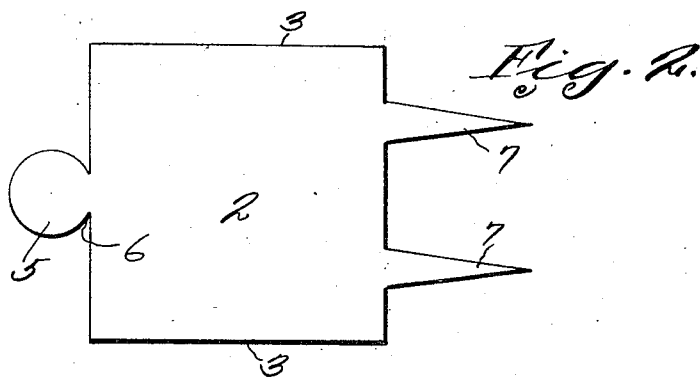
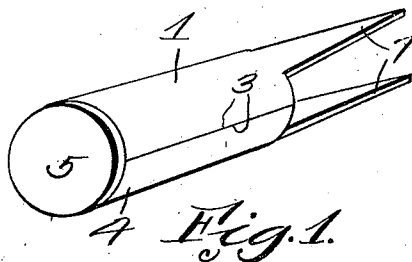
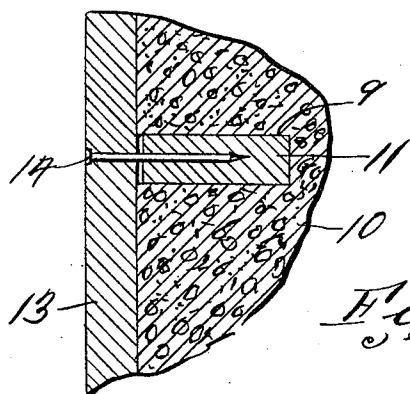
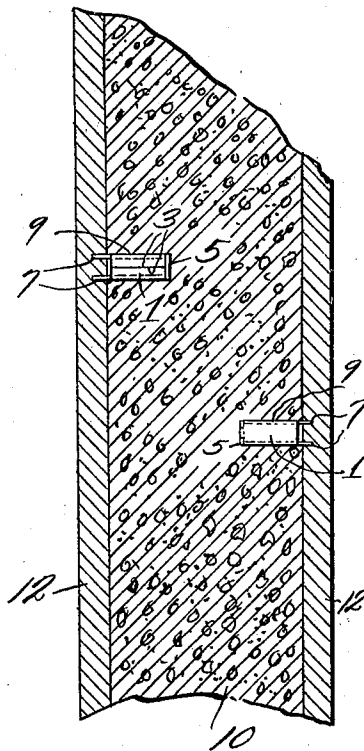


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C. A. RINEY
HOLE FORMING DEVICE
Filed July 7, 1922



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UNITED STATES PATENT OFFICE.

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HOLE-FORMING DEVICE.

Application filed July 7, 1922. Serial No. 573,341.

To all whom it may concern:

Be it known that CHARLES A. RINEY, citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, has invented certain new and useful Improvements in Hole-Forming Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to hole forming devices for concrete structures, and has for its object to provide a device of this character preferably cylindrical shaped and formed from a single sheet of metal and provided with prongs adapted to be driven into the boards of a concrete form and forming means whereby cylindrically shaped apertures may be formed in the concrete structure for the reception of wooden plugs, thereby allowing facings and the like to be secured to the structure. The present practice is to drill holes in the concrete after the structure is formed, which operation is a slow one and necessarily an expensive one. With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—

Figure 1 is a perspective view of the hole forming device.

Figure 2 is a blank from which the device is formed.

Figure 3 is a vertical sectional view through a portion of a concrete structure and portions of a form, showing the hole forming devices carried by the form.

Figure 4 is a detail sectional view through a portion of a concrete structure, a portion of a finishing board applied thereto and showing a wooden plug in the hole in the concrete structure.

Referring to the drawing, the numeral 1 designates the cylindrical body of the hole forming device which is formed by bending the rectangular shaped portion 2 of the blank to tubular form with its edges 3 in abutting engagement. The end 4 of the cylindrical

body 1 is closed by means of a disc shaped member 5 which is integrally joined at 6 to the rectangular shaped portion 2 of the blank. The cylindrical body member 1 is provided with integral prongs 7, which are substantially in parallel relation to each other and extending outwardly from diametrically opposite sides of the cylindrical body 1. The prongs 7 are formed integral with the rectangular shaped portion 2 of the blank as clearly shown in Figure 2.

When it is desired to form apertures in the concrete structure for the reception of wooden plugs 11, the hole forming devices are secured to the form boards 12 by driving the prongs 7 into the boards 12 as clearly shown in Figure 3. The prongs 7 will maintain the hole forming devices in position in such a manner that when the concrete structure is poured, cylindrically shaped holes 9 are formed and into which holes plugs 11 are driven after the form boards 12 and the devices have been removed. However it is to be understood that if so desired the hole forming devices may be left in the concrete structure and the prongs 7 removed therefrom. After plugs 11 have been driven into the holes 9, it is obvious that finishing boards 13 may be secured to the concrete structure by means of nails 14, thereby obviating the present practice which is slow and expensive of drilling holes in the concrete structure.

From the above it will be seen that a hole forming device is provided, for concrete structures during the formation thereof, which device is formed from a single sheet of material, has its inner end closed and one which may be stamped from a single sheet of material and then bent to form.

The invention having been set forth what is claimed as new and useful is:—

1. The combination with a form board for forming a plastic structure, of means carried by the form board for forming an aperture in the plastic structure, said means comprising a cylindrical member, integral prongs carried by one end of the cylindrical member and imbedded in the form board, the inner end of the cylindrical member being closed by a disc shaped member integrally joined to the cylindrical member.

2. The combination with a form board for

forming a plastic structure, of a cylindrical
hole forming device carried thereby, said
device being provided with prongs, said
prongs being imbedded in the form, the in-
5 ner end of the cylindrical hole forming de-
vice being closed by a disc shaped member,
said device being formed from a rectangular
sheet of metal bent to cylindrical form, said
disc shaped member and prongs being inte-
grally formed to the rectangular sheet of 10
metal.

In testimony whereof I hereunto affix my
signature.

CHAS. A. RINEY.