May 30, 1933. J. KASSMIR 1,911,957

SPACER FOR REENFORCEMENT RODS

Filed March 2, 1932

Fig. 1.

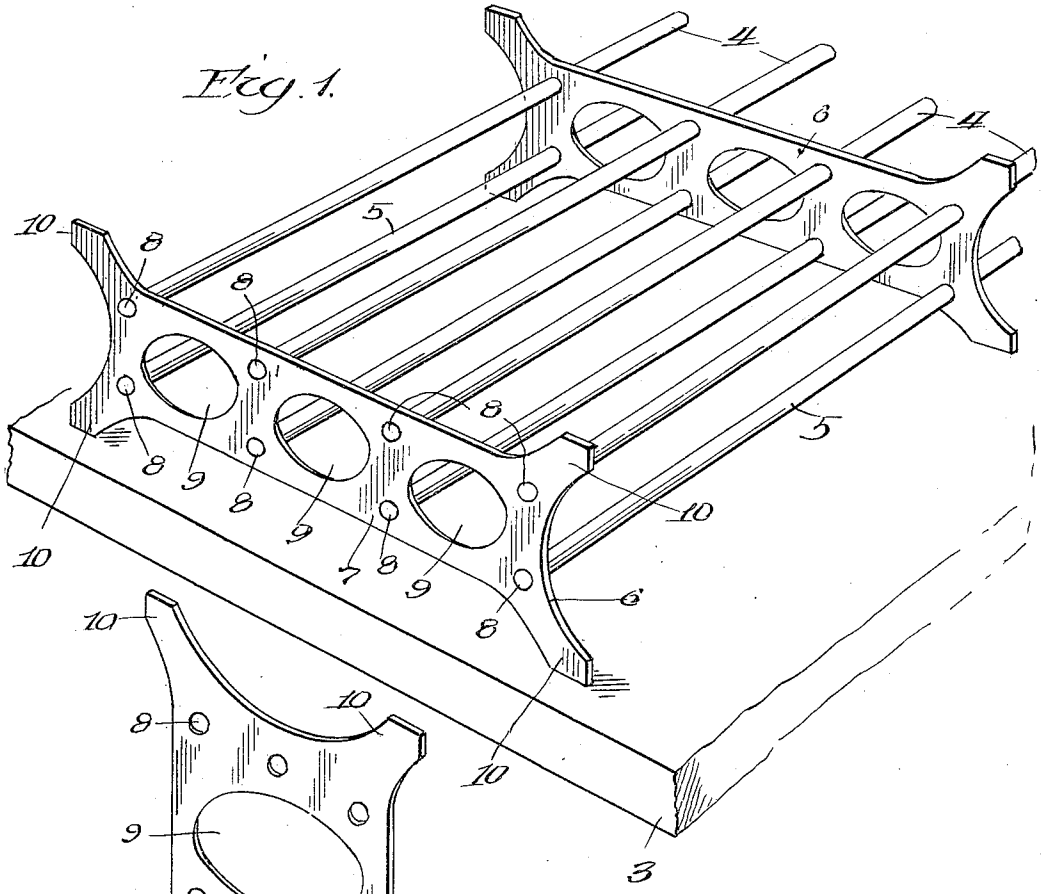
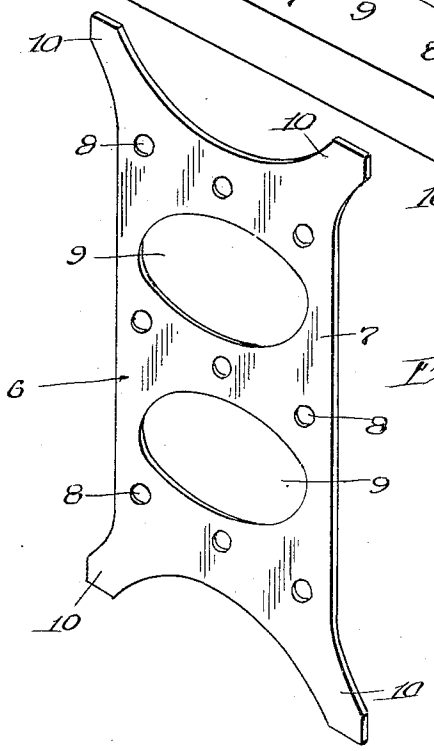


Fig. 2.



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SPACER FOR REENFORCEMENT RODS

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This invention relates to spacers for reenforcement rods such as are employed in reenforced concrete structures. Various expedients have heretofore been employed for temporarily spacing the reenforcement rods apart in the forms before the concrete is poured around them, but these expedients have either been too cumbersome for practical use or have been difficult to handle which made them impracticable. Sometimes the reenforcement rods have been wired together and the wires supported from other bars or rods in an effort to space the rods apart. This expedient also has objectionable features.

The object of the present invention is to provide a spacer which shall be simple in construction, shall not add materially to the cost, and shall be capable of spacing apart several tiers or layers of reenforcement rods.

Another object is to provide a spacer for reenforcement rods shaped to permit the concrete to extend through and around the spacers so as to avoid weakening the concrete at the places occupied by the spacers.

Another object is to provide a spacer which may be used for spacing the reenforcement rods of reenforced concrete floors, girders, beams, columns, and the like.

With these and other objects and advantages in view, this invention consists in the several novel features hereinafter set forth and claimed.

The invention is clearly illustrated in the drawing accompanying this specification in which—

Figure 1 is a perspective view of two spacers embodying the present invention and showing them in use supporting a number of reinforcement rods upon a fragment of a form; and

Fig. 2 is a perspective view of a slightly modified form of spacer.

Referring to said drawing and first to Fig. 1, the reference character 3 designates a fragment of a form such as is usually employed in laying reenforced concrete floors and 4 and 5 designate two tiers or layers of reenforcement rods such as are used in reenforced concrete floors. The spacers forming the subject matter of this specification are seen at 6, and since the spacers are alike, a description of one will suffice for all.

The spacer is formed of light gauge sheet metal struck up with suitable dies and comprises a substantially rectangular body portion 7 formed with two or more spaced rows of perforations 8 in which are received the reenforcement rods. The rows of perforations run lengthwise and crosswise of the body. Between the perforations 8 the body portion is formed with large openings 9 through which the concrete may extent from one side of the spacer to the other.

Extending from the four corners of the body are obliquely directed legs 10, the extremities of which are disposed beyond the end and side edges of the body portion so as to space the body portion and therewith the lower tier or layer of reenforcement rods above the form 3 and inward from any vertical wall of the form. With this shape of spacer reentrant spaces are provided at the ends and top and bottom of the body through which the concrete may extend intact from one side of the spacer to the other.

Any desirable number of perforations 8 and rows of perforations may be formed in the spacer depending, of course, upon the spacing of the reenforcement rods, and in practice the required number of reenforcement rods are threaded through the perforations of the spacers and the assembled rods and spacers laid upon the form adjacent each other so as to obtain a uniform spacing of the reenforcement rods throughout the entire floor. The spacers for each group of rods are spaced apart a sufficient distance to support the rods in spaced relation without permitting them to sag unnecessarily.

The form of the invention illustrated in Fig. 2 is particularly adaptable for use in connection with the reenforcement rods of girders, beams, and the like, and in construction is substantially the same as the spacers illustrated in Fig. 1. In this case, the spacer is set upon end in order to support a greater number of tiers or layers of rods

than when used for supporting the reenforcement rods of floors. In this case, three rows of vertically spaced perforations are shown, although this number may be increased as is found necessary. The legs in this case also support the lowermost tier or layer of reenforcement rods above the form and also space the end rods inwardly from the side walls of the form.

From the above it is apparent that the reenforcement rods are spaced uniformly in several tiers or layers and that there is no likelihood for them to become misplaced during the pouring of the concrete around them. Moreover, the reentrant end and top and bottom portions and the openings in the body portion of the spacers permit the concrete to flow from one side of the spacers to the other, whereby the finished floor may result in a continuous body of concrete from one end to the other. The obliquely directed legs, which extend from the corners of the body, enable the spacer to be supported either in horizontal position for spacing the reenforcement rods of floors, or in vertical position for use in connection with the reenforcement rods of girders, beams, or the like.

The most efficient construction of the spacer is one in which a minimum amount of metal is employed and a maximum amount of free space is provided for the passage of the concrete, since the only requirement of the spacers is to temporarily support the rods in spaced relation before and while the concrete is being poured upon the form.

I claim as new, and desire to secure by Letters Patent:

1. A spacer for reenforcement rods comprising a substantially rectangular metal plate of uniform thickness having vertically spaced rows of perforations for receiving and spacing apart tiers of reenforcement rods, and having also large openings between the rows of perforations through which concrete may extend, there being legs projecting obliquely from the four corners of the body and provided with pairs of feet at right angles to each other, whereby the spacer may rest upon a form either in a horizontal or vertical position and support the lower reenforcement rods above the form, and there being reentrant positions between the extremities of the legs and the end and top and bottom edges of the body portion permitting concrete to extend around the spacer close to the rods.

2. A spacer for reenforcement rods in which is comprised a substantially rectangular metal plate of uniform thickness throughout having a plurality of rows of vertically spaced apertures for receiving tiers of reenforcement rods and large openings through the body between the rows of apertures, there being legs extending obliquely from the four corners of the body portion adapted to space said body portion inwardly from the extremities of the legs, said legs being provided with pairs of feet at right angles to each other, whereby to support the spacer either in horizontal or vertical position with the lower tier of reenforcement rods above the form upon which the spacer is used.

3. A spacer for reenforcement rods comprising a metal plate, having an elongated body formed with lengthwise and crosswise extending rows of perforations for receiving reenforcement rods and large openings between said perforations, and obliquely directed legs extending from the four corners of the body and provided with pairs of feet at right angles to each other whereby the spacer may be supported by said legs in a horizontal or a vertical position, substantially as and for the purpose set forth.

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