L. N. LUKENS.

DEVICE FOR SPACING AND SUPPORTING REINFORCING BARS IN CONCRETE WORK.

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1,139,987. Patented May 18, 1915.

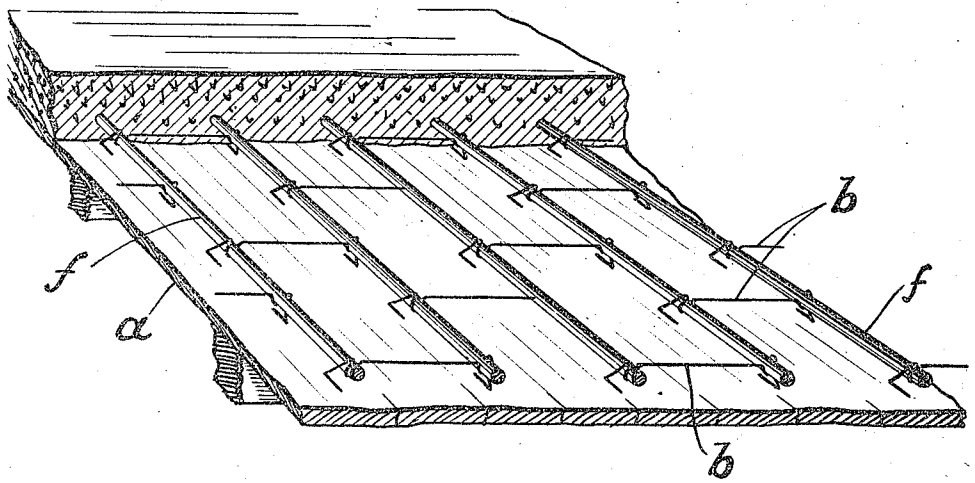


FIG. 1.

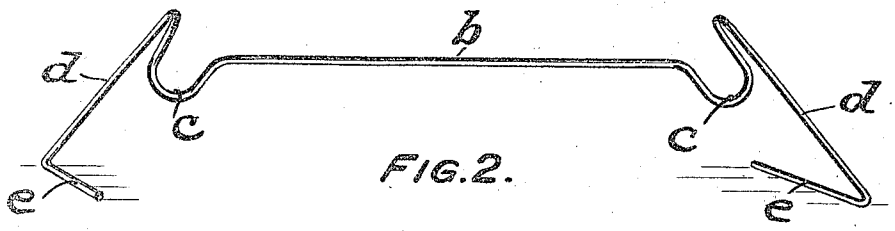


FIG. 2.

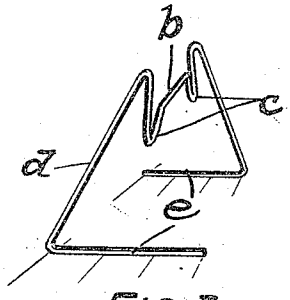


FIG. 3.

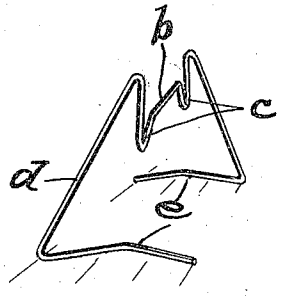


FIG. 4.

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DEVICE FOR SPACING AND SUPPORTING REINFORCING-BARS IN CONCRETE WORK.

1,139,987. Specification of Letters Patent. Patented May 18, 1915.

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To all whom it may concern:

Be it known that I, LEWIS N. LUKENS, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Devices for Spacing and Supporting Reinforcing-Bars in Concrete Work, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to reinforced concrete construction and more especially to devices for supporting and spacing the reinforcing bars. Such devices, commonly known as spacers, are well known and those of the preferred type comprise a bent wire structure having at opposite ends eyes to receive the bars and legs for holding the eyes above the level of the wooden centering used in forming the floor.

My improvement relates to spacers of this type, the object being to effectually support the bars, to space them equidistantly, to insure the maintenance of the bars in their spaced relation, and to facilitate the positioning of the bars.

A preferred embodiment of the invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing floor construction comprising a number of reinforcing bars supported by my improved devices. Fig. 2 is a perspective side view of one of the supporting and spacing devices. Fig. 3 is a perspective end view of the same. Fig. 4 is a view, similar to Fig. 3, of a modification.

The device comprises a single length of wire, which preferably possesses substantial elasticity, and is bent to form a main body portion or connecting member *b*, eyes *c* for the reception of the reinforcing bars or rods, and end supporting members *d e* for positioning the eyes a substantial distance above the wooden centering *a*. The eye *c* is formed by bending the wire at the end of the member *b* downward, around and upward and the supporting member *d* is formed by bending the wire at the end of the eye downward and laterally to form a leg *d* and then transversely to form a foot *e*.

As shown, the bend of the eye immediately adjacent to the supporting member extends substantially above the level of the connecting member, so that the eye opens inward as well as upward; this feature being accentuated by bending the wire forming the eye successively downward and outward and upward and inward.

While the supporting members at opposite ends of the spacer are duplicates, the leg *d* of one supporting member is at one side of the main body, while the leg *d* of the other supporting member is at the other side of the main body, each leg being preferably inclined in an outward as well as a lateral direction. By reason of its lateral inclination the lower end of each leg is located some distance to one side of the main body. The foot *e* extends transversely to the other side of the main body. Thus the spacer is perfectly balanced and readily maintains itself in operative position. As shown in Fig. 3 the foot may be perfectly straight; or it may be bent in an angular arch shape, as shown in Fig. 4.

The construction of the eye is such as to permit the reinforcing bars or the rods *f* to be readily and expeditiously applied to the spacers. While the bars are capable of yielding somewhat, which is a desirable feature, they tend always to assume their normal shape and thus effectively maintain the bars or rod in uniformly spaced relation.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. A device for supporting and spacing bars in reinforced concrete construction, comprising a wire extending between its end portions horizontally to form a connecting member, and beyond the end of the latter bent successively downward and upward to form a retaining eye opening upward, and thence downward with a lateral inclination and laterally in the opposite direction to form a supporting member.

2. A device for supporting and spacing bars in reinforced concrete construction, comprising a wire extending between its end portions horizontally to form a connecting member and beyond the end of the latter bent downward below the level of the connecting member and thence upward substantially above the level of the connecting member to form a retaining eye, and thence downward in a direction inclining both laterally and outwardly to form a supporting leg.

3. A device for supporting and spacing bars in reinforced concrete construction,

comprising a wire extending between its end portions horizontally to form a connecting member, and beyond the end of the latter bent downward below the level of the connecting member and thence upward substantially above the level of the connecting member to form a retaining eye, and thence downward with a lateral inclination to form a supporting leg and laterally in an opposite direction to form a supporting foot.

4. A device for supporting and spacing bars in reinforced concrete construction, comprising a wire extending between its end portions horizontally to form a connecting member, and beyond the end of the latter bent successively downward and upward to form a retaining eye opening upward, and thence downward in a direction inclining both laterally and outwardly to form a supporting leg and thence laterally in the opposite direction to form a supporting foot.

5. A device for supporting and spacing bars in reinforced concrete construction comprising a wire extending between its end portions horizontally to form a connecting member and beyond the end of the latter successively downward and outward and upward and inward to above the level of the connecting member to form a retaining eye, and thence bent successively downward in a laterally inclined direction and laterally in the opposite direction to form a supporting member.

6. A device for supporting and spacing bars in reinforced concrete construction, comprising a wire extending between its end portions horizontally to form a connecting member and beyond the end of the latter successively downward and outward and upward and inward to above the level of the connecting member to form a retaining eye, and thence bent downward in a direction inclining both laterally and outwardly to form a supporting leg and thence laterally in the opposite direction to form a supporting foot.

7. A device for supporting and spacing bars in reinforced concrete construction comprising a wire extending between its end portions horizontally to form a connecting member and beyond each end of the latter bent successively to form an eye and a supporting leg, the two supporting legs extending downward from the respective eyes in a direction inclining both laterally and outwardly and on respectively opposite sides of the connecting member.

8. A device for supporting and spacing bars in reinforced concrete construction comprising a wire extending between its end portions horizontally to form a connecting member and beyond each end of the latter bent successively to form an eye and a supporting member, one supporting member extending downward and laterally on one side of the connecting member and thence across to the other side and the other supporting member extending downward and laterally on the last named side of the connecting member and thence across to the first named side.

In testimony of which invention, I have hereunto set my hand, at Philadelphia, on this 22nd day of January, 1915.

LEWIS N. LUKENS.

Witnesses:
M. M. HAMILTON,
E. E. WALL.