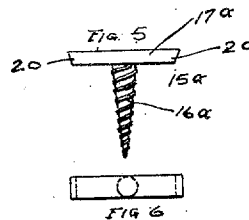
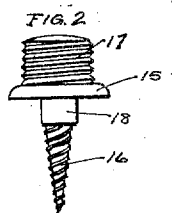
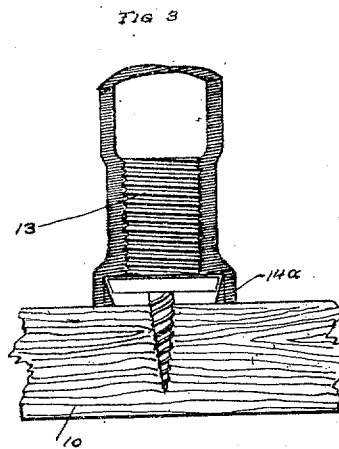
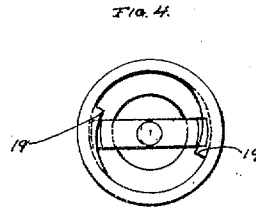
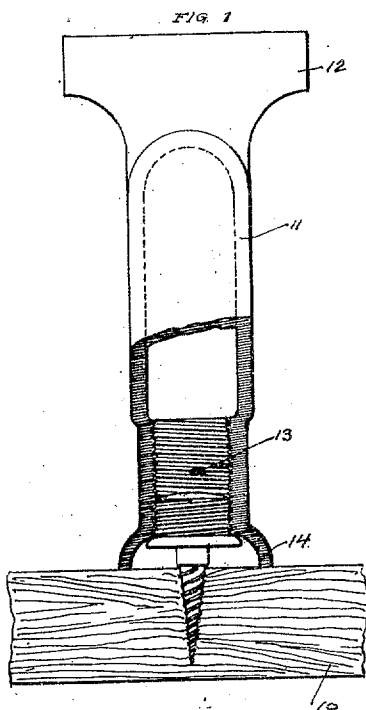


E. E. HALL.
HANGER SUPPORT FOR CONCRETE FLOORS.
APPLICATION FILED JULY 28, 1909.

1,018,490.

Patented Feb. 27, 1912



WITNESSES:

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HANGER-SUPPORT FOR CONCRETE FLOORS.

1,018,490.

Specification of Letters Patent

Patented Feb. 27, 1912.

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To all whom it may concern:

Be it known that I, ERIC E. HALL, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hanger-Supports for Concrete Floors, of which the following is a full, clear, and exact specification.

My invention is concerned with hanger supports for concrete floors, and is designed to produce a fixture that can be secured on the scaffolding while the concrete is being put in place, so that when the concrete has hardened and the scaffolding is removed, perfectly alined supports, into which hangers for shafting, etc., can be screwed, will remain embedded therein, with their lower ends threaded or otherwise provided with hanger-engaging means flush with the ceiling.

To illustrate my invention in some of its preferred forms, I annex hereto a sheet of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—

Figure 1 is a view of a support embodying my invention in place upon the scaffolding before the concrete is filled in, the lower portion thereof being in central vertical section; Fig. 2 is a side elevation of the screw detached; Fig. 3 is a view similar to the lower part of Fig. 1, but showing a preferred form; Fig. 4 is a view of the lower end of the form shown in Fig. 3; and Figs. 5 and 6 are a side and top plan view, respectively, of the form of screw employed in connection with the form shown in Fig. 3.

In laying floors of reinforced concrete, it will be understood that a scaffolding 10 has to be employed, upon which the soft concrete is placed, and upon which it hardens. After the concrete is set, the scaffolding is removed. Where such floors are employed in buildings designed for manufacturing purposes, it is necessary to have supports in the flooring, so that hangers can be attached thereto and suspended from the ceiling for line shafting, and it is the object of my invention to produce a support of this character that can be readily and conveniently held in place while the concrete is being filled in, and so that when the scaffolding is removed, the bottom part of the support will be flush with the ceiling and not covered by the concrete.

In carrying out my invention, I employ a

body portion 11, which is conveniently generally tubular in its shape, for economy of material and lightness, and is preferably provided at its upper end with a hub 12, which may take the elongated rectangular form shown and have a flat surface, which may be flush with the top floor when it is completed in order to indicate the location of the hanger. The body portion 11 is provided at its lower end with some suitable engaging means by which a hanger can be secured in place, the preferred construction being that the body portion is hollow and internally threaded, as at 13.

The lower end 14 preferably flares a little, as shown, and has the surface adapted to fit squarely on the top of the scaffolding. To temporarily hold the hanger in place, I provide some form of engaging means, such as a screw 15, the screw portion proper 16 of which is a wood screw, which can be readily and conveniently screwed into the upper surface of the wood constituting the scaffolding 10. To hold the screw in place while it is being screwed into the scaffolding, and while the concrete is hardening, I provide the screw with a head 17, which is adapted to engage the lower end of the body portion of the hanger, a simple engaging means being that the head 17 shall be externally threaded with the same pitch and diameter as the internal threads at 13. With the screw in place in the hanger, the point of the screw can be readily forced into the top of the scaffolding at the point where the hanger is to be located, and a few turns given to the head 12 will suffice to screw the hanger securely in place, as indicated in Fig. 1. After the concrete is set, the scaffolding 10 is stripped off of the lower side of the concrete, the fibers of the wood engaging the threads, of course, yielding readily to this stripping process. The screw 15 can then be readily removed by applying a wrench to the squared portion 18 provided for this purpose, after which, of course, the hanger support is ready for the application thereto of the hanger proper.

In Figs. 3 to 6, I have shown a preferred form, in which a somewhat cheaper form of screw 15^a can be employed. The body portion of the hanger support is the same in this form as in the form shown in Fig. 1, but the bottom portion 14^a has on its inner face the two interrupted converging threaded portions 19, which are adapted to

coöperate with the beveled ends 20 of the head 17^a, which head in this form preferably takes the form of the rectangular bar shown. With the head at right angles to the position shown in Figs. 3 and 4, it will be evident that it can be inserted in the hanger support, after which if it is turned through an angle of ninety degrees, it will be securely held in place, and if the hanger is turned in the direction to drive the screw 16^a, it will still be held in place. When the scaffolding 10 has been stripped off of this form, a wrench applied to the head 17^a will permit it to be turned through the angle of ninety degrees, or so much thereof as is necessary to release the screw, after which the hanger can be secured in the support in the same manner as in the other form.

While I have shown and described my invention in the forms which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein and having one end provided with engaging means, of a set screw having a head, which head is adapted to temporarily coöperate with said engaging means so that the body portion can be rigidly secured to a scaffolding before the concrete is placed about it by merely turning the body portion with the temporarily attached screw to drive the latter into the scaffolding.

2. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein, having a flat head on one end and the other end provided with engaging means, of a screw having a head,

which head is adapted to temporarily coöperate with said engaging means so that the body portion can be rigidly secured to a scaffolding before the concrete is placed about it by merely turning the body portion with the temporarily attached screw to drive the latter into the scaffolding.

3. In a device of the class described, the combination with a body portion adapted to engage the concrete and be held from movement therein and provided with engaging means, consisting of a main internally-threaded portion and an interrupted converging threaded portion, of a screw having a head adapted to enter and be secured by said converging threaded portion as the screw is turned in one direction, substantially as described.

4. In a device of the class described, the combination with a body portion having a flat head on one end and the other end provided with engaging means, consisting of a main internally-threaded portion and an interrupted converging threaded portion, of a screw having a head adapted to enter and be secured by said converging threaded portion as the screw is turned in one direction, substantially as described.

5. In a device of the class described, the combination with a body portion adapted to be embedded in the concrete and be held from movement therein and having one end provided with engaging means, of a securing member having a head, which head is adapted to temporarily coöperate with said engaging means, and a body portion adapted to engage the inner surface only of a scaffolding and be rigidly secured thereto before the concrete is placed about it and to be subsequently detached from both the body portion and the scaffolding.

In witness whereof, I have hereunto set my hand and affixed my seal, this 24th day of July, A. D. 1909.

ERIC E. HALL. [L. s.]

Witnesses:

F. E. BROM,

JOHN HOWARD McELROY.