

[54] CHAIR SUPPORT FOR REINFORCING
RODS

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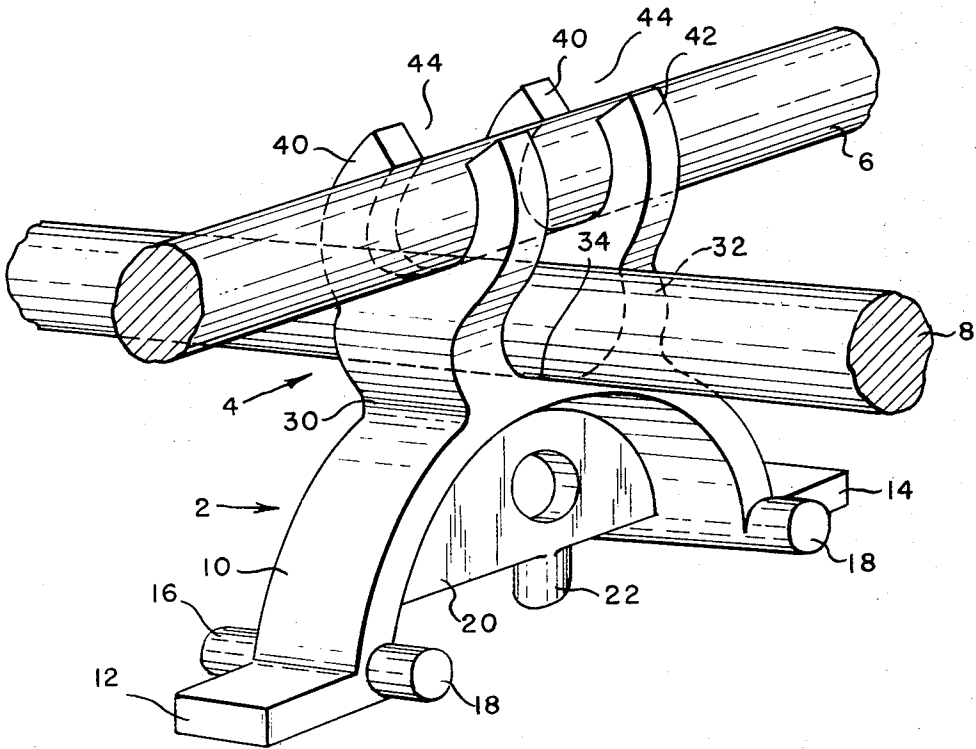
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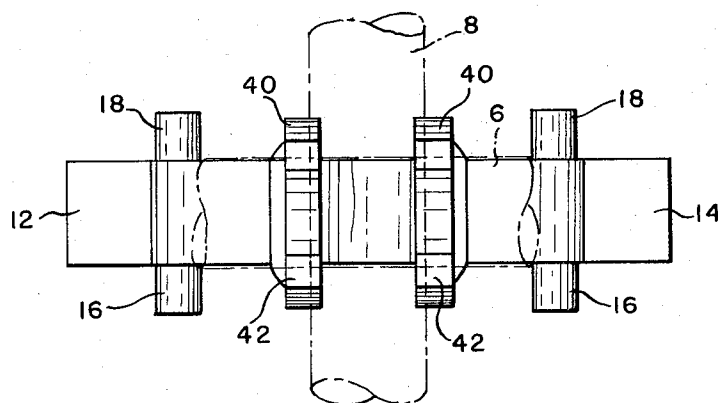
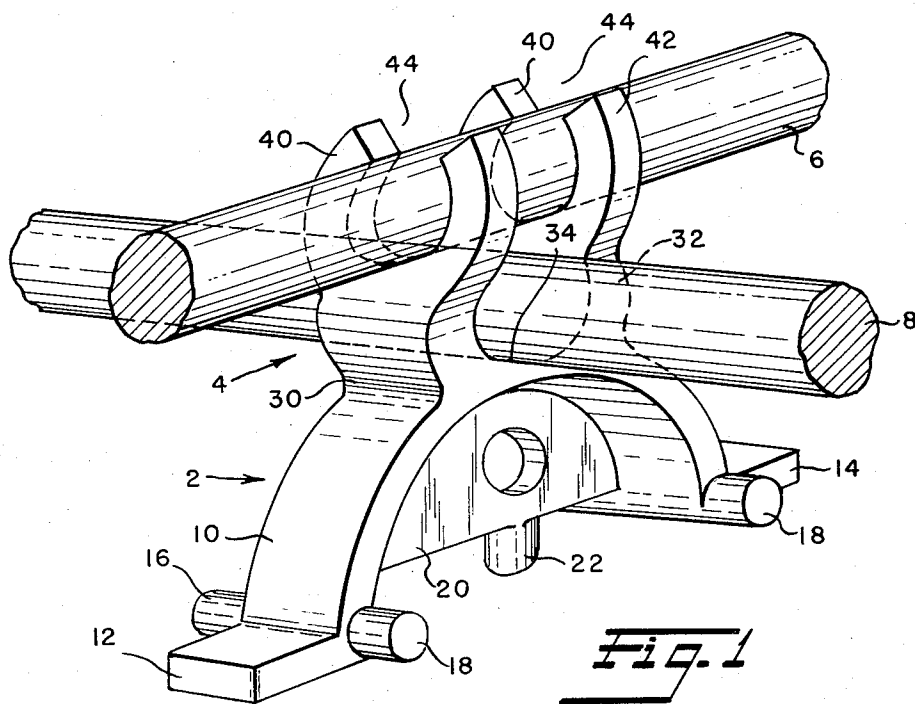
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ABSTRACT

A chair for supporting in right angular relation two reinforcing rods used in construction of concrete slabs has a lower arched base part and an upper rod supporting part integral with the base. The base is an arched structure with means for providing lateral, longitudinal and vertical support and strength. The rod supporting part comprises two spaced arms the lower parts of which form a saddle for receiving one reinforcing rod and the upper part of each of which is formed by two spaced upstanding inwardly concave arms the upper ends of which are spaced to provide an opening through which a second reinforcing rod arranged at right angles to the first rod may be introduced. The chair is of integral construction and is formed of a material causing the arms of each pair to be biased toward each other to firmly hold a reinforcing rod between them.

1 Claim, 2 Drawing Figures





CHAIR SUPPORT FOR REINFORCING RODS

BACKGROUND OF THE INVENTION

In the construction of a concrete slab, such as a floor, it is usual to use reinforcing rods arranged to form a grid with the rods arranged at right angles to each other. It is desirable to hold these rods in their arranged position during installation and while the concrete is being poured about them, and this may be most easily and conveniently done by supporting the bars on so-called "chairs" which rest on the form on which the concrete is poured and which support one or more of the rods.

SUMMARY OF THE INVENTION

It has been an object of the present invention to provide a chair of the type and for the purpose described above having new and improved construction and arrangement of parts, which is to be positioned at the point of intersection of two reinforcing rods, and which will firmly engage and hold both of them by resiliently engagement, thus insuring to the greatest degree that the rods will remain in place during installation and concrete pouring.

It has been another object of the invention to provide such a chair having a base of improved construction which will provide an improved and more secure support for the reinforcing rods, and which will insure that the chair will not be overturned during pouring.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the chair for two reinforcing bars provided by the invention, and
FIG. 2 is a top plan view of the chair.

DESCRIPTION OF THE INVENTION

A preferred form of the chair for supporting two intersecting reinforcing rods in poured reinforced concrete construction is disclosed in the drawings forming part of this specification, and consists of an integrally formed device which may be cast, molded or otherwise made of a synthetic plastic material such as high density polyethylene. This chair has a lower base part 2 and an upper part 4 for engaging and holding two reinforcing rods 6, 8 which, in the disclosed embodiment are arranged at right angles to each other with the rod 6 above rod 8.

The base part 2 of the chair comprises an upwardly bowed or arched strip 10 extending over approximately 60° of arc in the disclosed embodiment and terminating at its lower or outer ends in outwardly extending feet 12, 14 which form aligned flat extensions of the strip 10 giving lateral or transverse stability. Integrally formed pins 16, 18 which may be circular in cross section, extend fore and aft from the point of intersection of each end of the arched strip 10 and a foot 12 or 14 and have their lower edges of surfaces in the same plane as the lower surfaces of the feet 12, 14. These pins, extending as they do at right angles to the direction of the arch of strip 10, give what may be termed longitudinal stability to the chair and prevent it from tipping. The base part 2 is completed by a flat reinforcing web 20 which extends across the interior of the arched strip 10 to strengthen the arch, and a pin 22 which extends downwardly from the web 20 and the lower end of which is in the common plane of the lower surfaces of feet 12,

14 and pins 16, 18 and which provides additional support for vertical downward forced imposed on the chair.

The upper, or rod-engaging, part 4 of the chair is integral with the base part 2 and is generally positioned above the uppermost, or central, part of the arch of strip part 10 of the base. This upper part comprises a first pair of upstanding arms 30, 32 which are spaced apart in the direction of the arch of strip 10 and by a distance slightly less than the diameter of the reinforcing rod 8. The inner surfaces of the lower parts of these arms are curved toward each other to form a saddle 34 on which the lower rod 8 rests. The arms 30, 32 are formed of a material, and are so shaped in manufacture, that they are biased toward each other so that they are sprung apart when rod 8 is inserted between them, after which they resiliently engage the sides of the rod to hold it snugly in place.

Means are also provided by the invention for engaging and supporting a second reinforcing rod 6 in position above rod 8, and such means comprise two pairs of arms 40, 42, each pair extending upwardly from one of the two arms 30, 32. The arms 40, 42 of each pair of outwardly bowed and their inner surfaces form a generally circular opening, and the two circular openings thus formed by the two pairs of arms 40, 42 are axially aligned with the axis at right angles to the curvature of the surface of saddle 34 at the lower parts of the arms 30, 32. The upper ends of arms 40, 42 of each pair are spaced apart to provide an opening 44 and the two openings 44 are aligned to permit the insertion of reinforcing bar 6 into the aligned part-circular surfaces formed by the four arms 40, 42. These arms are formed of such a material, and are so made, that the arms 40, 42 of each pair are biased toward each other whereby the bar 6 will be firmly held by the arms.

In the use of the chair, it will be set down on a flat surface on which concrete is to be poured, and in this position the feet 12, 14 will provide lateral stability, the pins 16, 18 will provide longitudinal stability preventing tipping, the arc 10 reinforced by web 20 will provide strength and rigidity, and the vertical pin 22 will provide vertical support.

The lower rod 8 may be inserted between arms 30, 32 and will rest on the saddle 34, being held in place by the pressure of inwardly biased arms 30, 32. The upper rod 6 may now be inserted through the aligned openings 44 into the aligned part-circular openings defined by the four arms 40, 42 where it will be held in place by the pressure of the inwardly biased arms 40, 42.

1. A chair for supporting two reinforcing rods positioned at right angles to each other, comprising a base part and a rod supporting part extending upward from the base part, the base part comprising an upwardly arched part, a surface engaging foot extending outwardly from each end of the arched part, horizontal pins extending in each direction from the intersection of each end of the arched part and the adjacent foot, a web extending across the interior of the arch, a vertical pin extending downwardly from the web, the lower surfaces of each foot and the horizontal and vertical pins being in the same plane to provide lateral, longitudinal and vertical support to the chair when positioned on a horizontal surface, the rod supporting part comprising a first pair of spaced upwardly extending arms each having a surface at its lower part which is curved

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toward the other arm to provide a saddle part on which a first rod is supported, said arms being so constructed and being formed of such material that they resiliently engage the sides of a rod positioned between them, each of said arms having above its lower saddle-forming part a second pair of upwardly extending arms

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which are spaced from each other in the direction of the axis of the saddle part with an opening between their upper extremities and which have outwardly curved inner surfaces providing surfaces within and on which a second rod is supported.

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