

M. H. PAINE.
 CONTRACTIBLE CORE.
 APPLICATION FILED FEB. 20, 1920.

1,396,280.

Patented Nov. 8, 1921.

Fig. 1.

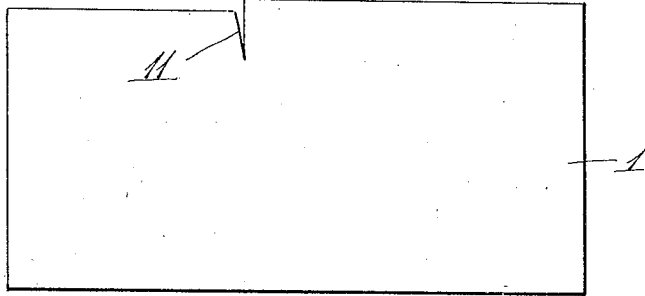


Fig. 2.

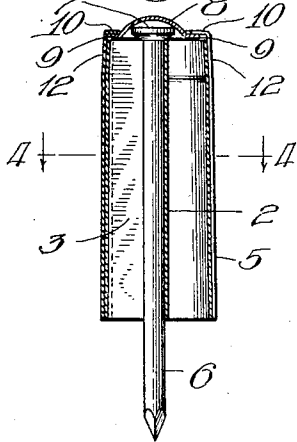


Fig. 3.

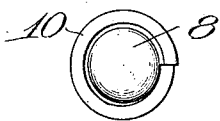


Fig. 4.

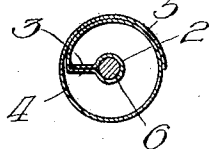
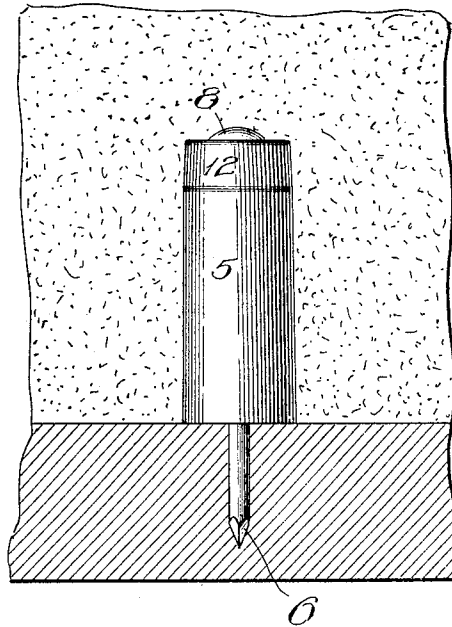


Fig. 5.



Inventor:
Mathew H. Paine
by *Winifred Williams*
Attys

UNITED STATES PATENT OFFICE.

MATHEW H. PAINE, OF GLENELLYN, ILLINOIS, ASSIGNOR TO THE PAINE COMPANY,
OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CONTRACTIBLE CORE.

1,396,280.

Specification of Letters Patent.

Patented Nov. 8, 1921.

Application filed February 20, 1920. Serial No. 360,123.

To all whom it may concern:

Be it known that I, MATHEW H. PAINE, a citizen of the United States, residing at Glenellyn, county of Du Page, State of Illinois, have invented a new and useful Improvement in Contractible Cores, of which the following is a specification.

This invention relates to improvements in contractible cores and has for one of its objects the provision of a device of this character which shall be adapted for use in forming holes or cells in concrete walls and the like during the formation thereof. Another object is to provide a core which shall be simple in construction and operation, economical to manufacture, and one which may be easily and quickly removed after the concrete has become set.

Other objects and advantages will be apparent from the following description taken in connection with the accompanying drawings wherein one form of the invention is illustrated.

Figure 1 is a plan view showing the approximate form of the blank from which the device may be shaped;

Fig. 2 is a vertical sectional view of the device;

Fig. 3 is a top plan view thereof;

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 2; and

Fig. 5 is a view showing the device in operative position.

Referring more in detail to the drawings, the device is shown as comprising a blank 1 of sheet metal or the like, so formed as to provide an outer cylinder 5 and an inner cylinder 2, the latter being formed by bending the inner edge of the blank radially inwardly as at 4 and then turning the same back upon itself as at 3. The other or outer end of the blank overlaps the cylinder 5 as shown.

Suitable attaching means, shown in the drawings in the form of a nail 6, fits the inner cylinder 2, the head 7 resting upon the upper edge thereof as shown. The lower or spiked end of the nail extends a suitable distance below the base of the cylinders for engagement with the wooden frame work or form for supporting the device in operative position.

A suitable cap 8 of dome shape and provided with an annular flange 9 is adapted to fit within the upper end of the outer cylinder

5 of the device and seat against the head 7 of the nail. The upper edge of the outer cylinder is flanged over as at 10 and maintains this cap 8 securely in position. As will be observed, this cap not only prevents displacement of the nail but also provides a cover for the outer end of the device, thus preventing the plastic material from entering the same or otherwise interfering with its removal after said material has hardened.

A substantially V-shaped slot 11 is provided in the upper edge of the blank 1 as shown in Fig. 1, said slot being adapted to define the line along which the inner end of the said blank is bent in forming the inner cylindrical portion 2 thereof. The slot 11 is of V-design in order to provide for the taper 12 at the upper end of the device and to permit of greater contracting. The walls of the cylinder 5 preferably taper slightly from the bottom upwardly to within a certain distance of the top, practically corresponding to the depth of notch 11, from which point the more pronounced taper 12 is imparted to the cylinder.

As is well known it is common practice, during the pouring of concrete walls and the like to embed therein bolts or anchoring devices of various other types, so that when the concrete hardens or becomes set these devices will be rigidly held in position. These anchoring devices, as is well known, provide supports for fixtures of various kinds and structural elements in general. Many disadvantages have developed as a result of this practice just described.

In short it has been found desirable to form holes or cells in walls, floors, etc., during their formation or during the pouring of the concrete, so that anchoring devices of various types may be attached thereto in such wise as to permit of the same being readily and quickly removed, changed or replaced. It will be observed that the device forming the subject of the present invention provides a very simple and efficient means for forming these cells. The device is attached to the wooden mold or form at the desired position by a simple hammer blow and it has been found that in removing the mold or form after the concrete has hardened, the device will generally remain attached thereto and thus be withdrawn therewith, leaving the holes or cells in the wall unobstructed. However, in the event the de-

vice does not remain attached to the frame work so as to be withdrawn therewith when the mold is removed from the mass of concrete, the same may be easily and quickly contracted by gripping the walls 3—4 with a pair of pincers or like instrument and imparting a slight twist or turn to the inner cylinder 2. This causes the overlapping end of the outer cylinder to slide upon the latter in such wise that the device is contracted and its removal thereby permitted. As will be appreciated, the device may be used over and over again, the same assuming its normal shape and size as soon as removed.

As will be appreciated, the device herein described and illustrated is susceptible of many changes and modifications without departing from the spirit of the invention and accordingly it is not desired to limit the same to the particular form or arrangement shown, except where limitations appear in the appended claims.

What I claim is:—

1. In a device of the class described, a sheet of material bent to provide spaced apart outer and inner cylindrical portions, said outer portion being contractible by turning said inner portion relatively thereto.

2. In a device of the class described, a sheet of material bent to provide outer and inner cylindrical portions, attaching means carried by said inner portion and said outer portion being contractible around said inner portion.

3. In a device of the class described, a sheet of material bent to provide outer and inner cylindrical portions, attaching means carried by said inner portion, said outer portion being contractible around said inner portion, and means for preventing displacement of said attaching means from said inner portion.

4. In a device of the class described, a sheet of material bent to provide outer and inner cylindrical portions, attaching means carried by said inner portion, said outer portion being contractible around said inner portion and means for preventing displacement of said attaching means from said inner portion, said means also serving as a cover for one end of said device.

5. In a device of the class described, a blank of sheet material slit at one edge, the portion of said blank on one side of said slit being rolled into cylindrical form, the other portion of said blank being bent radially inwardly with respect to said first named portion and also formed into a cylinder, attaching means carried by said last named portion, and means covering one end of said device for maintaining said attaching means against displacement.

6. A device for the purposes described consisting of a contractile cylinder; a smaller cylinder internal thereof and unitary therewith; an attaching means inserted in the internal cylinder; a cap covering the attaching means at its upper end and adapted to inclose one end of the said cylinder.

7. A device for the purposes described consisting of a support; an attaching means; a contractile cylinder external of said support and integral therewith, the sides of said cylinder tapering from the bottom upwardly.

Signed at Chicago, Ill., this 16th day of February, A. D., 1920.

MATHEW H. PAINE.

Witness:

E. C. HALL.