

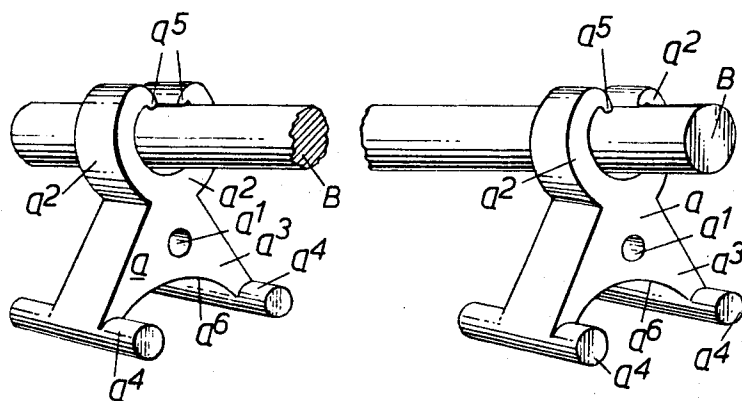
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K. W. OLIVER

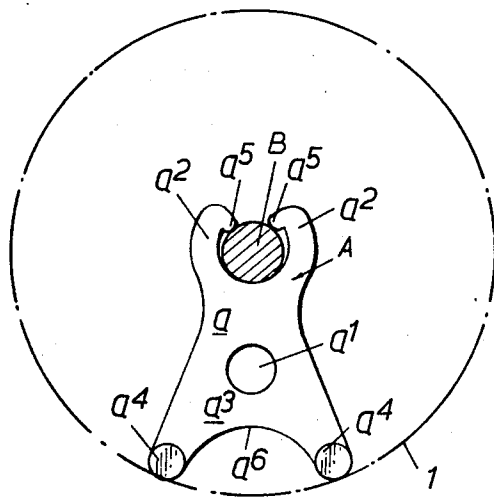
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DISTANCE PIECE FOR CONCRETE REINFORCING RODS AND THE LIKE

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- FIG. 1. -



- FIG. 2. -

INVENTOR:
KEITH WILLIAM OLIVER

BY
Norris & Bateman
Attys

1

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DISTANCE PIECE FOR CONCRETE REINFORCING RODS AND THE LIKE

Keith W. Oliver, Manchester, England, assignor to Celmac Plasclip Limited, Chester, England, a corporation of Great Britain

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Claims priority, application Great Britain, Feb. 16, 1963, 6,363/63

3 Claims. (Cl. 52—689)

ABSTRACT OF THE DISCLOSURE

A distance piece for supporting a concrete reinforcing rod at a predetermined distance from either a flat or arcuate support surface and comprising a plastic solid member having a generally triangular body, arcuate arms extending upwardly from the body to receive the rod, and a pair of parallel cylindrical feet at the base corners of the body. The feet project beyond both sides of the body in parallel relation with the reinforcing rod. The triangular body has a substantially downwardly concave bottom between the feet so as to be spaced from the support surface and there is only line contact between the cylindrical feet and the support surface.

This is a continuation-in-part of my copending application Ser. No. 343,702, filed Feb. 10, 1964, for Distance Pieces.

This invention relates to a distance piece for supporting a reinforcing member in spaced relationship from a surface, and comprising a base part adapted to stand on the surface and provided with means for supporting the reinforcing member, the dimension between the base part and the supporting means determining the height above the surface at which the reinforcing member is supported.

Distance pieces of the kind referred to are commonly used for positioning reinforcing rods in moulds to be used for casting concrete members having such rods embedded therein, the distance pieces being embedded in the concrete and forming part of the finished concrete product.

According to a major object of this invention a distance piece of the kind referred to is characterized in that said base part is adapted to contact the surface when stood thereon at two or more discrete spaced apart locations, the base part being shaped in such a manner as to be spaced from the surface at positions intermediate the locations.

Another object of this invention is to provide a novel distance piece which is non-tiltable on both flat and curved support surfaces and which seats on either flat or curved support surfaces substantially only along parallel lines that are contained in planes each extending tangentially of a circle. Whether mould support surface be flat or curved, therefore, little, if any, of the distance piece will be visible after the mould is removed.

Further objects of this invention will appear as the description proceeds in connection with the appended claims and annexed drawings wherein:

FIGURE 1 is a perspective view of two distance pieces supporting a reinforcing bar; and

FIGURE 2 is an end view partly in section of a distance piece and reinforcing bar.

An integrally solid distance piece A for supporting a reinforcing bar B is formed with a generally triangular body portion a with one or more apertures a^1 passing

2

therethrough in regions thereof below supporting arms or wings a^2 . Distance piece A is moulded from a resilient mouldable plastics material such as polyvinyl chloride or polyurethane.

The distance piece A is formed with a base portion a^3 of substantially triangular shape and two spaced parallel cylindrical members a^4 forming feet extending from portion a . The support arms or wing a^2 are arranged parallel to each other and extend from the apex of the body portion a and the cylindrical feet are located at the remaining two corners of body portion a respectively and are disposed at right angles to body portion a and extend for a short distance on either side thereof.

The bottom edge a^6 of the body portion extending between members a^4 is of concave shape so that when distance piece A is located by members a^4 on a surface, the bottom edge of base part a^3 is spaced from the surface.

The free ends of arms a^2 are each formed with an inwardly extending lip a^5 to engage bar B.

In use the distance piece A is located by members a^4 on a surface 1 which is to be filled or covered with concrete or the like such as that of a mould or a floor, for example.

The reinforcing rod B is inserted between the arms or wings a^2 which, owing to their resilience, may be forced apart by the rod for this purpose. The rod B is firmly located between the arms or wings a^2 by the lips a^5 and rests between the arms or wings and is supported in spaced relationship at a distance determined by the dimensions of the distance piece A from the surface 1.

Concrete is poured onto the surface and the reinforcing rod B together with the distance piece A supporting same are embedded therein.

The distance pieces A are firmly secured in the concrete particularly by the concrete which passes under the concave portion between the feet and the surface and by the concrete which passes through the hole a^1 .

As shown in the drawings, arms a^2 are arcuate in shape and define an upwardly opening, flexible socket for receiving rod B. Members a^4 extend beyond oppositely facing sides of body portion a along axes which are parallel with the longitudinal axis of the arm-defining flexible socket and hence with the longitudinal axis of rod B received in the socket. The oppositely sides of body portion a lie in parallel planes which normally intersect the longitudinal axes of members a^4 and the flexible, rod-receiving socket. Members a^4 extend the same distance outwardly from each of these parallel planes.

As shown, members a^4 and arms a^2 are substantially symmetrical with respect to a central plane passing through the apex of body portion a midway between the members and the arms. Members a^4 are thus spaced equidistantly from the aligned longitudinal axes of rod B and the flexible, rod-receiving socket at equal angles on opposite sides of the above-mentioned central plane containing the apex of body portion a and the axis of rod B. Members a^4 are shown to be parallel with the above-mentioned central plane and to have equally diametered, circular cross-sections.

With the foregoing construction, therefore, it is clear that the circular outline of surface 1, which has its center coinciding with the longitudinal axis of rod B, will only substantially tangentially contact the cylindrical peripheries of members a^4 as shown in FIGURE 2. Members a^4 also will only tangentially contact a flat support surface owing to their configuration and relative positions. This feature of the invention is particularly advantageous in supports rods in moulds which are used for producing

reinforced concrete units and the like because, whether the mould support surface be flat or curved as shown in FIGURE 2, little, if any, of the distance piece will be visible after the concrete has set and the mould is removed since the mould only contacts the distance piece tangentially along two spaced parallel lines located axially on the peripheries of members a^4 . As a result, the external peripheral surface of the moulded product will not be marred and will not require the removal of protruding portions of pieces used to support the reinforcing rod.

In effect, a surface plane tangentially touching the bottom periphery of one of the members a^4 and normally intersecting the central plane mentioned above will tangentially touch the bottom periphery of the other member. Likewise, a support surface in the form of an arc struck from the center of rod B and tangentially touching the periphery of one of the members a^4 will also tangentially touch the other member.

In addition to the foregoing advantages, it is clear that the distance piece of this invention, owing to the arrangement and configuration of members a^4 , is non-tiltable on curved support surfaces as shown in FIGURE 2 as well as flat surfaces. Consequently, a steady support is provided for the reinforcing rod before the concrete is poured and set.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by Letters Patent is:

1. A distance piece for supporting a concrete reinforcing rod at a predetermined distance from a surface comprising an integral solid member of relatively resilient plastic material having a generally triangular body, a pair of arcuate arms extending upwardly at the apex of said body to define an upwardly open flexible socket for receiving said rod, inwardly extending lips on said arms for engaging and holding said rod between said arms, a pair of similar parallel cylindrical feet at the base corners of

said body, said feet projecting beyond both sides of said body in parallel relation with the rod received in said socket and being adapted to rest on said surface, and means defining a substantially downwardly concave bottom on said body between said feet so as to be spaced from said surface, said feet and arms being substantially symmetrical with respect to a central plane passing through the apex of the body midway between said feet and arms, said feet being parallel to said central plane and being spaced equidistantly from the longitudinal axis of said rod at equal angles on opposite sides of said central plane, said feet being so disposed and configured that a support surface plane tangentially touching the bottom periphery of one of said feet and perpendicularly intersecting said central plane tangentially touches the periphery of the other of said feet and that a support surface in the form of an arch struck from the center of the rod in said socket and tangentially touching the periphery of one of said feet tangentially touches the periphery of the other of said feet.

2. The distance piece defined in claim 1 wherein said body has opposite sides lying in parallel planes which normally intersect said central plane and wherein each of said feet extend the same distance outwardly from each of said planes, with only said feet contacting the surface from which said rod is adapted to be supported.

3. The distance piece defined in claim 2 comprising means defining at least an aperture through said body intermediate said socket and said concave bottom, said aperture being adapted to receive the material for embedding said rod and said body and thereby enabling said material to effectively form a ring passing through said aperture and under said concave bottom.

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45 FRANCIS K. ZUGEL, *Primary Examiner.*