

Oct. 12, 1937.

A. E. OSBORN ET AL

2,095,528

PROTECTOR

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Fig. 1.

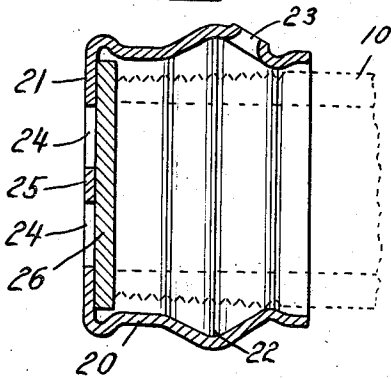


Fig. 2.

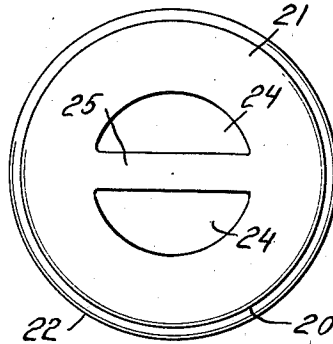


Fig. 3.

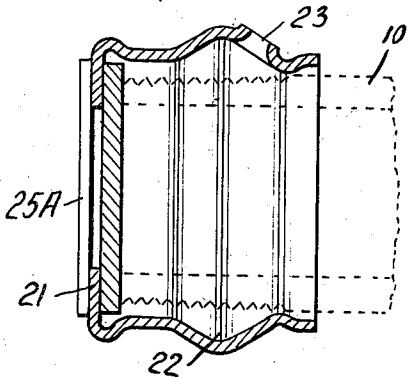


Fig. 4.

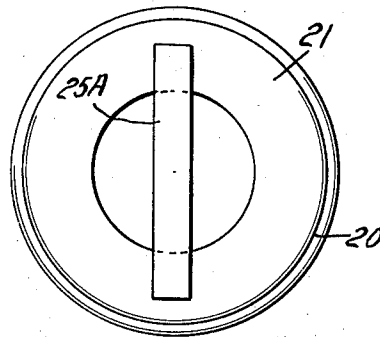


Fig. 5.

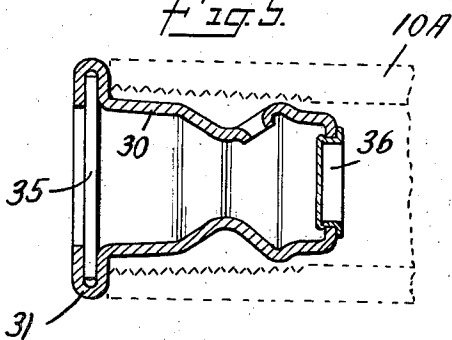


Fig. 6.

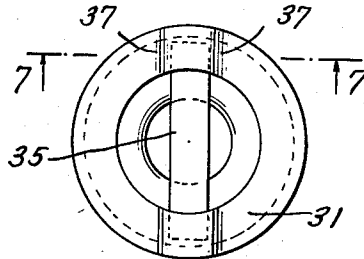
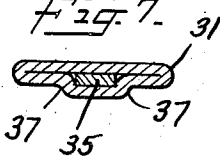


Fig. 7.



INVENTOR
Charles M. O'Boyle
Alden E. Osborn
BY
Marshall & Hawley
ATTORNEYS

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PROTECTOR

Alden E. Osborn, New York, and Charles M. O'Boyle, New Rochelle, N. Y., assignors to Simplex Improvements, Inc., New York, N. Y., a corporation of Delaware

Application September 13, 1935, Serial No. 40,394

1 Claim. (Cl. 138—96)

This invention relates to improvements in protectors of the type shown in Patent No. 1,949,431, issued March 6, 1934 to Alden E. Osborn, one of the present applicants, and in application Serial No. 741,061, filed by said Osborn August 23, 1934. Its object is to improve the construction of such protectors in order to facilitate their use and to strengthen them.

It has been found in practice that when such protectors are applied to pipes or other articles in the manner disclosed in the aforesaid patent and application, they are so effectively secured thereto that difficulty is experienced sometimes in rotating them for the purpose of removal. Several expedients have been tried for the purpose of overcoming this feature with more or less success. We have discovered a simple and effective device which meets the desired end and which at the same time stiffens and strengthens the end of the protector. According to this invention we construct the protector with a flat rigid transverse bar which can be readily engaged by an ordinary wrench or other tool to obtain the torque necessary to remove an applied device. It may likewise be used to tighten the protector on the article when it is applied thereto. The bar further functions to stiffen the protector and thereby increase its effectiveness.

We will describe some embodiments of the invention and point out its novel features in appended claim.

In the drawing,

Fig. 1 is a sectional elevation of a device made according to the present invention and especially designed as a protector for the end of an externally threaded pipe, the latter being indicated in this figure by dotted lines;

Fig. 2 is an end elevation of the protector shown in Fig. 1;

Fig. 3 is a view similar to Fig. 1 illustrating a modification of construction;

Fig. 4 is an end elevation of the device shown in Fig. 3;

Fig. 5 is a sectional elevation of a device especially designed as a protector for the end of an internally threaded pipe, which also embodies this invention; and

Fig. 6 is an end elevation of the device shown in Fig. 5. The cross bar is affixed to the device shown in Figs. 5 and 6 in a different manner than those shown in the preceding figures.

Fig. 7 is a sectional view taken through the line 7—7 of Fig. 6.

Like characters of reference designate corre-

sponding parts in the different figures of the drawing.

10 designates an externally threaded pipe. Its threaded end is protected by a cover of the type shown in the aforesaid patent. Briefly, this comprises a cylindrical shell 20 having a flange 21 extending over the end of the pipe. The shell is secured to the pipe by winding a cord or other flexible element into a space between the outer surface of the pipe and the inner surface of the shell. These covers are usually constructed with an annular groove 22 with an opening 23 to receive such flexible element.

According to the embodiment of the present invention illustrated in Figs. 1 and 2, the end of the cover is cut away as at 24, 24 leaving a transverse flat bar 25 extending diametrically across the flange 21. This may be engaged by any suitable tool to remove the cover from the pipe. It may also be used to produce the relative rotation between the cover and the pipe in applying the device. It further results in stiffening the cover and may be engaged by a hook for lifting and handling the pipe.

In Fig. 1, a disk 26 is shown interposed between the end of the pipe and the flange 21. This forms a closure to keep foreign matter out of the pipe. It may be made of frangible material, such as wood fibre, for example, which may be broken when it is desired to engage the bar 25 with a wrench or a hook.

The bar may be a separate element, as shown at 25A in Figs. 3 and 4, in which case it is rigidly affixed to the flange 21 in any desired manner, as by welding or riveting.

In Figs. 5 and 6 we have shown the invention applied to an inside protector of the type shown in application Serial No. 741,061, filed by Alden E. Osborn on August 23, 1934, one of the present applicants. In this case the shell 30 extends into the end of an internally threaded pipe 10A. Its outer flange 31 is formed of double thickness by bending the end of the shell outwardly and inwardly. The inner end of the shell is closed, either by an integral part of the material of which the shell is formed, or by a disk or cap 36 snapped onto the shell, as shown in Fig. 5.

A transverse bar 35 extends diametrically across the flange 31 and between the folds thereof. It is affixed to the flange in any desired manner. The outer layer of the flange is preferably bent back at the sides of the bar, as shown at 37 (Fig. 7).

Various modifications of this invention may be made within its spirit and scope and we intend no

limitations other than those imposed by the appended claim.

What we claim is:

A cover comprising a rigid body adapted to protect an article and arranged to be secured to the protected article by wrapping a flexible element between adjacent surfaces of said body and

of the protected article, a flange at the end of the body adapted to overlie the end of the protected article, a rigid bar extending across the flange, and a frangible disk inside the flange adapted to close the end of the protected article.

ALDEN E. OSBORN.
CHARLES M. O'BOYLE.