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METALLIC REINFORCE FOR CONCRETE CONSTRUCTION.
APPLICATION FILED MAY 11, 1908.

918,716.

Patented Apr. 20, 1909.

Fig. 1.

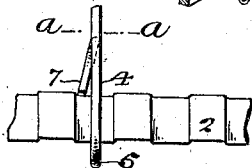
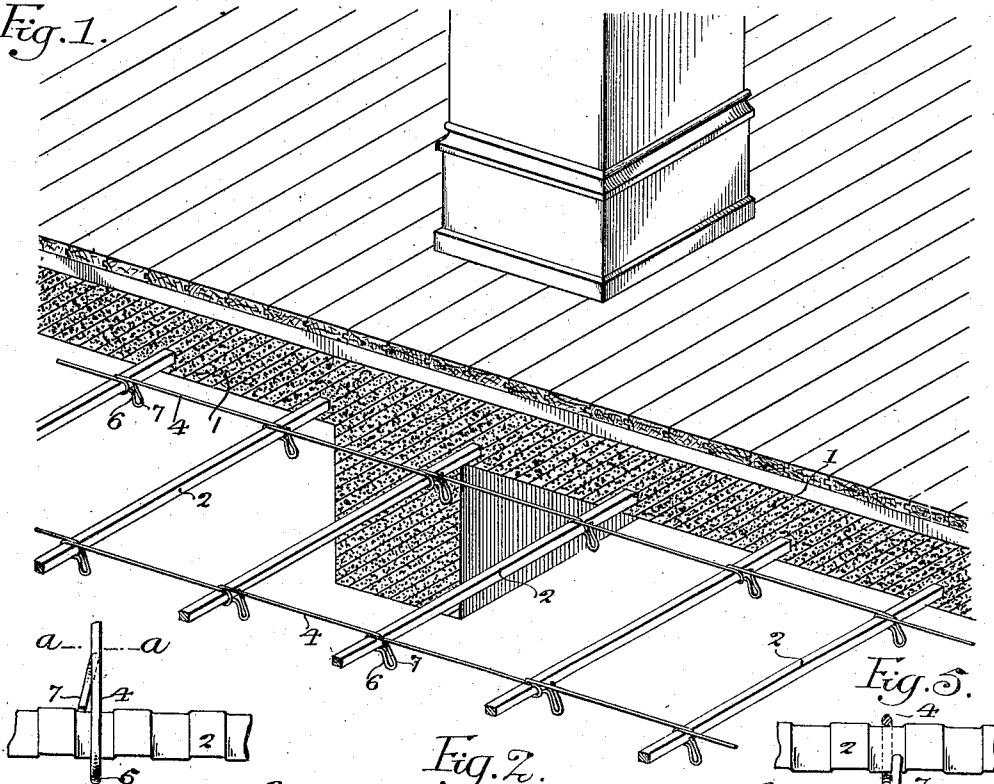


Fig. 2.

Fig. 4.

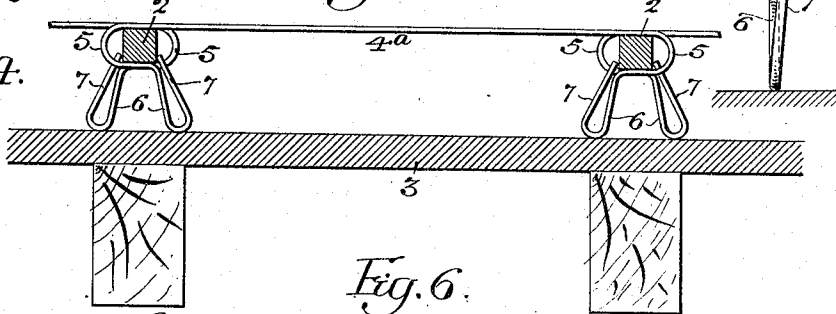


Fig. 6.

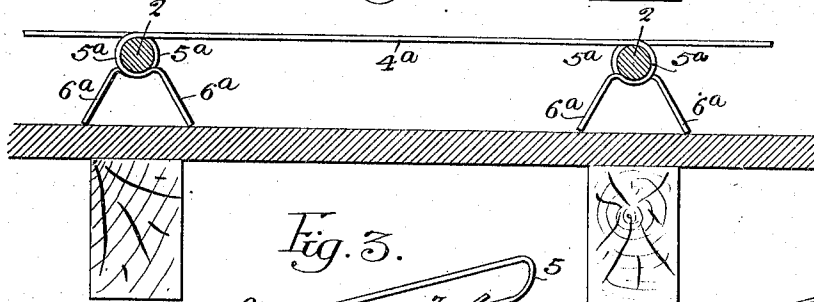


Fig. 3.

Fig. 7.

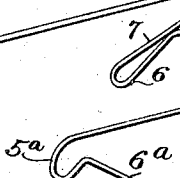
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UNITED STATES PATENT OFFICE.

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METALLIC REINFORCE FOR CONCRETE CONSTRUCTION.

No. 918,716.

Specification of Letters Patent.

Patented April 20, 1909.

Application filed May 11, 1908. Serial No. 432,007.

To all whom it may concern:

Be it known that I, DANIEL A. WEDMORE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Metallic Reinforces for Concrete Construction, of which the following is a specification.

The object of my invention is to provide suitable spacing and supporting means for the rods or bars familiarly known as "slab rods" used in reinforced concrete construction of floors and ceilings.

To secure the greatest efficiency from the use of a metallic reinforce, it is desirable that the rods comprising the same shall be spaced equidistantly when used; and the object of my invention is to effect such result.

A further object of my invention is to insure the retention of the rods in their spaced positions, and to provide a reinforcement, consisting of the rods and the tying means, that can be made in a factory, rolled up and then placed on the job ready for use.

My invention is fully shown in the accompanying drawings, in which:

Figure 1, is a sectional perspective view showing the use of one form of my improved spacing and tying members for slab rods used in a reinforced concrete floor; Fig. 2, is a sectional view of the same, illustrating the rods and their supporting means in place upon the wooden centering arranged to receive the concrete; Fig. 3, is a perspective view of one of the spacers shown in Figs. 1 and 2; Fig. 4, is a plan view of the end of the spacing member shown in Figs. 1, 2 and 3, in engagement with a rod; Fig. 5, is an elevation of Fig. 4, showing the tie member in section on the line *a-a*; Fig. 6, is a view similar to Fig. 2, showing another form of spacer and tie, and the manner of using the same, and Fig. 7, is a perspective view of the spacing and tying member shown in Fig. 6.

As noted above, the particular feature of my invention consists in providing means for supporting, spacing and retaining the slab rods employed in reinforced concrete floor construction. These slab rods have various cross-sectional contours, square, round &c., and it is usually preferable to employ deformed bars, as they are called, as illustrated in Figs. 4 and 5.

In Fig. 1, a concrete floor is shown at 1, in

which slab rods 2 are employed. These rods are spaced apart at proper intervals and supported and retained in position with respect to a wooden centering 3 employed in the formation of said floor, by means of the members 4. These members have curved or bent ends 5 forming eyes for the reception of the rods; those of square cross section being preferably employed with this form of tie and spacing member, although round bars may be used if desired. The bent or curved ends of the rods are continued downwardly to form supports 6 for engagement with the centering during the formation of the floor, such portions having return projections 7, disposed at a slight angle with respect to the portions 6, as clearly shown in Figs. 4 and 5, and these projections 7 engage the slab rods and form guards to prevent the withdrawal of said rods after the spacing members have been applied thereto. This construction provides a lock whereby the slab rod can not be withdrawn without destroying the spacing member. It also permits the construction of the reinforcement in the shop and the folding of the same prior to being set up on the job.

In Figs. 6 and 7, I have shown a modified form of structure more particularly available for use in connection with round slab rods. This member 4^a is provided with the curved or bent portions 5^a forming eyes which embrace the rods 2^a, and by extending such curved portion a little more than half-way around the rod, a spring lock will be provided by the ends of the spacing members which will effectually maintain said rods in proper position with respect to each other. These spacing members have legs 6^a extending at an angle from the inner portion of the curved ends, and these serve to support the rods at the proper distance above the centering during the process of laying the concrete floor. This form of tie and spacing member is advantageous for use on the job, as the friction hold obtained by the narrow throat is hardly sufficient to permit formation of the reinforce in the shop, such as is contemplated with the use of the device shown in Figs. 1 to 5.

The supporting, spacing and retaining members made in accordance with my invention are easily and cheaply manufactured; may be readily applied to the slab rods as

illustrated herein, and besides serving to space these rods, they securely hold them in proper relative position.

I claim:

- 5 1. As a new article of manufacture, a supporting and spacing member for use in reinforced concrete construction, comprising a bent wire structure having open-sided eyes at the ends of the same, and guards integral with said spacing member for engagement with rods disposed in said eyes.

2. As a new article of manufacture, a supporting and spacing member for use in reinforced concrete construction, comprising a bent wire structure having open-sided eyes at the ends of the same, supports extending from said eye portions, and guards extending from said supports for engagement with rods disposed in said eyes.

- 20 3. As a new article of manufacture, a supporting and spacing member for reinforced concrete construction, comprising a bent wire structure having an open ended eye to receive and retain a rod, a support extending from said eye, and a guard continuous with the support for engagement with said rod.

4. The combination, in reinforced concrete construction, of a series of tie-rods, a series of supports, and spacers carried by said supports, said spacers having curved portions to receive the rods and guards for engaging the rods to prevent movement of the same.

5. The combination in a reinforced concrete construction, of a tie rod and a supporting spacer, said spacer having a curved portion to receive the rod, and an integral projection carried by said spacer and forming a

support, said projection having a guard portion in engagement with the rod to prevent movement of the same.

6. The combination, in reinforced concrete construction, of a series of tie rods disposed equidistantly, hinged retaining means disposed at right angles to and securing said rods together, supports integral with said hinged retaining means, and guards for engagement with the rods continuous with said supports.

7. A supporting and spacing member for tie rods having hooked portions to engage said rods; the throat portion of said hooks being of less width than the diameter of the rod, supports carried by said member adjacent the hooks, and guards continuous with said supports for engagement with the rods.

8. A supporting and spacing member for tie rods having hooked portions to engage said rods, supporting legs and guards integral with said spacing member and continuous with said legs for the throats of said hooked portions.

9. A supporting and spacing member for tie rods having hooked portions to engage said rods, supports adjacent said hooks, and integral guards continuous with said hooks for the throats of the same.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

DANIEL A. WEDMORE.

Witnesses:

E. P. WALLACE,
H. C. TOOMEY.