

April 21, 1953

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2,635,320

SUPPORTING ASSEMBLY FOR CONCRETE FORMS

Filed Oct. 20, 1950

2 SHEETS--SHEET 1

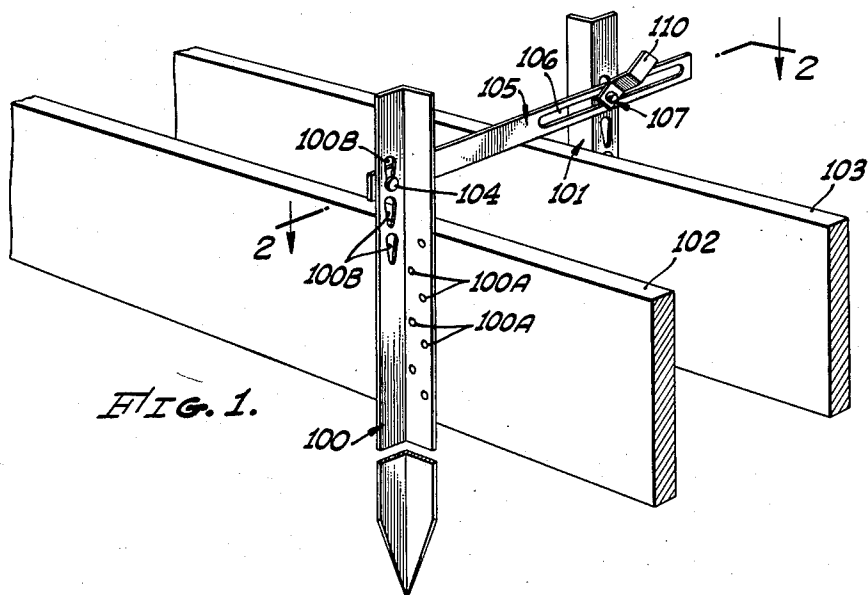


FIG. 1.

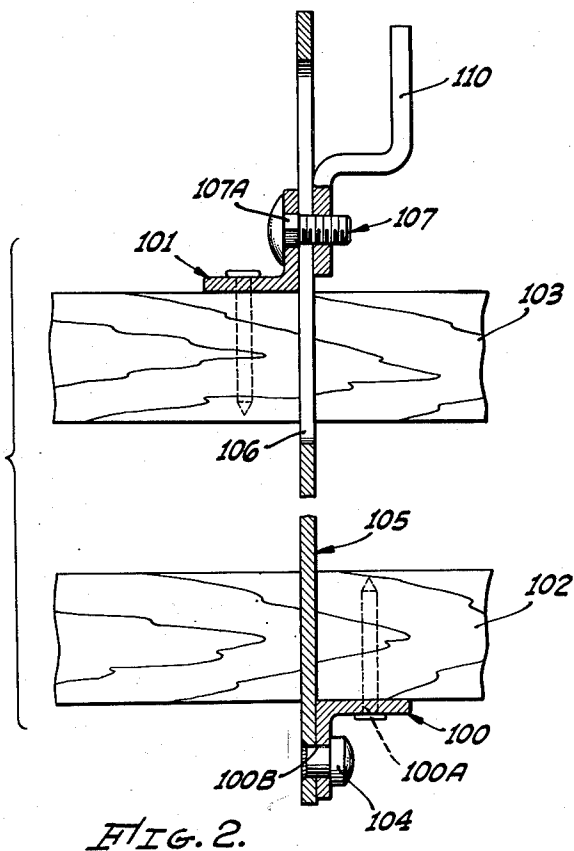


FIG. 2.

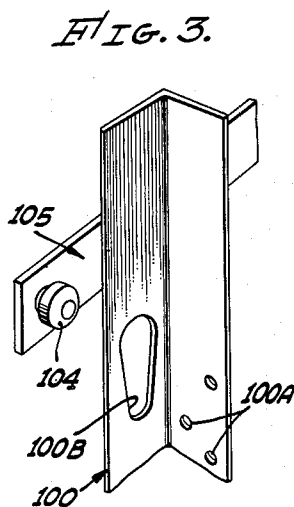


FIG. 3.

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2 SHEETS—SHEET 2

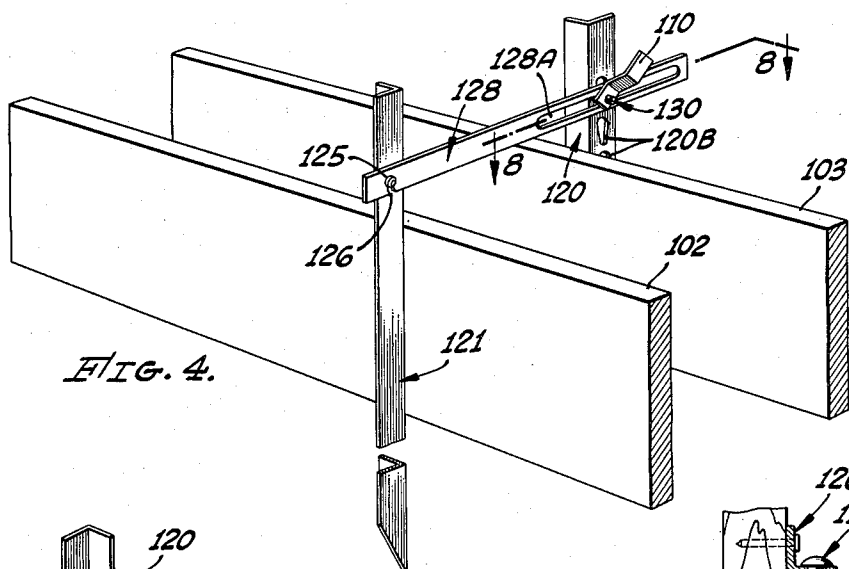


FIG. 4.

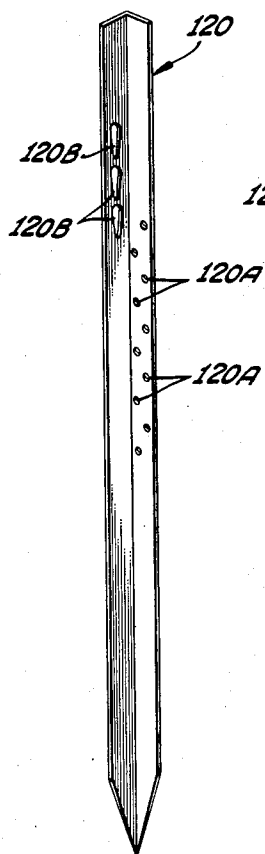


FIG. 6.

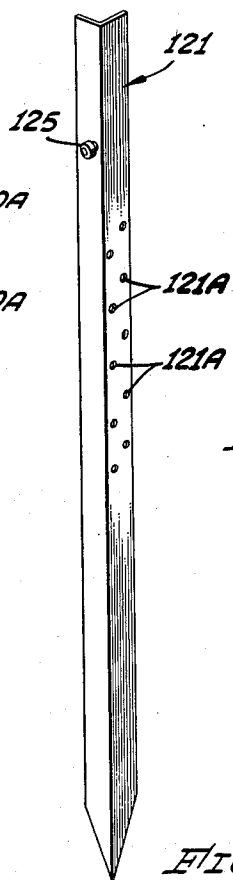


FIG. 7.

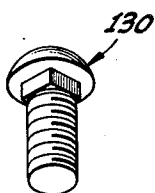


FIG. 8A.

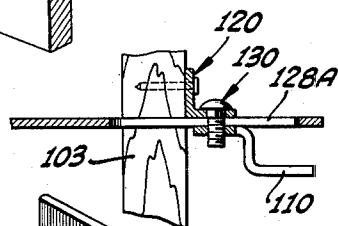


FIG. 8.

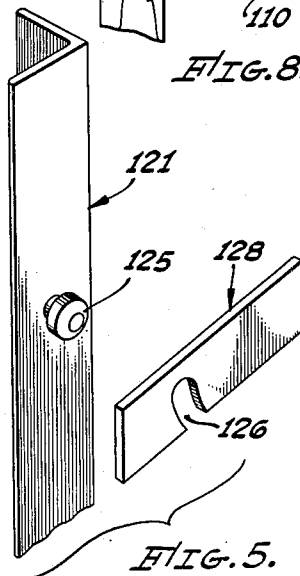


FIG. 5.

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SUPPORTING ASSEMBLY FOR CONCRETE FORMS

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Application October 20, 1950, Serial No. 191,229

6 Claims. (Cl. 25—118)

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The present invention relates to forms useful in pouring concrete to form curbs and foundation walls.

A general object of the present invention is to provide an improved supporting assembly for maintaining forms in a predetermined relationship to each other while concrete is being poured between them.

Another object of the present invention is to provide an improved assembly, characterized by its inexpensiveness, ease of manufacture and ease and convenience with which the individual parts may be assembled in the field in a minimum amount of time.

Another object of the present invention is to provide an improved supporting assembly of the character described in which all of the stakes anchoring the form are of identical construction to thus minimize the necessity for stocking or supplying different types of stakes.

Another general object of the present invention is to provide an improved concrete form supporting structure which may be quickly mounted in position and quickly removed without much effort.

Another object of the present invention is to provide an improved concrete form supporting structure characterized by the fact that the stakes supporting the structure are adapted to directly contact the concrete form, thus permitting the back form to be set as to line and grade, and facilitating the driving of stakes against such back form.

Another general object of the present invention is to provide a concrete form supporting structure useful in pouring curbs, characterized by the fact that only angle iron stakes on opposite sides of the form are required with but a single brace releasably secured to upper ends of the stakes on opposite sides of the form.

A specific object of the present invention is to provide an improved concrete form supporting structure useful in pouring curbs, characterized by the fact that it uses two angle iron stakes releasably secured together at their upper ends by means of a self-locking cross brace.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. This invention itself, both as to its organization and manner of operation, together with further objects and advantages thereof, may be best understood by reference to the following description taken in connection with the accompanying drawings in which:

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Figure 1 is a perspective view of an assembly embodying features of the present invention;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is a perspective view in enlarged form showing two elements of Figure 1 in detached condition;

Figure 4 is a perspective view of a modified assembly embodying features of the present invention;

Figure 5 is a view in enlarged form of the two parts shown in Figure 4 in detached relationship;

Figures 6 and 7 are perspective views showing the rear and front stakes, respectively, of Figure 4;

Figure 8 is a sectional view taken substantially on the line 8—8 of Figure 4.

Figure 8A is a perspective view of a bolt used in the apparatus.

In the two different arrangements shown in Figures 1 and 4, there is provided a pair of angle iron stakes on opposite sides of wooden forms with a self-locking cross brace releasably secured to the upper ends of the stakes. The forms shown in Figures 1 and 4 are intended primarily for use in pouring concrete curbs, and the arrangement shown in Figure 1 is my preferred arrangement since the front and back stakes 100 and 101, respectively, may be of identical construction and interchangeable, to thus avoid the necessity for stocking and supplying two different types of stakes. Referring specifically to the arrangement shown in Figures 1-3, both inclusive, the stakes 100 and 101 of identical construction, are formed from angle iron stock and have their lower ends pointed to facilitate driving them into the ground. One leg of the angle iron member 100 has a series of apertured portions 100A through which nails may be driven to secure the wooden planks or forms 102, 103 thereto; the other leg of the angle iron member 100 having a series of self-locking apertured portions 100B therein, of generally triangular or tapered shape for cooperation with the locking lug 104 affixed to one end of the cross brace 105.

The cross brace 105 has a slotted portion 106 extending transversely and centrally thereof through which a carriage clamping bolt 107 passes, with its square shoulder portion 107A cooperating with the apertured portion 100B to prevent turning of the bolt when and as the nut 108, in the form of a tapped bent elongated arm or handle, is turned to tighten the clamp thus provided. For this purpose the apertured portions 100B in each of the stakes 100, 101 are of

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identical size and shape so as to cooperate respectively with the shouldered lug 104 on the brace 105, and with the square heads 107A of the bolts 107 as shown in Figure 2.

Examining the general shape of the apertured portions 100B in Figure 3, it is observed that they taper towards the lower or pointed end of the stake to provide an area of decreasing cross section in which the lugs 104 may become wedged with the shouldered portion of such lugs, as shown in Figure 2, overlapping the apertured portion 100B. The same type of locking cooperation exists between the shoulder portion 107A of the carriage bolt 107 and the identical apertured portion 100B on the other stake 101.

In the arrangement shown in Figures 4-7, the back stake 120 is of identical construction as the two stakes 100 and 101 shown in the previous figures, with the apertured portions 120A and 120B therein serving the same purposes as the corresponding apertured portions 100A and 100B in the stake 100 or corresponding apertured portions in stake 101. The front stake 121 is also of angle iron stock with a pointed end to facilitate driving the same into the ground, and has a series of apertured portions 121A through which nails may be driven to secure the front wooden plank or form 102 thereto.

Stake 121 has mounted a shouldered lug 125 near the upper end thereof for cooperation with an arcuate slotted portion 126 (Figure 5) in the end of brace 128, which otherwise is of identical construction as the brace 105 shown in Figure 1. The brace 128 has an apertured portion 128A extending centrally and longitudinally thereof through which the clamping carriage bolt 130 passes, with its shoulder portion cooperating with one of the apertured portions 120B in stake 120 to prevent its turning while the tapped handle 110 is turned to clamp the structure.

It is clear that the elongated slotted portions 106 and 128A in the braces 105 and 128, respectively, allow a considerable range of adjustment for curbs of different widths.

It is thus apparent that the arrangement provided in Figures 1-8, inclusive, eliminates the use of tie rods and spreaders heretofore used, and permits the rapid assembly of forms without the need of additional bracing.

It also permits the contractor to use thicker planks or forms 102, 103. Customarily, such planks are one inch stock and with the present arrangement the forms may, for example, be of two inch stock with a greater distance between stakes to thus effect a saving in time and labor.

While the particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

I claim:

1. An adjustable supporting assembly of the character described comprising: a pair of identical stakes on opposite sides of a concrete form, each of said stakes being of angle iron stock with a series of nail apertured portions extending through and along one leg thereof, and with a series of tapered self-locking apertured portions extending through and along the other leg thereof, a cross brace joining the upper ends of said

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pair of stakes and releasably secured thereto, said cross brace having a shouldered locking lug on one of its ends cooperating with one of said tapered locking apertures in one of said stakes, said brace having a central and longitudinally extending apertured portion, a carriage type of bolt extending through the locking aperture of the other of said stakes and the apertured portion of said brace with the head of said bolt cooperating with the last mentioned apertured portion to prevent the same from turning, and a tapped elongated bent hand lock on the end of said bolt.

2. An adjustable supporting assembly of the character described comprising: a pair of stakes, each stake being of angle iron stock and pointed at one of their ends to facilitate their entrance into the ground, each of said stakes having a series of nail apertured portions extending through and along one leg thereof respectively, a wooden plank form engaging respectively said one leg of each stake, the other leg of one of said angle iron stakes having fastening means thereon, a cross brace joining the upper ends of said pair of stakes and releasably secured thereto, said cross brace having means on one of its ends cooperating with the aforementioned fastening means to releasably lock said brace and said one stake together, said cross brace having a central and longitudinally extending apertured slotted portion therein, the other leg of the other stake having an apertured portion therein, a carriage type of bolt extending through the last mentioned apertured portion with the head thereof cooperating therewith to prevent turning of the bolt, said bolt extending through said slotted portion, and a nut in the form of a tapped, bent, and elongated hand lock on the end of the bolt clamping the brace to said other leg.

3. The arrangement set forth in claim 2 in which said fastening means on said other leg of said one stake is an apertured portion therein tapered in the direction of the pointed end of said one stake, and said locking means on said one end of said brace is a shouldered lug cooperating with said tapered apertured portion.

4. The arrangement set forth in claim 2 in which said fastening means on said other leg of said one stake is a shouldered lug, and said locking means on said one end of said brace is a slotted portion in said brace cooperating with said shouldered lug.

5. The arrangement set forth in claim 2 in which each of said stakes are of identical construction and are interchangeable, with said fastening means on said other leg of said one stake having an apertured portion therein tapered in the direction of the pointed end of said one stake, said locking means on said one end of said brace is a shouldered lug cooperating with said tapered apertured portion, and said apertured portion of said other leg of said other stake being also tapered and of identical construction as the aforementioned tapered apertured portion.

6. An adjustable supporting assembly of the character described comprising: a pair of stakes, each of said stakes being of identical construction and pointed at their lower ends to facilitate entrance into the ground, each of said stakes having an apertured portion which is tapered respectively in the direction of their pointed ends, a cross brace releasably attached to the upper ends of said stakes, said brace having a shouldered lug on one of its ends cooperating in lock-

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ing engagement with one of said tapered apertured portions, said brace having an apertured portion, a bolt passing through the brace apertured portion and the other tapered apertured portion and having means thereon cooperating therewith to prevent turning of the bolt, and a tapped handle on the bolt serving as a nut to clamp the brace apertured portion to said other tapered apertured portion.

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