

Dec. 19, 1933.

S. A. HOLMES

1,940,545

CONCRETE ANCHORING DEVICE

Filed Dec. 23, 1931

2 Sheets-Sheet 1

FIG. 1.

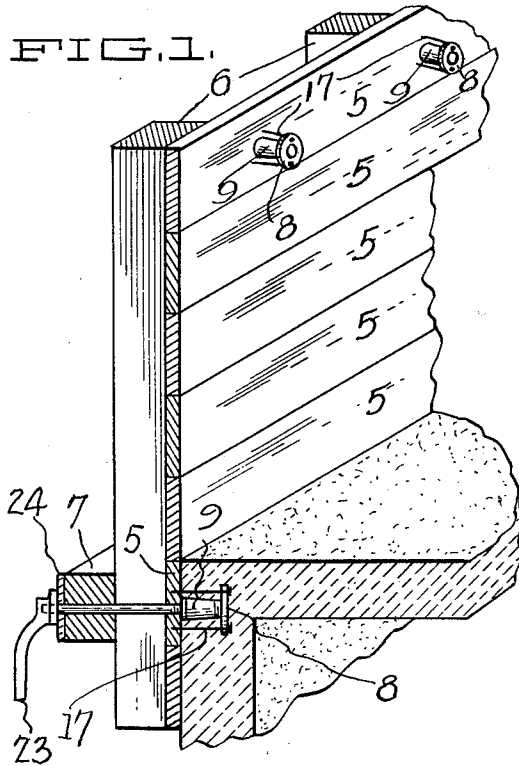


FIG. 2.

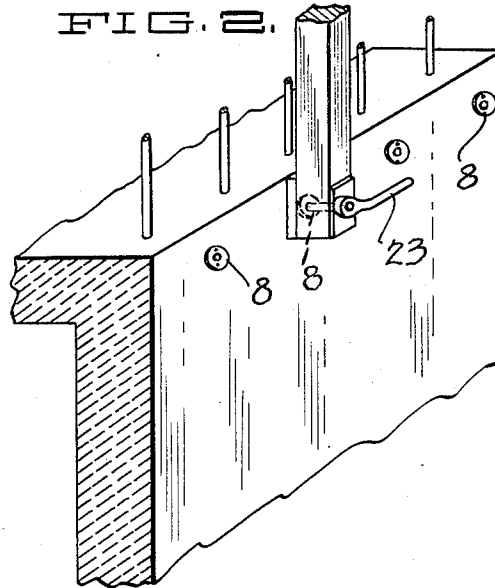


FIG. 3.

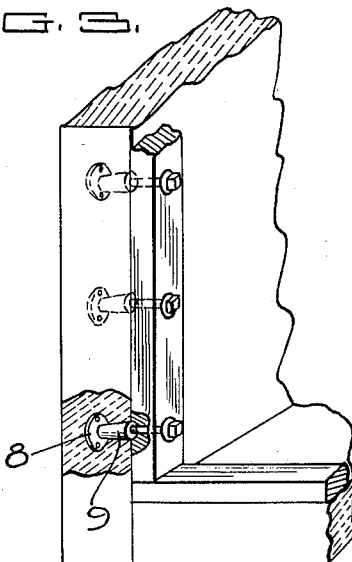
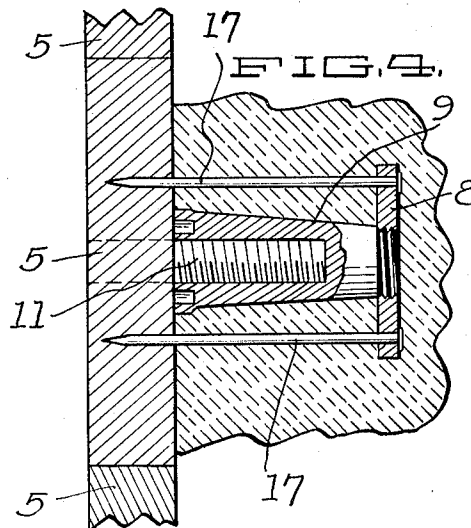


FIG. 4.



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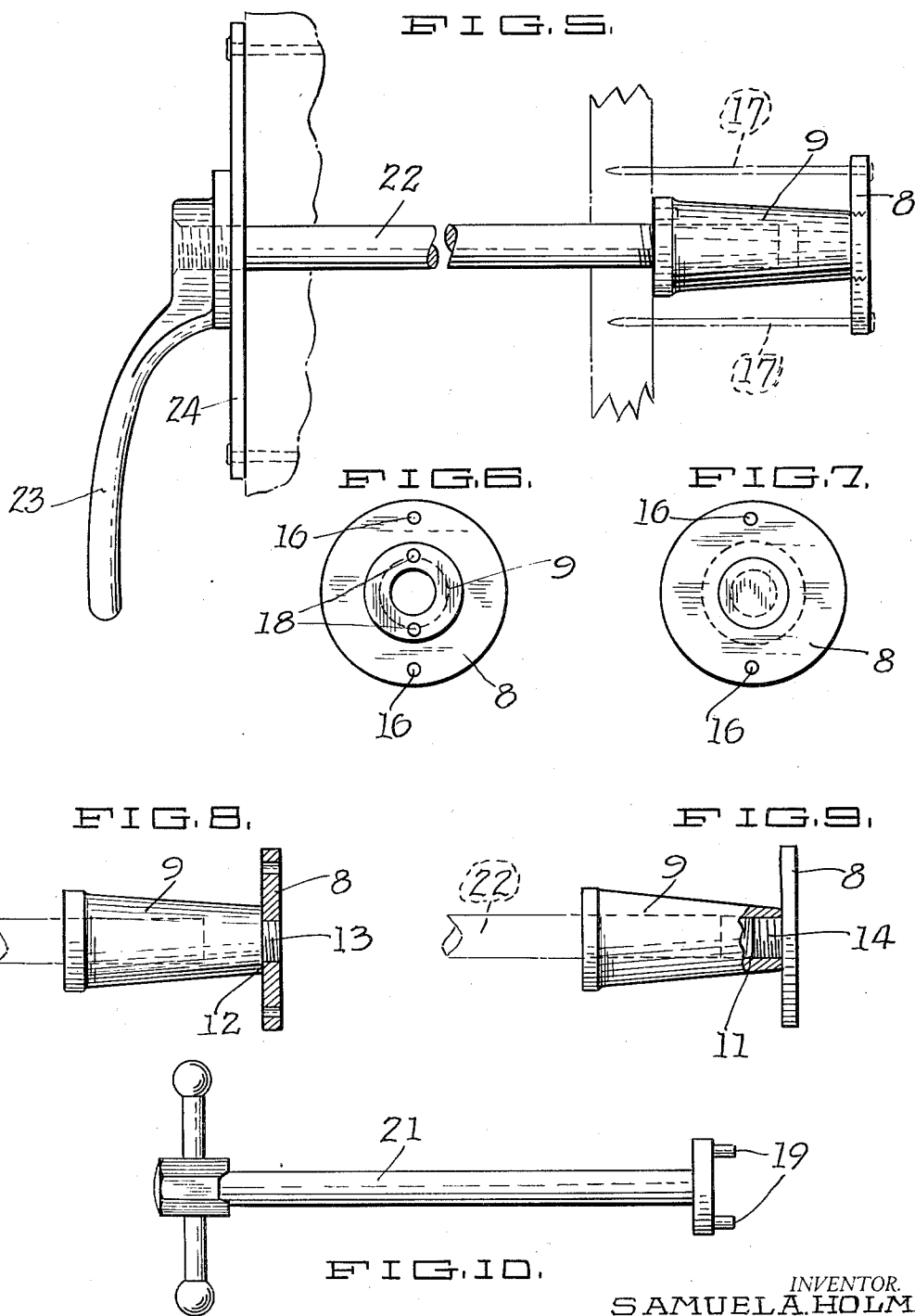
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UNITED STATES PATENT OFFICE

1,940,545

CONCRETE ANCHORING DEVICE

Samuel A. Holmes, Berkeley, Calif.

Application December 23, 1931

Serial No. 582,855

2 Claims. (Cl. 72-105)

This invention relates to improvements in concrete anchoring devices, and has particular reference to a device for anchoring forms, studding and the like to concrete structures.

5 One of the objects of this invention is to provide means whereby an anchoring element is embedded in the concrete at the time the concrete is poured and to which the form is attached and afterwards providing means whereby 10 the form may be released from the anchor and re-anchored thereto but in a different position.

A further object is to provide means whereby, if desired, a portion of the anchoring means may be salvaged.

15 A further object is to produce a device which is simple in construction and therefore economical to manufacture.

A still further object is to provide a device which when left in the concrete will not produce 20 an unsightly appearance.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals 25 are employed to designate like parts throughout the same,

Fig. 1 is a fragmentary perspective view showing the manner in which my device is employed,

Fig. 2 is a fragmentary detail view illustrating 30 the manner in which a studding may be secured to a concrete structure,

Fig. 3 is a fragmentary detail view showing the manner in which a batten may be secured to a concrete structure,

35 Fig. 4 is a detail cross sectional view showing my device as the same is embedded in the concrete,

Fig. 5 is a side elevation of my device in connection with a form,

40 Figs. 6 and 7 are end elevations of my anchoring means,

Figs. 8 and 9 are modified forms of my device, and

Fig. 10 is a wrench for salvaging a portion of 45 the anchor.

In pouring concrete structures, it is more economical if the form boards may be raised after the pouring of the concrete progresses. This is generally accomplished by securing suitable staging to the forms for maintaining the same in place. With my invention I secure to the form boards, a plurality of anchors and after the concrete has been poured and solidified about these anchors, the form boards are released from the 50 anchors and moved upwardly and reengaged with

the next above anchors. These anchors may also be attached to the form boards in such a manner that they will assume definite positions whereby studding, battens and the like may be later secured thereto.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numerals 5 designate form boards which are secured to uprights 6. A brace 7 is usually employed which extends the 65 length of the form and is connected to the uprights 6.

My device consists of a plate 8 to which is threadedly attached a tapered casting 9. This casting is interiorly bored and threaded as shown 70 at 11 and is secured to the plate 8 in any approved manner. As shown in Figs. 4 and 5 the casting is threaded and secured to the plate 8. In the modified form shown in Fig. 8, a shoulder 12 is provided, the stud 13 being threaded to the 75 plate. In the form shown in Fig. 9, a stud 14 is formed upon the plate and is threaded into the bore 11. The plate 8 has holes 16 through which nails 17 may be passed and driven into the form boards 5, so as to hold the plate and its attached 80 casting to the form boards. Holes 18 are formed in the casting 9 so as to receive the lugs 19 of the spanner wrench 21. A clamping rod 22 is adapted to be threaded into the bore 11 and is provided with a handle 23 and a plate 24. The plate 24 85 is preferably secured to the cross member 7 and the handle 23 is adapted to abut this plate.

The result of this construction is that in use a plurality of plates with their attached castings are nailed to the form boards 5 at pre-determined 90 locations and the clamping rods 22 are inserted through the form boards 5 in the lower line of anchoring devices. The concrete is now poured between the forms and after the same has set, the handles 23 are rotated so as to remove the 95 clamping rods from their engagement with the castings. The form boards are then pulled away from the concrete, withdrawing the nails from the form boards and leaving the plates, the castings and the nails, extending through the plates, 100 embedded in the concrete. The form may now be moved upwardly so that the rods may engage the upper line of embedded anchors. If it is desired to salvage the castings 9 the spanner 21 is employed and by causing the lugs 19 to 105 enter the holes 18 in the ends of the castings, they may each be rotated and separated from their respective plates, the nails 17 preventing the rotation of the plates 8 in the concrete. The openings left may be filled with concrete so as 110

to remove the evidence of any anchoring means or if desired these castings may be left in place and studding or like material may be attached to the concrete as illustrated in Figs. 2 and 3.
5 It is of course obvious that the ends of the nails 17 projecting from the concrete will be cut off so as not to cause an unsightly appearance in the structure.

It is to be understood that the form of my
10 invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.
15 Having thus described my invention, I claim:—

1. A concrete anchor comprising a plate, means

for removably securing said plate to a concrete form, a casting removably engaging said plate, said casting being decreasingly tapered toward its points of engagement with said plate, wrench
80 engaging means formed in said casting whereby said casting may be removed from said plate after said plate has been embedded in concrete.

2. A concrete anchor comprising a plate and a casting removably attached to said plate, said plate and said casting being adapted to be embedded in a plastic mass, and means carried by
85 said plate and said casting for causing the ejection of said casting from said plastic mass through relative movement between said plate and said casting, after said plastic mass has become hardened.
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