Sept. 10, 1946. J. L. PAINTER, JR 2,407,441

FORM TO PROVIDE AIR PASSAGES IN CONCRETE WALLS

Filed July 19, 1945 2 Sheets-Sheet 1

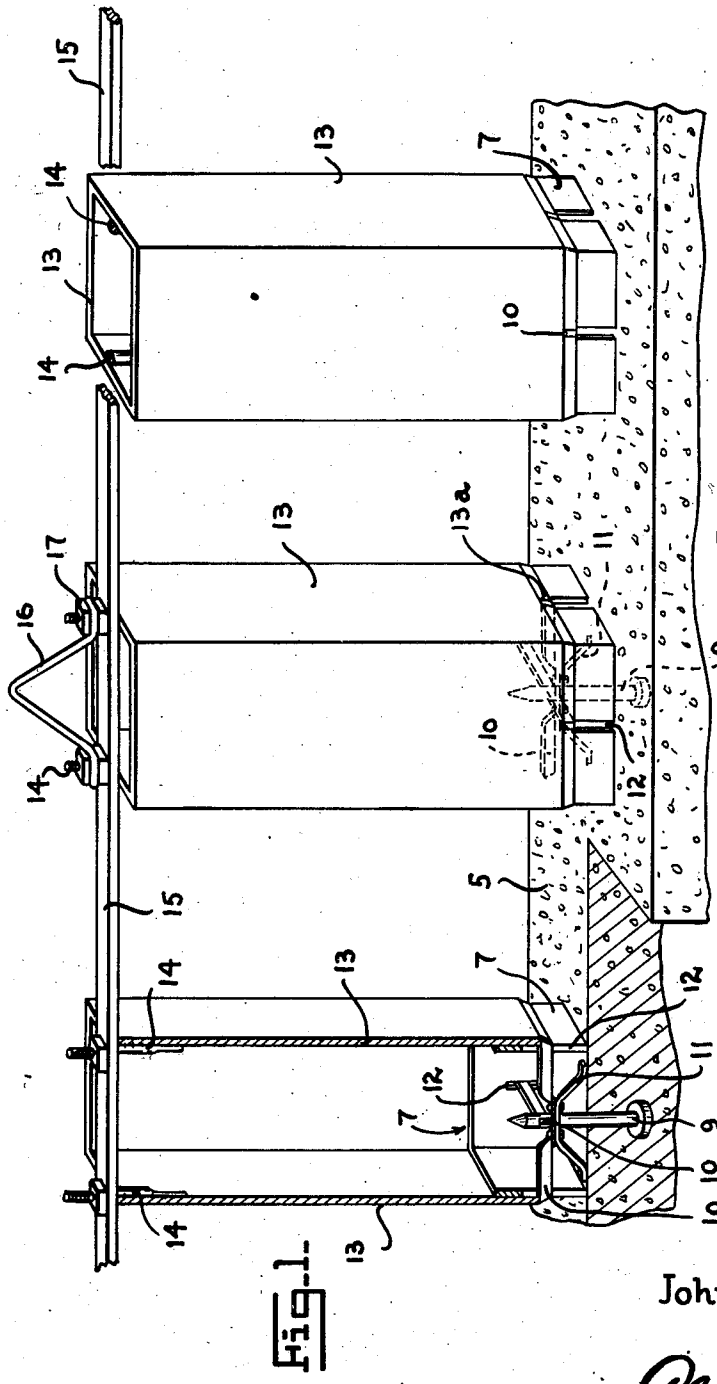


Fig-1.

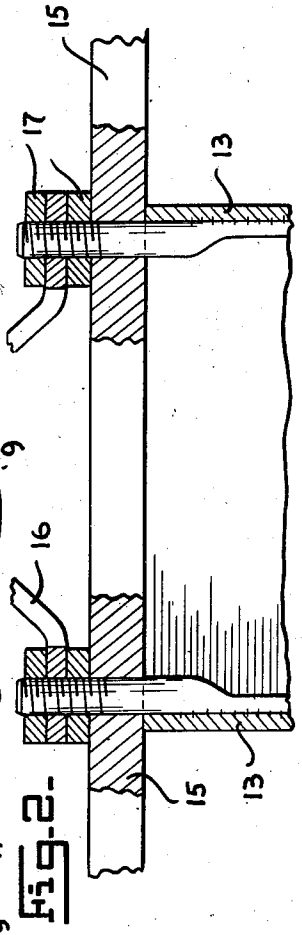


Fig-2.

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Filed July 19, 1945 2 Sheets-Sheet 2

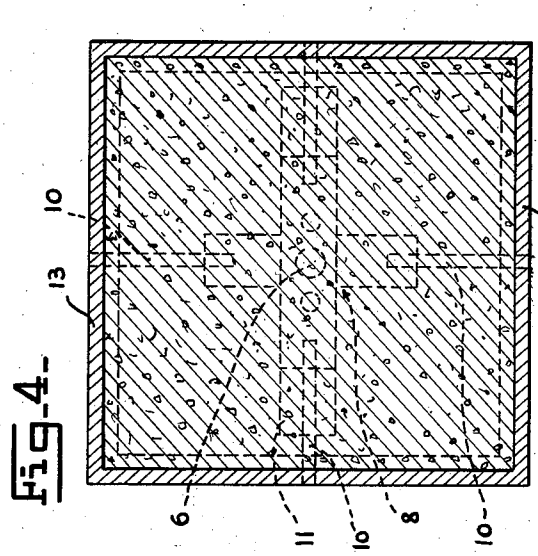


Fig-4-

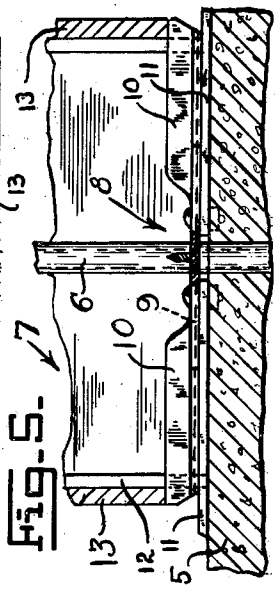


Fig-5-

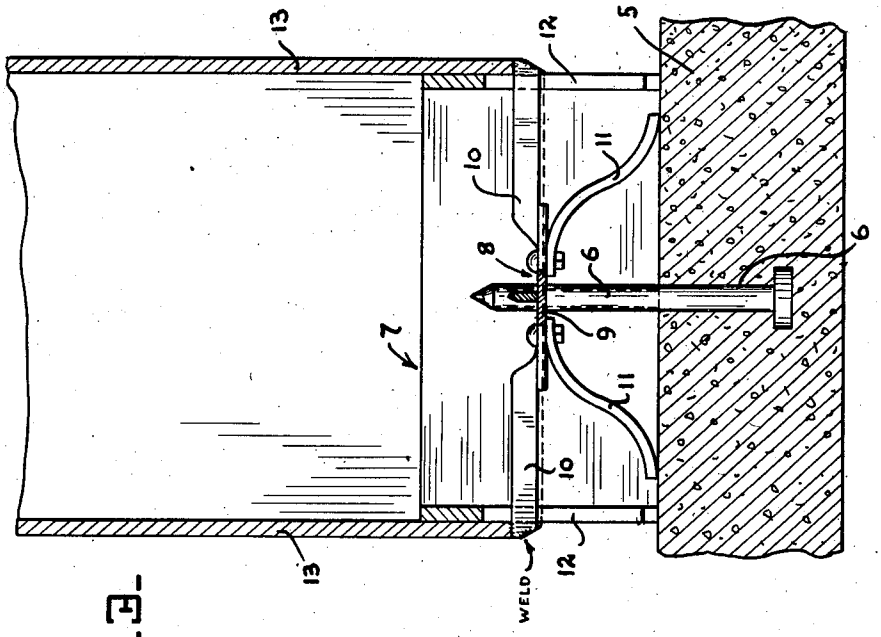


Fig-3-

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UNITED STATES PATENT OFFICE

2,407,441

FORM TO PROVIDE AIR PASSAGES IN CONCRETE WALLS

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Application July 19, 1945, Serial No. 605,941

5 Claims. (Cl. 25—128)

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The present invention relates to new and useful improvements in concrete forms, and more particularly to a removable form adapted to provide vertical air passages in a concrete wall while the same is being poured.

More specifically, the invention embodies a hollow form of predetermined height adapted for resting on the footing of a concrete wall for embedding in the concrete while the wall is being poured, together with means at the bottom of the form to break the same loose from the concrete before the concrete is set and thus facilitate removal of the form from the wall to leave a vertical air passage therein.

A further object of the invention is to provide a device of this character of simple and practical construction which is efficient and reliable in use, 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 reference numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a group of the forms shown in position prior to the pouring of the wall and with parts broken away and shown in section,

Figure 2 is an enlarged fragmentary sectional view of the upper end of one of the forms,

Figure 3 is an enlarged vertical sectional view of the lower end of one of the forms,

Figure 4 is a transverse sectional view, and

Figure 5 is a fragmentary, vertical sectional view of the lower end of the form showing the outer sleeve moved downwardly to its lowermost position for releasing the form.

Referring now to the drawings in detail, wherein, for the purpose of illustration, I have disclosed a preferred embodiment of the invention, the numeral 5 designates a concrete footing on which a concrete wall is to be poured through the use of conventional wall forms (not shown). Spikes or rods 6 are embedded in the footing 5 with one end projecting upwardly above the footing at spaced intervals.

A lower, hollow form 7 of square shape or other suitable shape in cross-section, and open at each end, is supported in upright position on the footing and surrounding the upper end of the spikes or rods 6.

A spider designated generally at 8 includes a hub portion 9 and radially extending horizontal arms 10 is mounted on the spikes 6. Leaf springs 11 are welded, bolted or otherwise attached at one end to the hub 9 and are curved downwardly with their free ends bearing on the footing.

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The outer ends of the arms 10 are slidably received in vertical slots 12 in the lower sides of the form 7.

An upper, hollow form 13 has its lower end telescoping over the lower form 7 with the lower edges of the upper form 13 formed with slots 13a in which the outer ends of the arms 10 are welded. The lower edge of the form 13 is beveled to facilitate cutting through the partially set concrete after pouring about the forms.

A pair of bolts 14 project upwardly from the upper form 13 at opposite sides thereof, the lower ends of the bolts being welded or otherwise suitably secured to the inside of the form 13 and groups of the forms are connected to each other to maintain the same against movement on the footing 5 while pouring the concrete wall by means of a bar 15 positioned transversely on top of the form 13 and through which the upper ends of the bolts 14 are inserted.

A bail or handle 16 also has its ends attached to the bolts 14 by means of nuts 17 to facilitate lifting the forms from the concrete wall after the latter has been set.

After the concrete has been poured and starts to harden, a blow by a hammer or other tool is delivered to the top of the upper form 13 which results in the springs 11 setting up a vibration and thus loosens the forms from the concrete, whereupon the forms with the spider attached thereto may be lifted from the concrete. If necessary the upper form 13 may be driven all the way down to the footing to start the loosening action.

Having thus described the invention, what I claim is:

1. A mold for concrete walls comprising a pair of telescoping hollow forms adapted for resting on a wall footing and including upper and lower forms, said lower form having vertical slots therein, a plurality of arms having an end projecting in the slots for vertical movement therein and secured to the upper form, and spring means extending between the arms and the footing.

2. A mold for concrete walls comprising a pair of telescoping hollow forms adapted for resting on a wall footing and including upper and lower forms, said lower form having vertical slots therein, a plurality of arms having an end projecting in the slots for vertical movement therein

and secured to the upper form, means for centering the arms in the forms, and spring means extending between the arms and the footing.

3. A mold for concrete walls comprising a pair of telescoping hollow forms adapted for resting on a wall footing and including upper and lower forms, said footing having an upstanding pin anchored thereto, a spider secured to the upper form and slidably mounted on said pin said lower form having vertical slots in its lower edge slidably receiving the arms, and spring means positioned between the spider and the footing and adapted to vibrate the forms as a result of blows delivered against the upper form by an implement.

4. A mold for concrete walls comprising a pair of telescoping hollow forms adapted for resting on a wall footing and including upper and lower forms, said footing having an upstanding pin

anchored thereto, a spider secured to the upper form and slidably mounted on said pin said lower form having vertical slots in its lower edge slidably receiving the arms, and spring means positioned between the spider and the footing and adapted to vibrate the forms as a result of blows delivered against the upper form by an implement, and means attached to the upper form for lifting both the upper and lower forms and the spider from the concrete.

5. A mold for concrete walls comprising a pair of telescoping hollow forms adapted for resting on a wall footing and including upper and lower forms, spring means engaging the footing, and means connecting the spring means to the upper form to cause vibration of the forms by blows delivered against the upper form by an implement.

JOHN L. PAINTER, JR.