Aug. 7, 1923. 1,463,967

S. I. PEDIGO

HANGER DEVICE FOR CONCRETING STRUCTURAL BEAMS

Filed Aug. 30 . 1922

Fig. 1

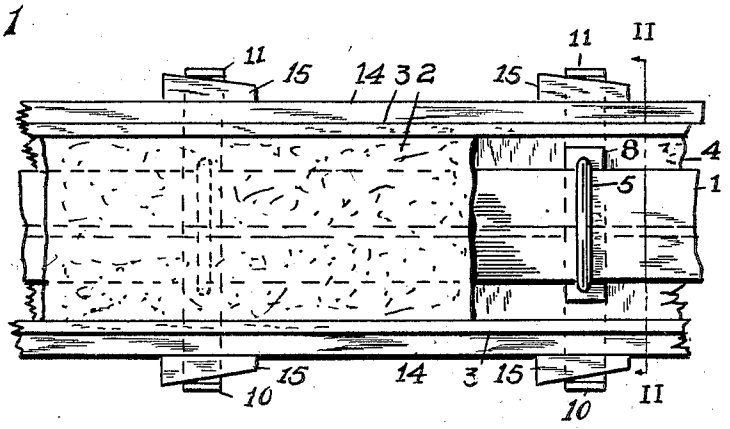


Fig. 2

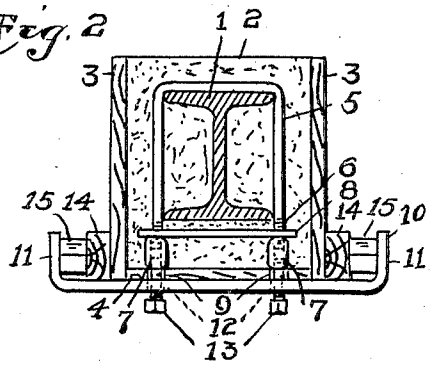


Fig 3

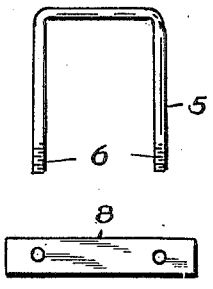
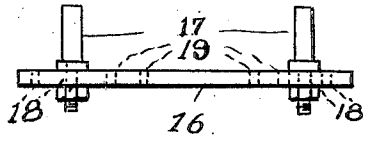


Fig. 4

Fig. 5



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Patented Aug. 7, 1923. 1,463,967

UNITED STATES PATENT OFFICE.

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HANGER DEVICE FOR CONCRETING STRUCTURAL BEAMS.

Application filed August 30, 1922. Serial No. 585,136.

To all whom it may concern:

Be it known that I, SANFORD I. PEDIGO, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Hanger Devices for Concreting Structural Beams, of which the following is a specification.

This invention relates to a hanger device for concreting structural beams, and the primary object of the invention is to provide hangers of the type stated, in a manner as hereinafter set forth, whereby the concrete form together with the concrete mass is supported and carried by the structural beam itself during the process of concretion, thus obviating the necessity of providing the usual expensive shoring for effecting suitable supporting means for the form and concrete; thereby also eliminating the obstructions necessitated by such supporting means and permitting of the continuance of work otherwise suspended or retarded until the obstructions referred to may be safely removed after the solidification of the concrete mass.

Further objects of the invention are to provide a device of the character described, which requires no special materials except those embodied in the invention itself, which is simple in its construction and arrangement, strong, durable and efficient in its use, readily installed in position and conveniently removed therefrom, and comparatively inexpensive to manufacture.

To the accomplishment of these and such other objects as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts herein specifically described and illustrated in the accompanying drawing, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which come within the scope of the claims hereunto appended.

In the drawing forming a portion of this specification and wherein like numerals of reference designate corresponding parts throughout the several views:—

Figure 1 is a fragmentary top plan view of a concreted structural beam supported in accordance with my invention.

Figure 2 is a transverse sectional view thereof on line II—II, Figure 1.

Figures 3 and 4 are enlarged detail views of the reinforcement rod and tie bar, respectively.

Figure 5 is a side elevation of a modified form of the bar.

Referring in detail to the drawing 1 denotes a structural steel beam embedded in the concrete 2. The concrete 2 is confined by a form of the usual construction comprising the side members 3 and the bottom member 4.

An inverted U-shaped-reinforcing rod 5 straddles the beam 1 and has each of its vertically depending ends formed with screw threads 6 adapted for engagement with a threaded sleeve coupling 7 for the purpose to be described. The ends of the rod 5 pass through a suitably apertured reinforcing cross rod 8 which rests transversely on the upper ends of the sleeve couplings 7.

The lower ends of the couplings 7 are in contact with the inner face of the bottom member 4 of the form, and apertures 9 are formed in the bottom member 4 which register with the respective threaded bores of the coupling 7.

A transversely extending tie bar 10, having upturned vertically disposed ends 11, is positioned against the outer or under face of the bottom member 4 of the form. The tie bar 10 is provided with apertures 12 which register with respective apertures 9 formed in the bottom member 4 of the form.

A bolt 13 extends through each of the apertures 12 and 9 and threadably engages respective sleeve couplings 7, thereby securing the tie bar 10 in a position to support the form and concrete forming therein.

A horizontally disposed elongated ledger board 14 is positioned against the outer face of each of the side members 3 at the lower portion thereof and wedge members 15 are interposed between the ledger boards 14 and the upturned vertical ends 11 of the tie bar 10.

The ledger board 14 in conjunction with the wedge 15 will prevent liability of the side members 3 spreading or bulging laterally when sustaining the pressure of the concrete thereagainst before solidification.

It will be noted that the rod 5 not only serves as a reinforcement for the concrete but constitutes a hanger member for securing the tie bars 10. Any number of hanger rods 5 with tie bars 10 may be spaced along

the length of the beam to best meet conditions found in practice.

The modified form of tie bar 16, shown in Figure 5, is identical in operation and construction as that referred to relative to the preferred form of tie bar 10, with the exception that instead of the up-turned ends 11 of the latter, detachable pins 17 are provided permitting of the adjustment of the pins 17 upon the tie bar 16, in apertures 18 provided therefor in the latter. The tie bar 16 is also formed throughout its length with a plurality of apertures 19 permitting of its use in connection with structural beams of varying widths, having corresponding reinforcing rod hangers engaging said tie bar 16 through the apertures 19.

In the use of my improved device the reinforcing hanger rods 5 together with the sleeve couplings 7 attached thereto, will become fixed in the concrete as it solidifies and cannot be recovered or removed from the concrete beam, but upon removal of the bolts 13 the tie bars 10 may be readily removed and used in subsequent operation.

What I claim is:—

1. A supporting device for concreting structural beams comprising a reinforcing hanger having depending portions provided with threaded ends and straddling said beam, a sleeve coupling mounted on each of said depending ends, a tie bar having vertically disposed members, and a bolt extending through said tie bar and engaging with each of said sleeve couplings for securing the concrete form in position.

2. A supporting device for concreting structural beams comprising a reinforcing hanger having depending portions provided with threaded ends and straddling said beam, a sleeve coupling mounted on each of said depending ends, a tie bar having vertically disposed members, and a bolt extending through said tie bar and engaging with each of said sleeve couplings for adjustably securing the concrete form in position.

3. A supporting device for concreting structural beams comprising in combination with a concrete form, a vertical U-shaped hanger constituting a reinforcement for the concrete and straddling said beam, said hanger provided with threaded ends, a reinforcing cross rod positioned below said beam and provided with apertures for the passage of said threaded ends, a sleeve coupling threadably mounted on each of said threaded ends, a tie bar positioned against the bottom of the said form, bolts extending through said tie bar and said form and engaging said sleeve couplings for detachably securing said tie bar in position and a vertically disposed member carried at each end of said tie bar and adapted to be engaged for securing said form in position, said members being adjustable on said tie bar.

In testimony whereof I affix my signature.

SANFORD I. PEDIGO.