No. 871,017. PATENTED NOV. 12, 1907.

A. WITTE.

# MEANS FOR SUPPORTING REINFORCING RODS FOR CEMENT STRUCTURES.

APPLICATION FILED JULY 31, 1906.

Fig. 1.

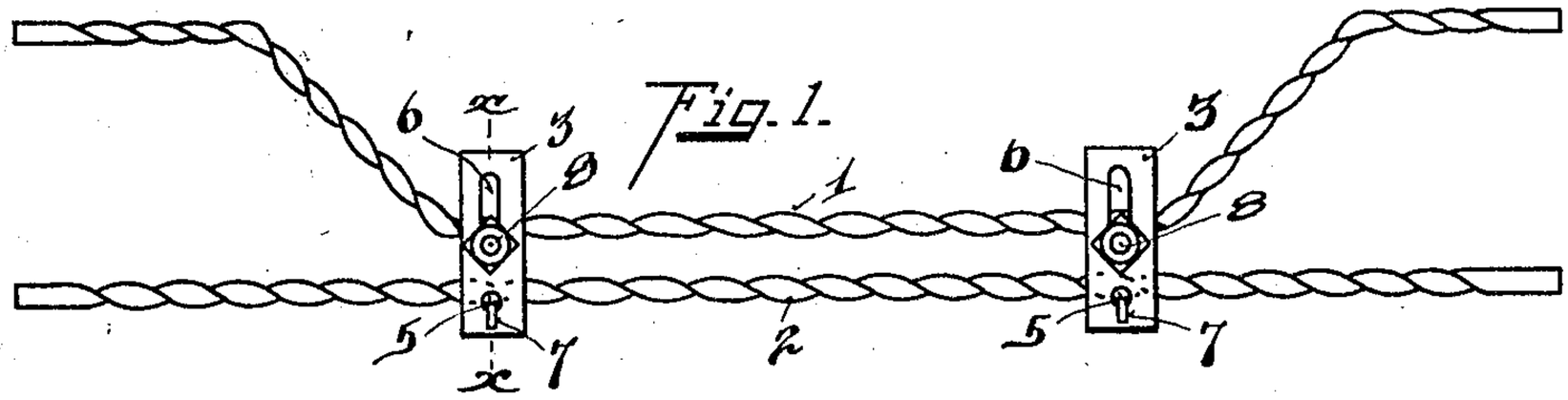



Fig. 2.

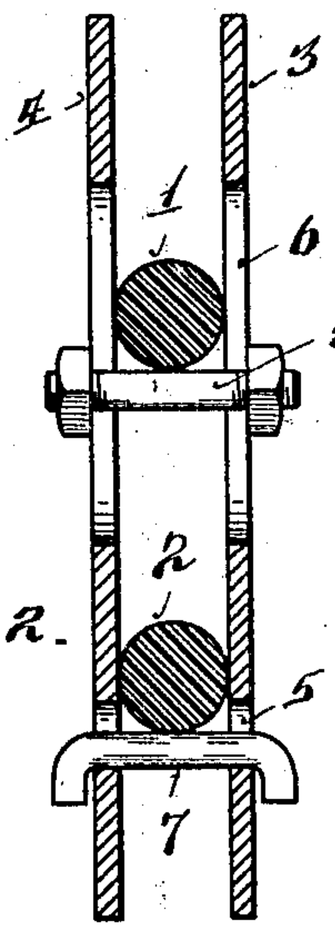



Fig. 3.

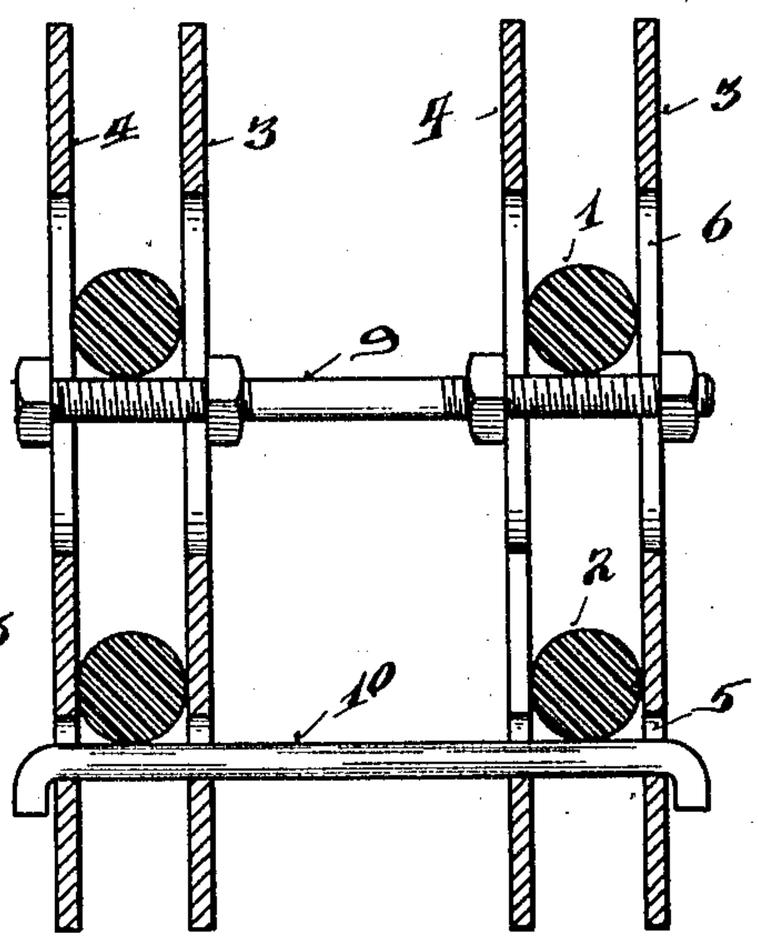
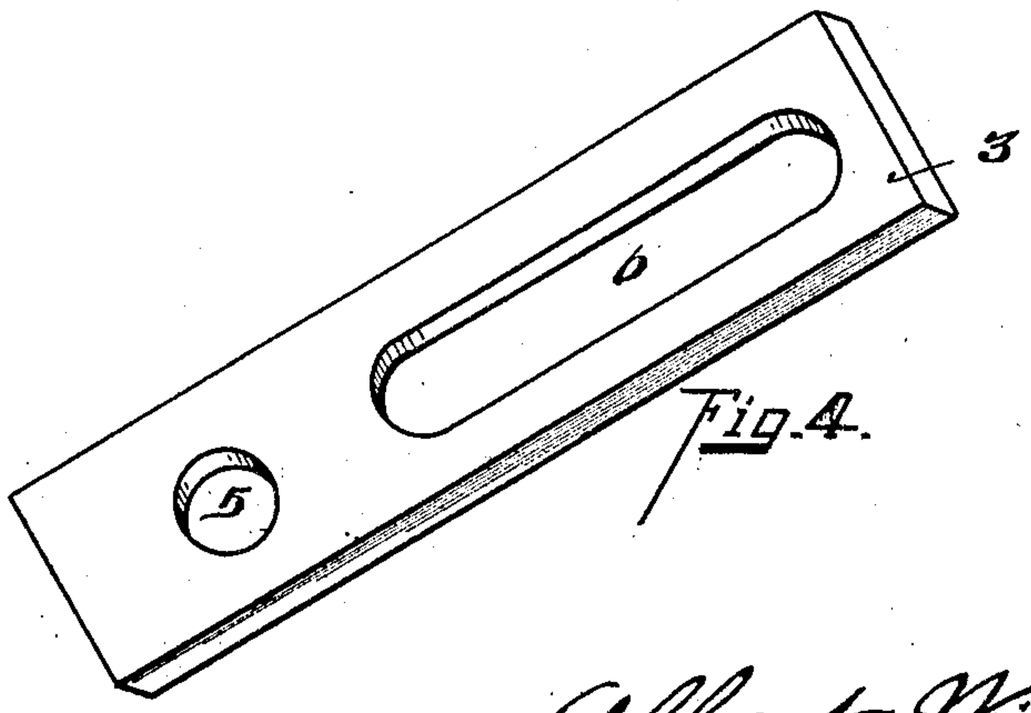



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## MEANS FOR SUPPORTING REINFORCING-RODS FOR CEMENT STRUCTURES.

No. 871,017. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed July 31, 1906. Serial No. 328,613.

*To all whom it may concern:*

Be it known that I, ALBERT WITTE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Means for Supporting Reinforcing-Rods for Cement Structures, of which the following is a specification.

My invention relates to improved means for supporting steel bars and the like used in reinforced concrete structure.

The object of my invention is to provide means whereby steel bars used in reinforced concrete structure are held in their set position free from each other and from the false structure, whereby the concrete mixture when filled into this false structure can entirely surround the reinforcing bars thus preventing the same from coming in contact with each other.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which:—

Figure 1 is a side elevation of my improved means for supporting reinforcing bars. Fig. 2 is an enlarged section on line *x*, *x*, Fig. 1. Fig. 3 is an enlarged sectional view similar to Fig. 2, but showing another set of reinforcing bars spaced from each other and securely held in such spaced position. Fig. 4 is a perspective view of one of the clamping plates.

1, 2, represent reinforcing bars and as shown are twisted steel bars of particular shape. But the bars can be of any form employed for various work in reinforced concrete structure and my invention appertains only in maintaining the bars in a spaced position prior to and during the forming of the cement work.

3, 4, represent clamping plates adapted to be supported upon each side of the bars, said clamping plates are preferably provided with an orifice 5 and an elongated slot 6.

7 represents a pin or tie rod; the ends ot which are bent downward and passed through the orifices 5 of the clamping plates 3, 4, for supporting one of the reinforcing bars.

8 represents a bolt passing through the slots 6 and upon which bolt a second reinforcing bar is supported.

When the proper adjustment of the bars is made relative to each other the bolt nuts are tightened which will securely lock the bars in such adjusted position.

In the form shown in Fig. 3 two sets of reinforcing bars are shown, each set of reinforcing bars being provided with the clamping plates 3, 4, and the whole tied together by an elongated bolt 9 and tie rod 10. Of course it being understood that more than two reinforcing rods may be employed and locked in position, in which instance the clamping plates are made of greater length and additional locking bolts provided.

The bars being held a selected distance apart, by their clamping plates, form a single unitary, but spaced structural element, which not only allows the concrete to be filled in between the constituent parts, but which also allows such single elements or units to be spaced relative to other reinforcing units, whether of the same or different species.

Having described my invention, I claim:—

1. A unitary spaced structural element for reinforcing concrete, comprising a bar arranged in a horizontal plane, in combination with spacing plates arranged vertically and in pairs, said plates being provided with slots, clamping means passing through said slots and beneath the bar securing the bar between the plates, substantially as described.

2. A unitary spaced structural element for reinforcing concrete, comprising a series of parallel bars, in combination with spacing plates arranged in pairs, said plates being provided with orifices, clamping means passing through said orifices and beneath the bars securing the bars between the plates and in spaced positions from each other, substantially as described.

In testimony whereof, I have hereunto set my hand.

ALBERT WITTE.

Witnesses:
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