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E. B. JARVIS.

REINFORCING TRUSS FOR CONCRETE.

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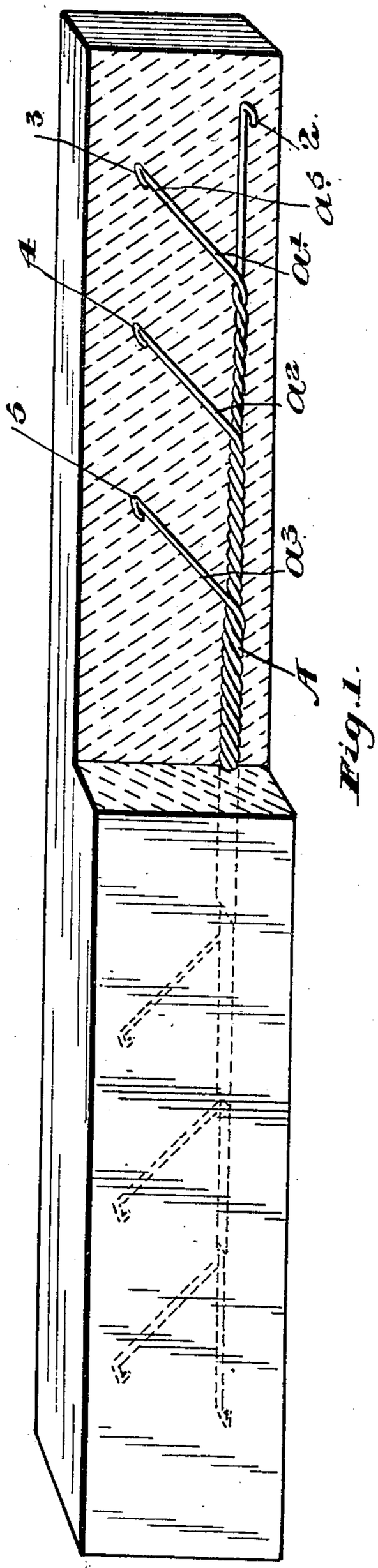

Fig. 1.

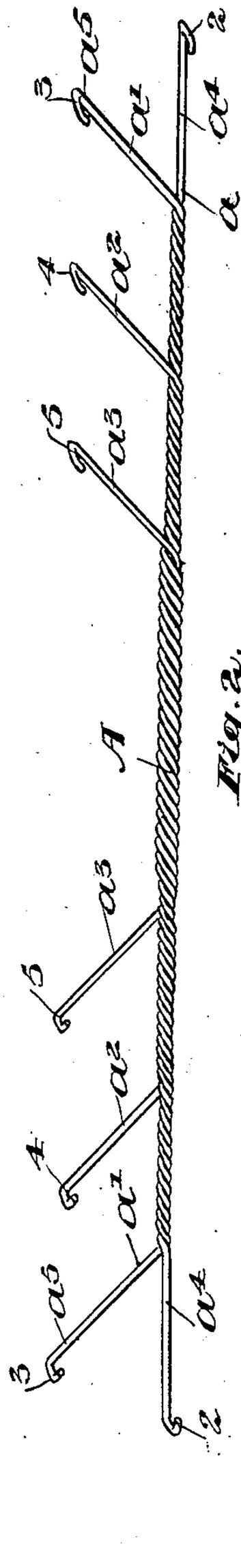

Fig. 2.

Witnesses.
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REINFORCING-TRUSS FOR CONCRETE.

No. 825,884. Specification of Letters Patent. Patented July 10, 1906.

Application filed December 23, 1904. Renewed February 3, 1906. Serial No. 299,360.

To all whom it may concern:

Be it known that I, EDGAR BEAUMONT JARVIS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Reinforcing-Trusses for Concrete, of which the following is a specification.

My invention relates to improvements in reinforcing-trusses for concrete; and the object of the invention is to devise a simple, strong, and efficient truss of this class capable of withstanding a maximum shearing stress and tensile stress for a minimum weight of metal when placed in the concrete; and it consists, essentially, of a bar formed of a plurality of strand or rods twisted in convolute form one into the other, the greatest number of and shortest of the strands being located at the center and the number of the strands decreasing from the center outwardly to the ends, the ends of each strand, starting from the central one, being turned upwardly and extending outwardly obliquely except the final strand, which extends longitudinally in alinement with the bar, which is otherwise formed in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of my improved reinforcing-truss embedded in a concrete beam, and Fig. 2 is a view of the truss.

In the drawings like characters of reference indicate corresponding parts in each figure.

A is the bar forming my truss, which comprises the several rods or strands of wire a a' a^2 a^3. The strand a' may be termed the "foundation-strand," being provided with hooked ends 2. The ends a^4 of the strand a are preferably straight and alined with the bar. Upon the bar a is formed the rod or strand a', which is twisted in convolute form with the bar a except at the ends a^5, which are bent obliquely upwardly and outwardly and provided with hooked ends 3. The strand or bar a^2 is twisted around, preferably, to follow the convolute twisted bars a and a', and the ends are arranged obliquely and extend outwardly toward the end of the bar, being provided with hooked ends 4. The bar a^3 or centrally-disposed bar forming the central portion of the truss is likewise twisted so as to follow the combined convolutions of the aforesaid bars a' a^2 a^3, the oblique ends extending outwardly, being provided with hooked ends 5.

The arrangement of the hooked ends 2, 3, 4, and 5 may be as desired, or the ends may not necessarily be hooked, but may be formed or set up into any other shape.

I preferably make the central or outside strand lighter than the next beneath it and the next lighter than the strand beneath it, and so on until the final strand—that is to say, the innermost strand—will be the heaviest and the central strand the lightest, and the oblique ends, starting from the central to the outside, will therefore gradually increase in weight or cross-sectional area, thereby saving metal in the construction of the truss, as the weight of metal used is so disposed as to effectually take up the shearing and tensile strains where required.

What I claim as my invention is—

1. A reinforcing-truss for concrete comprising a bar made up of a plurality of rods or strands of different lengths, said strands being twisted around each other, the shorter strand being located at the center of the truss and on the outer side thereof and the longest strand forming the inside core and provided with straight ends extending axially of the bar, the said short strand or strands having integral continuations extending obliquely outwardly from the truss, substantially as described.

2. A reinforcing-truss for concrete comprising a bar made up of a plurality of rods or strands of different lengths, said strands being twisted around each other, the shorter strand being located at the center of the truss and on the outer side thereof, and the longest strand forming the inside core and provided with straight ends extending axially of the bar, the said short strand or strands having integral continuations extending obliquely outwardly from the truss and the ends of all the strands being provided with integral hooks, substantially as described.

3. A reinforcing-truss for concrete comprising a straight bar made up of a plurality of rods or strands twisted around each other, the shortest strand being located at the center and on the outside and the longest on the inside forming a core, said longest strand being provided with straight ends alined with the bar and the remaining strands with obliquely-arranged ends extending outwardly and upwardly and the strands constituting the bar increasing in cross-sectional area from the center bar to the outermost bar as and for the purpose specified.

4. A reinforcing-bar comprising a plurality of rods or strands of different lengths twisted together and having their ends extended laterally to form shearing members.

5. A reinforcing-bar comprising a plurality of rods or strands of different lengths twisted together and having their ends extended laterally to form a series of spaced shearing members.

6. A reinforcing-bar comprising a plurality of rods or strands of different lengths twisted together and having their ends extended laterally on one side of the bar to form a series of spaced shearing members.

7. A reinforcing-bar comprising a plurality of rods or strands of different lengths twisted together and having their terminal portions extended laterally in opposite directions from the center of the bar to form a series of spaced shearing members.

8. A reinforcing-bar comprising a plurality of superposed rods or strands of different lengths twisted together and having their ends extended laterally to form spaced shearing members.

9. A reinforcing-bar comprising a plurality of rods or strands of different lengths, said rods or strands being twisted together and having their ends extended laterally to form shearing members, the terminal portions of which are disposed substantially parallel with the longitudinal plane of the bar.

10. A reinforcing-bar comprising a main supporting-rod having a plurality of auxiliary rods intertwisted therewith, the opposite ends of the auxiliary rods being extended laterally to form shearing members.

11. A reinforcing-bar comprising a main supporting-rod having a plurality of superposed auxiliary rods of different lengths coiled around the same and intertwisted therewith, the ends of the auxiliary rods being extended laterally in opposite directions from the center of the main rod to form shearing members.

12. A reinforcing-bar comprising a main supporting-rod having a plurality of superposed auxiliary rods of different lengths coiled around the same and intertwisted therewith, the ends of the auxiliary bars being extended laterally on one side of the main rod to form a series of spaced shearing members.

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Witnesses
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