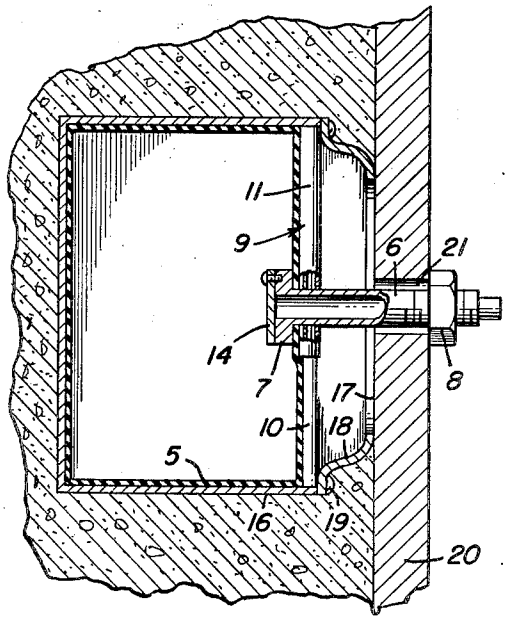
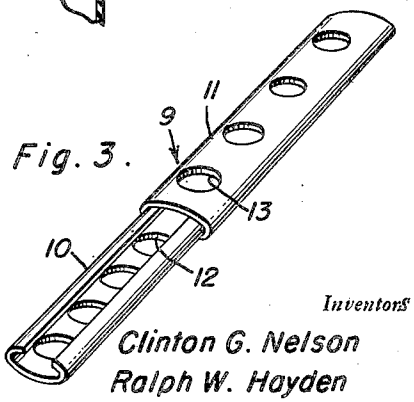


Fig. 3.



Inventors
Clinton G. Nelson
Ralph W. Hayden

By Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Patented Sept. 15, 1953

2,652,168

UNITED STATES PATENT OFFICE

2,652,168

TEMPORARY OUTLET BOX MOUNTING FOR USE WITH CONCRETE FORMS

Clinton G. Nelson and Ralph W. Hayden,
North Richland, Wash.

Application May 6, 1949, Serial No. 91,802

3 Claims. (Cl. 220—3.4)

1

The present invention relates to new and useful improvements in mountings for holding outlet boxes and the like on a concrete form while the concrete is being poured.

Heretofore it has been the practice in concrete construction to tie outlet boxes and similar receptacles to be recessed in a concrete wall to the concrete form by means of wire and which practice has frequently resulted in the breaking or stretching of the wire allowing the concrete to enter the box and sometimes resulting in completely losing the box in the concrete and thus presenting considerable difficulty in locating and chipping out the box.

Accordingly it is an object of the present invention to overcome this objectionable practice by providing an inflatable box sealing member or bag positioned internally of the box, and holding the member in the box and the box to the concrete form by means including a valve stem which projects outwardly from the form for inflating the member or bag to seal the outlet box on the inside of the form while the concrete is being poured and set, and for subsequently removing the inflatable member or bag by deflating the same so that the same may be removed from the box when the form is removed.

An important object of the invention is to provide a lining for the outlet box to seal the openings in the box from the entrance of concrete, water or other material during the pouring of the concrete in the form.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a vertical sectional view showing the inflatable bag in its inflated position in an outlet box and the valve stem for holding the latter on the inside of a concrete form;

Figure 2 is a side elevational view with the inflatable bag shown in section;

Figure 3 is an enlarged perspective view of the box supporting bracket;

Figure 4 is a sectional view of the box provided with a modified cover; and,

2

Figure 5 is an enlarged longitudinal sectional view of the inflating valve stem showing a modified check valve at the inner end thereof.

Referring now to the drawings in detail wherein for the purpose of illustration we have disclosed a preferred embodiment of the invention the numeral 5 designates a rubber or other suitable inflatable bag secured to a valve stem 6 by means of a circumferential flange 7 at the inner end of the valve stem. A nut 8 is threaded on the outer end of the valve stem.

An adjustable bracket 9 composed of a channel section 10 and a sleeve section 11 telescoping on the section 10 and both formed with alined openings 12 and 13 is positioned on the valve stem 6 outwardly of bag 5 by inserting the valve stem through a pair of the alined openings, said bracket 9 when thus positioned forming a cross member on the valve stem 6.

The valve stem is provided with the usual inflating valve (not shown) similar to that used for inflating automobile tires and by means of which the bag 5 may be inflated by attaching an air or other fluid hose to the valve stem.

The inner end of valve stem 6 is closed by a rubber or other suitable flap valve 14 secured to the flange 7, or by means of a ball check valve 15 as shown in Figure 5 of the drawings.

The bag 5 and bracket 9 are placed in an outlet box 16 through the usual elongated opening 17 in the cover 18 secured to the box by screws 19 and the bracket 9 turned crosswise behind the opening in the cover. The box 16 is then placed against the inside of a concrete form 20 with the cover 18 against the form to close opening 17 and stem 6 inserted through an opening 21 in the form and nut 8 threaded on the stem and tightened against the outside of the form to clamp the box in position.

An air hose is attached to valve stem 6 and bag 5 inflated to a suitable pressure sufficient for holding bracket 9 tightly against cover 18.

After the concrete has set, the inflating valve in stem 6 is removed and nut 8 removed from the stem thus permitting removal of the form. A tool (not shown) is then inserted in valve stem 6 to open check valve 14 and deflate bag 5 which may then be removed from the embedded box 16.

Where a blank cover 22, as shown in Figure 1, is used on box 23, the bag 24 and bracket 25 are placed in the box before the cover is secured in position and valve stem 26 inserted through a small central opening 27 in the cover before the box is secured to the inside of the form.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. Means for supporting a receptacle having an apertured front and at one side of an apertured support, said means comprising a valve stem insertable through said apertures to extend inwardly and outwardly of the receptacle and support, a cross member on said valve stem positionable in said receptacle behind said front and slidable on the stem to press said front against said side of the support, means on said stem engageable with the opposite side of the support to prevent said stem from movement inwardly of the receptacle, and an inflatable bag on said stem positionable in the receptacle for inflation through said stem to expand against said receptacle and cross member.

2. Means according to claim 1 wherein said cross member comprises telescopically adjustable sections for extending and contracting said member to fit in receptacles of different sizes, said sections having openings therein registering when the member is extended and contracted, said stem fitting in the registering openings to hold said member extended and contracted respectively.

3. Means according to claim 1 wherein said stem is provided with a circumferential flange between which and the cross member one side of the bag is confined on said stem.

CLINTON G. NELSON.
RALPH W. HAYDEN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
Re. 21,094	Brating	May 23, 1939
1,213,649	Hunter	Jan. 23, 1917
2,196,874	Ruegg	Apr. 9, 1940
2,410,936	Gronemeyer et al.	Nov. 12, 1946

FOREIGN PATENTS

Number	Country	Date
184,638	Great Britain	Aug. 24, 1922