Aug. 8, 1933. D. E. PRIEST 1,921,538

SECURING AND SUPPORTING DEVICE FOR CONCRETE REENFORCEMENT

Filed March 16, 1932

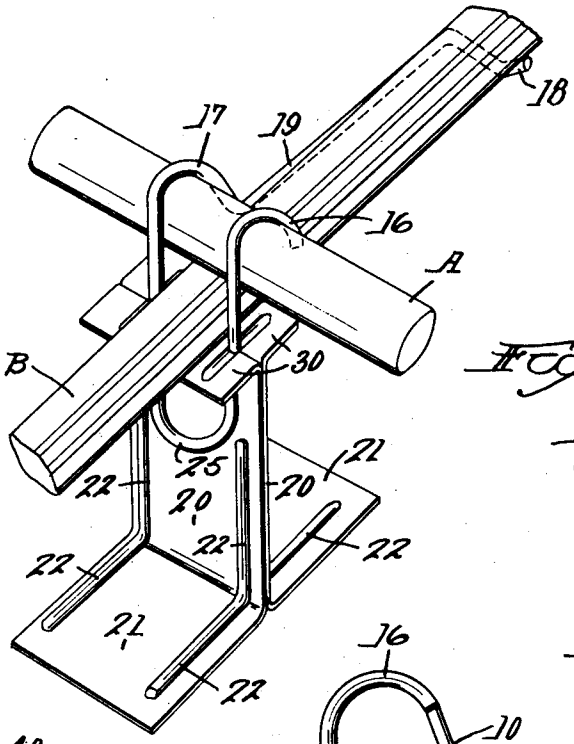


Fig. 1.

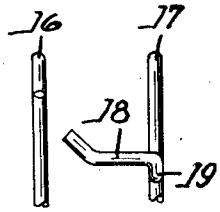


Fig. 6.

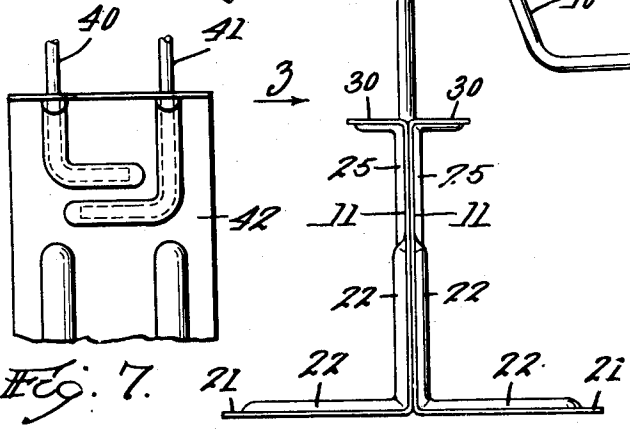


Fig. 7.

Fig. 2.

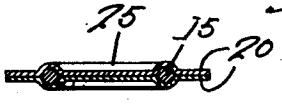


Fig. 4.

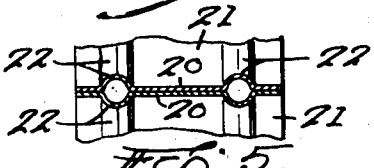


Fig. 5.

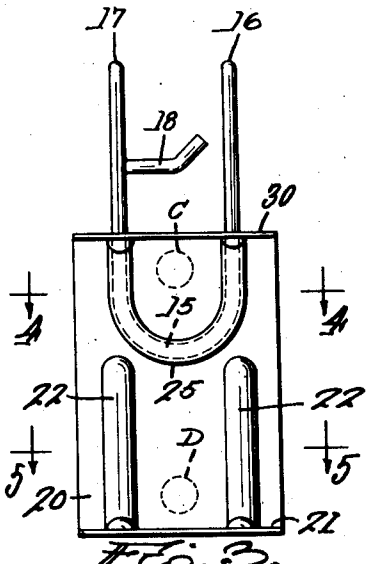


Fig. 3.

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SECURING AND SUPPORTING DEVICE FOR CONCRETE REENFORCEMENT

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Application March 16, 1932. Serial No. 599,245

8 Claims. (Cl. 72—122)

This invention relates to concrete structures such as floors or roadways in which steel bars are used for reenforcement.

It is the object of my invention to provide improved means for securing such bars together and for supporting the reenforcing parts at a desired elevation above the foundation surface on which the concrete is laid.

A further object is to provide a securing and supporting device which will firmly resist rocking displacement when in use.

My improved securing and supporting device is economical to manufacture, substantial in construction, convenient in application and particularly well adapted to its intended purposes.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawing, in which

Fig. 1 is a perspective view of my improved securing and supporting device;

Fig. 2 is a side elevation thereof;

Fig. 3 is an end view of the device, looking in the direction of the arrow 3 in Fig. 2;

Figs. 4 and 5 are detail sectional plan views, taken along the lines 4—4 and 5—5 in Fig. 2;

Fig. 6 is a detail end view, looking in the direction of the arrow 6 in Fig. 2, and

Fig. 7 is a detail front elevation of a slight modification.

Referring to the drawing, I have shown my improved securing and supporting device as comprising a securing member 10, preferably formed from a single piece of wire rod, and a pair of brackets 11 by which the member 10 is firmly supported.

The securing member 10 is formed with a depending U-shaped portion 15, a pair of upper U-shaped loops 16 and 17 adapted to overlie an upper reenforcing bar A (Fig. 1), and an offset hook-shaped portion 18 formed at the end of an arm 19 extending from the loop 17 longitudinally of a lower reenforcing bar B.

Each bracket 11 is preferably formed from a single piece of sheet steel and comprises an upright portion 20 and a base portion 21. Ribs 22 are preferably formed by stamping them out of the sheet metal surfaces, and these ribs substantially stiffen the brackets. The upright portions 20 are also provided with U-shaped recessed portions 25, adapted to receive the depending U-shaped portions 15 of the wire rod securing members 10.

The brackets 11 are also preferably provided with laterally extending upper portions 30, underlying and supporting the lower reenforcing bar B. The brackets 11 are secured together in any convenient manner, as by spot-welding at the points C and D (Fig. 3), and when thus secured together, the brackets 11 firmly engage and support the U-shaped portions 15 of the wire members 10 and hold them firmly in assembled relation.

The application of the device is clearly shown in Fig. 1, in which it appears that the upper reenforcing bar A is held in position by the upper looped portions 16 and 17, and that the lower reenforcing bar B rests upon the lateral extensions 30 of the brackets 11. The device is firmly secured in position by hooking the end portion 18 of the arm 19 under the lower rod B.

The arm 19 is so shaped that it must be displaced downwardly when the portion 18 is inserted under the bar B. Consequently there is a strong resilient force holding the portion 18 against the bar and preventing displacement thereof.

It thus appears that my invention is simple in construction and that all parts are firm and rigid and adapted to strongly resist displacement. The lateral projections 30 provide an extended flat surface for engagement with the lower bar B and thus prevent rocking of the support under the reenforcing bar B.

While the securing member is preferably made from a single piece of wire, many of the advantages of the invention may be utilized by making the securing member in two pieces 40 and 41 (Fig. 7) having offset end portions firmly secured by welding or otherwise between sheet metal brackets, 42, correspondingly recessed.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:—

1. A device for securing and supporting concrete reenforcing bars comprising a bar-securing member formed of a single piece of wire rod having an upwardly looped portion, a depending U-shaped portion and a longitudinally extended hook-arm, and a pair of angle brackets secured together back-to-back at each side of said depending U-shaped portion, said brackets firmly holding said bar-securing member at a predetermined elevation.

2. A device for securing and supporting concrete reenforcing bars comprising a bar-securing member formed of a single piece of wire rod having an upwardly looped portion, a depending

U-shaped portion and a longitudinally extended hook-arm, and a pair of angle brackets secured together back-to-back at each side of said depending U-shaped portion, said brackets having U-shaped recesses in their adjacent faces closely fitting and engaging said depending U-shaped portion, whereby said bar-securing member is firmly secured and supported.

3. A device for securing and supporting concrete reenforcing bars comprising a bar-securing member formed of a single piece of wire rod having an upwardly looped portion, a depending U-shaped portion and a longitudinally extended hook-arm and a pair of angle brackets secured together back-to-back at each side of said depending U-shaped portion, said brackets firmly holding said bar-securing member at a predetermined elevation and being formed of sheet metal with reenforcing ribs pressed outwardly therefrom to stiffen said brackets.

4. A device for securing and supporting concrete reenforcing bars comprising a bar-securing member formed of a single piece of wire rod having an upwardly looped portion, a depending U-shaped portion and a longitudinally extended hook-arm and a pair of angle brackets secured together back-to-back at each side of said depending U-shaped portion, and having laterally extending top portions positioned to underlie and support a lower reenforcing bar.

5. A device for securing and supporting concrete reenforcing bars comprising a bar-securing member formed of a single piece of wire rod having an upwardly looped portion, a depending U-shaped portion and a longitudinally extended hook-arm, and a pair of angle brackets secured together back-to-back at each side of said depending U-shaped portion, said brackets having top portions extending laterally in both directions to underlie and support a lower reenforcing bar, and said laterally extending top portions firmly resisting twisting of said securing and supporting devices under the reenforcing bars.

6. A device for securing and supporting concrete reenforcing bars comprising bar-securing portions of wire rod with upwardly disposed loops, depending offset portions and a longitudinally extending hook arm, and a pair of angle brackets secured together back-to-back at each side of said depending offset portions and firmly holding said bar-securing portions at a predetermined elevation, each of said brackets having a substantial base portion and said base portions extending in opposite directions when the said brackets are in assembled relation, thereby providing an extended balanced base of substantial area for said device.

7. A device for securing and supporting concrete reenforcing bars comprising bar-securing portions of wire rod with upwardly disposed loops, depending offset portions and a longitudinally extending hook arm, and a pair of angle brackets secured together back-to-back at each side of said depending offset portions and firmly holding said bar-securing portions at a predetermined elevation, said brackets having recesses in their adjacent faces closely fitting and engaging said depending portions.

8. A device for securing and supporting concrete reenforcing bars comprising bar-securing portions of wire rod with upwardly disposed loops, depending offset portions and a longitudinally extending hook arm, and a pair of angle brackets secured together back-to-back at each side of said depending offset portions and firmly holding said bar-securing portions at a predetermined elevation, said brackets having laterally extending top portions positioned to underlie and support a lower reenforcing bar.

DWIGHT E. PRIEST.