

J. V. JENKINS.
 REINFORCING BAR FOR CONCRETE CONSTRUCTION.
 APPLICATION FILED NOV. 22, 1907.

904,785.

Patented Nov. 24, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

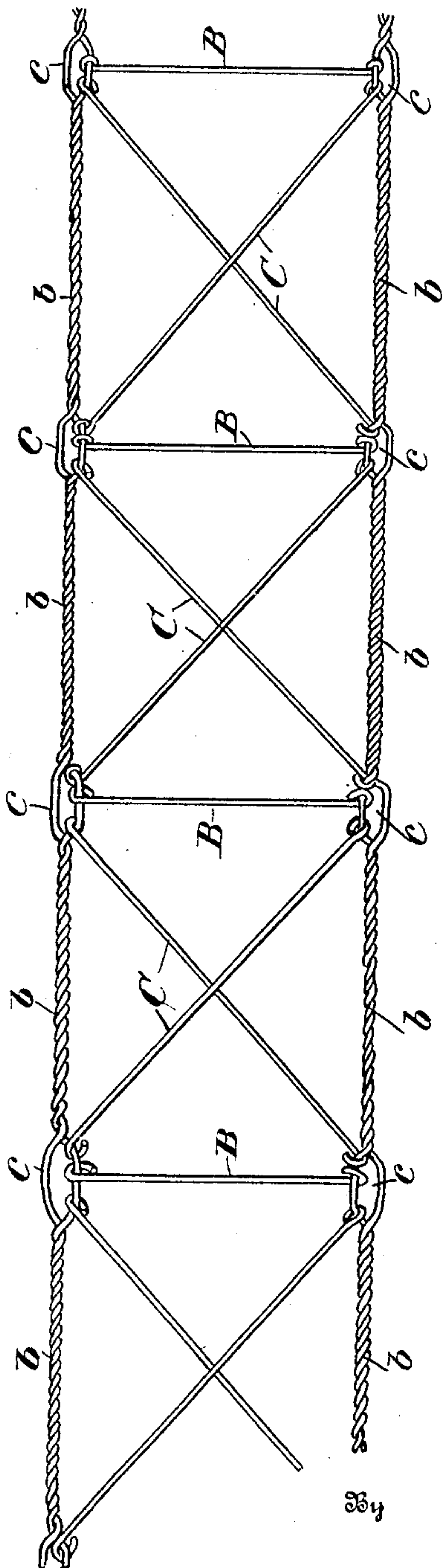


Fig. 2.

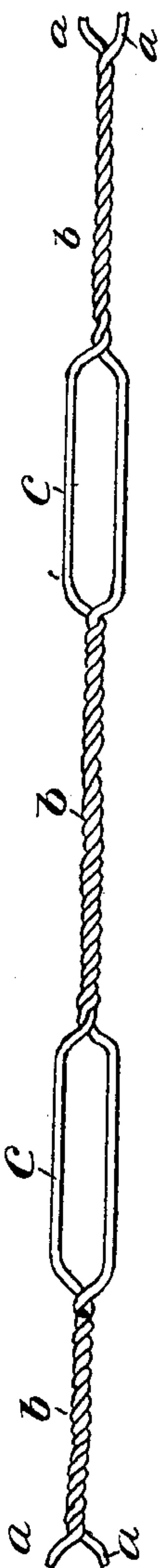
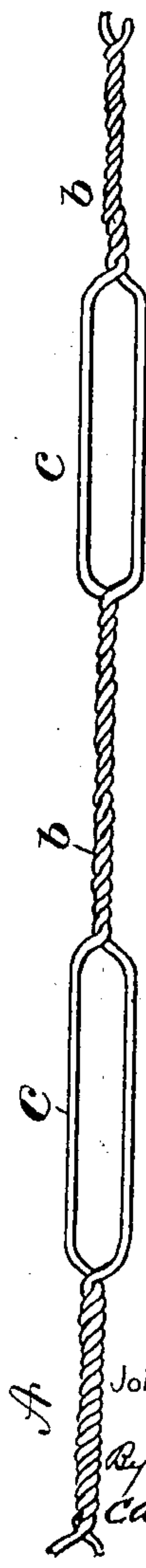


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 5.



Fig. 4.

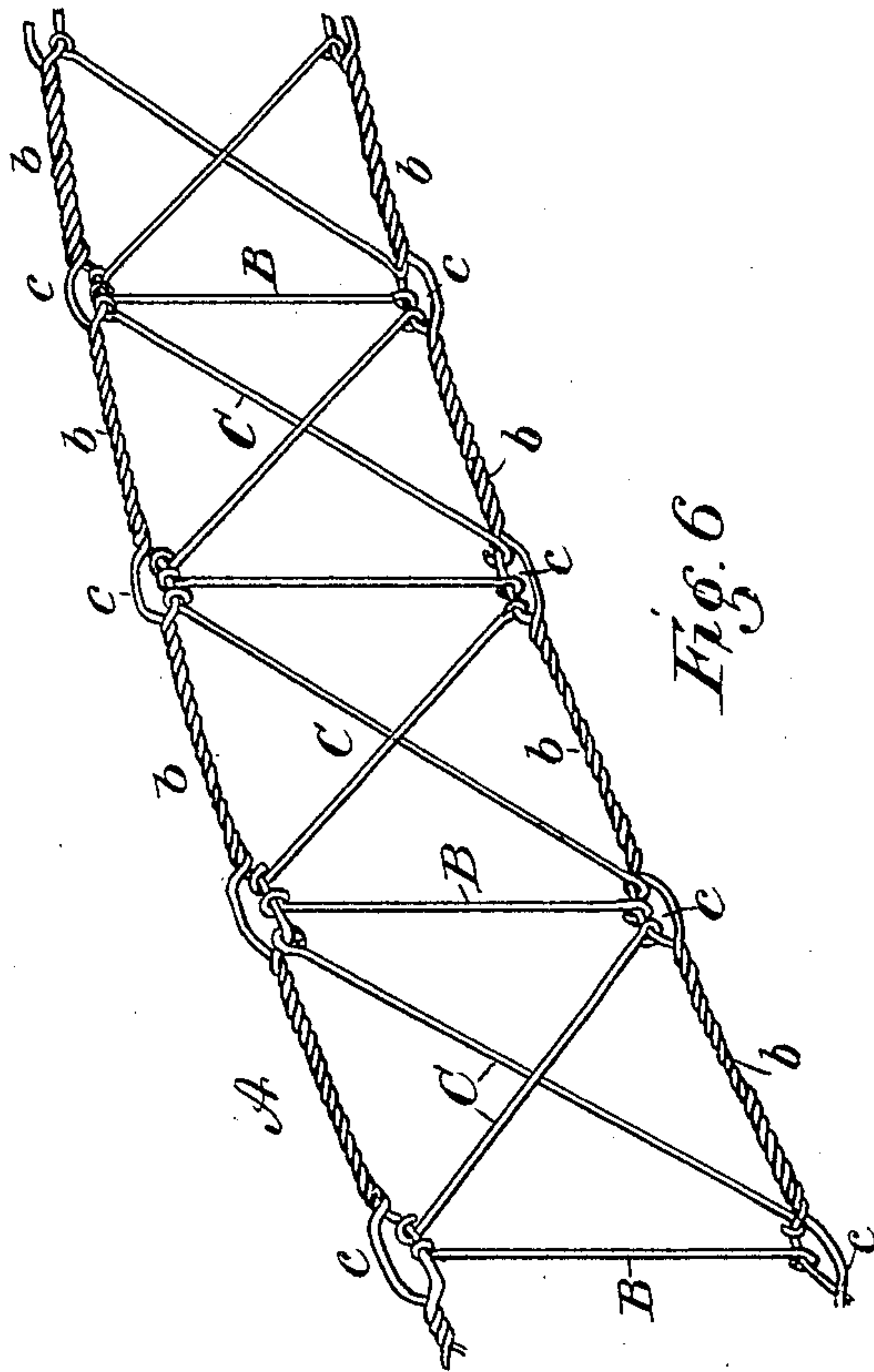


Fig. 6

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JOHN V. JENKINS, OF WICHITA, KANSAS.

REINFORCING-BAR FOR CONCRETE CONSTRUCTION.

No. 904,785.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed November 22, 1907. Serial No. 403,350.

To all whom it may concern:

Be it known that I, JOHN V. JENKINS, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Reinforcing-Bars for Concrete Construction, of which the following is a specification.

My invention relates to bars for reinforced concrete and among the objects in view is to provide an improved form of bar which is adapted to give increased strength to the concrete, provide a better bond therefor, and overcome all danger of splitting of the concrete.

A further object is to provide an improved bar for the purpose mentioned, which will be economical in its construction and with the various objects in view.

The invention consists in the novel construction of the bar as hereinafter fully described, illustrated in the drawing, and pointed out in the appended claims.

In the drawing:—Figure 1 is an elevation showing a portion of two bars constructed and combined in accordance with my invention. Fig. 2 represents a portion of one of the bars showing longer loops than those seen in Fig. 1. Fig. 3 is a view similar to Fig. 2, showing still longer loops. Fig. 4 represents in detail one of the diagonally arranged connecting bars or hooks. Fig. 5 is a detail view showing the ends of two adjacent bars connected or spliced together. Fig. 6 shows a portion of two bars constructed and combined for use in concrete arch construction.

In carrying out my invention, I provide a bar A composed of two individual wires or rods *a*, which wires or rods are twisted together at intervals as indicated at *b*, the twisted portions being separated by non-twisted portions spread apart to form loops *c*. Thus the twisted portions and the loops alternate throughout the length of the bar. By twisting the two rods or bars together, great strength is obtained, which is not secured by the ordinary straight rod or bar, and by providing the loops, a better bond is obtained than could be obtained by a straight bar and furthermore these loops avoid all danger of splitting of the concrete.

The loops *c* may vary in length and in Fig. 2 I show the loops as being somewhat longer than those seen in Fig. 1, while in Fig. 3 I show the loops as being somewhat

longer than those seen in Fig. 2, and I do not wish to be restricted to any particular size of loop.

While the bar A so far described could be used in concrete construction, yet I preferably employ a construction wherein at least two of the bars hereinbefore described, are combined for coöperation, these bars being connected by suitable connecting hooks or braces.

In Fig. 1 I show two of the bars A, arranged parallel to each other and these bars A are connected by connecting shear bars or braces B and C. The shear bars B are hooked at their opposite ends and engage the loops *c* of the bars A, while the shear bars C are also hooked at opposite ends and engage the said loops *c*, but these shear bars C are arranged diagonally as seen in Fig. 1. The shear bars B and C serve to maintain the bars A at the desired distance apart, and at the same time serve to provide additional bonding and strengthening means for the concrete. By providing the braces B and C with hooks at opposite ends, the attachment of said braces to the reinforcing bars A is facilitated.

When it is desired to connect or splice together several of the bars A, the adjacent ends thereof are constructed to provide loops *d* which engage with each other as seen in Fig. 5.

It will be noted that by the construction represented in Fig. 1, it is possible to combine additional bars A with the bars A seen in said figure, by using additional shear bars B and C arranged as in Fig. 1, to connect the various hooks A together.

My invention is adapted for use with concrete arch constructions by shortening the successive bars B, beginning at the base of the arch and extending to the highest point thereof whereby the bars A will be made to approach closer together as they near the highest point of the arch, as seen in Fig. 6.

I would state that I do not wish to be restricted to any particular size of wires or rods as I may use all sizes thereof as may be found suitable or convenient.

What I claim is:—

1. The combination with a plurality of reinforcing bars each comprising a plurality of wires or rods, twisted together at intervals and spread apart intermediate the twisted portions to form loops, of shear bars arranged diagonally intermediate the rein-

forcing bars and each provided with hooks at opposite ends which engage with the loops of the reinforcing bars.

2. The combination with a plurality of reinforcing bars each comprising a plurality of wires or rods twisted together at intervals and spread apart intermediate the twisted portions to form loops, of shear bars arranged diagonally intermediate the reinforcing bars and each provided with hooks at opposite ends which engage with the loops of the reinforcing bars, and shear bars arranged right-angularly to and between the reinforcing bars and provided at opposite ends with hooks which engage with the loops of the reinforcing bars.

3. The combination with a plurality of reinforcing bars each comprising a plurality of wires or rods twisted together at intervals and spread apart intermediate the twisted portions to form loops, of shear bars varying in length arranged diagonally intermediate the reinforcing bars, and each provided with hooks at opposite ends which engage with the loops of the reinforcing bars.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN V. JENKINS.

Witnesses:

C. H. PAPES,

Mrs. H. C. FOSTER.