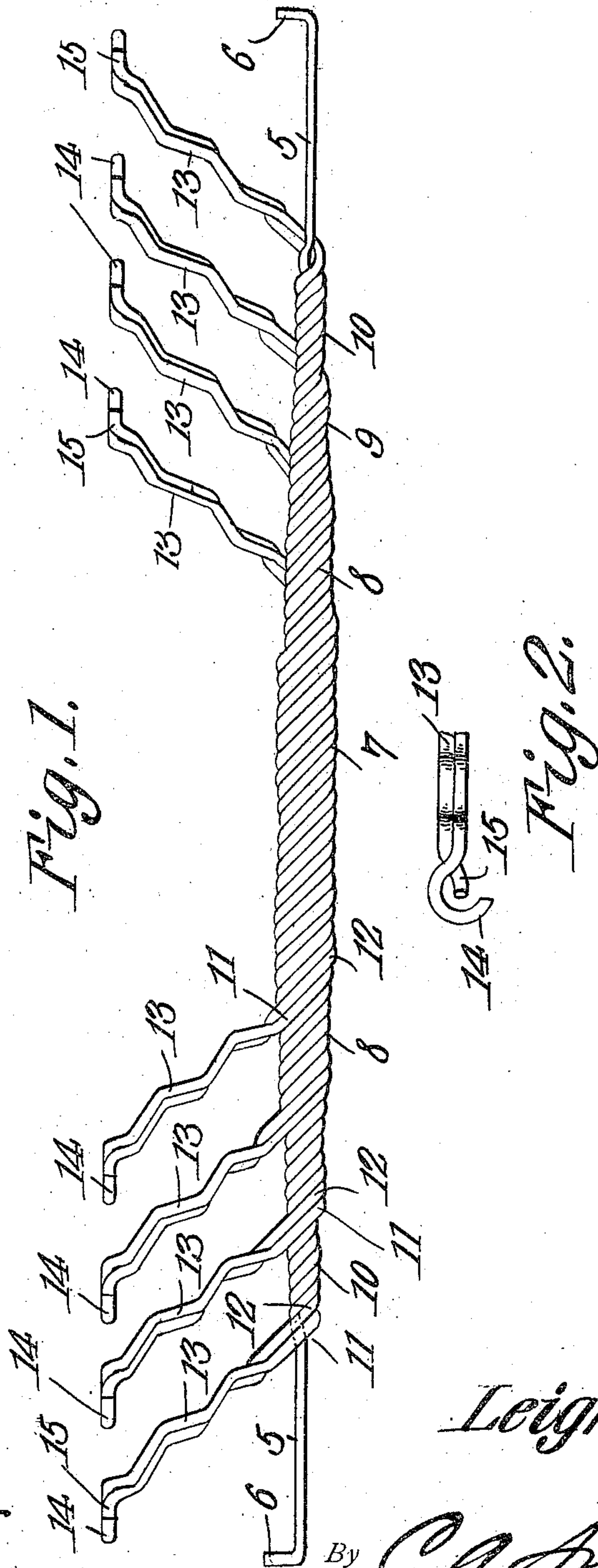


No. 841,014.

PATENTED JAN. 8, 1907.

L. HUNT.
REINFORCING BAR.
APPLICATION FILED JULY 31, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart
L. T. McKee

Leigh Hunt,
INVENTOR.

By

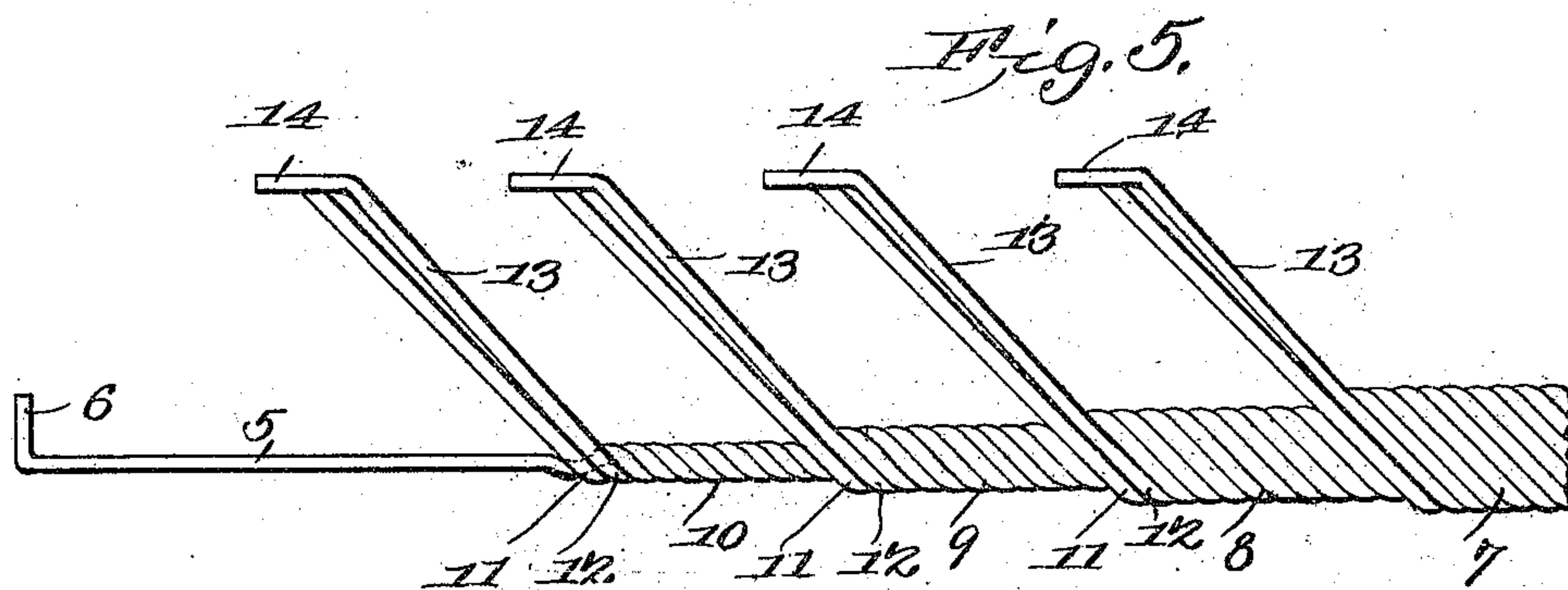
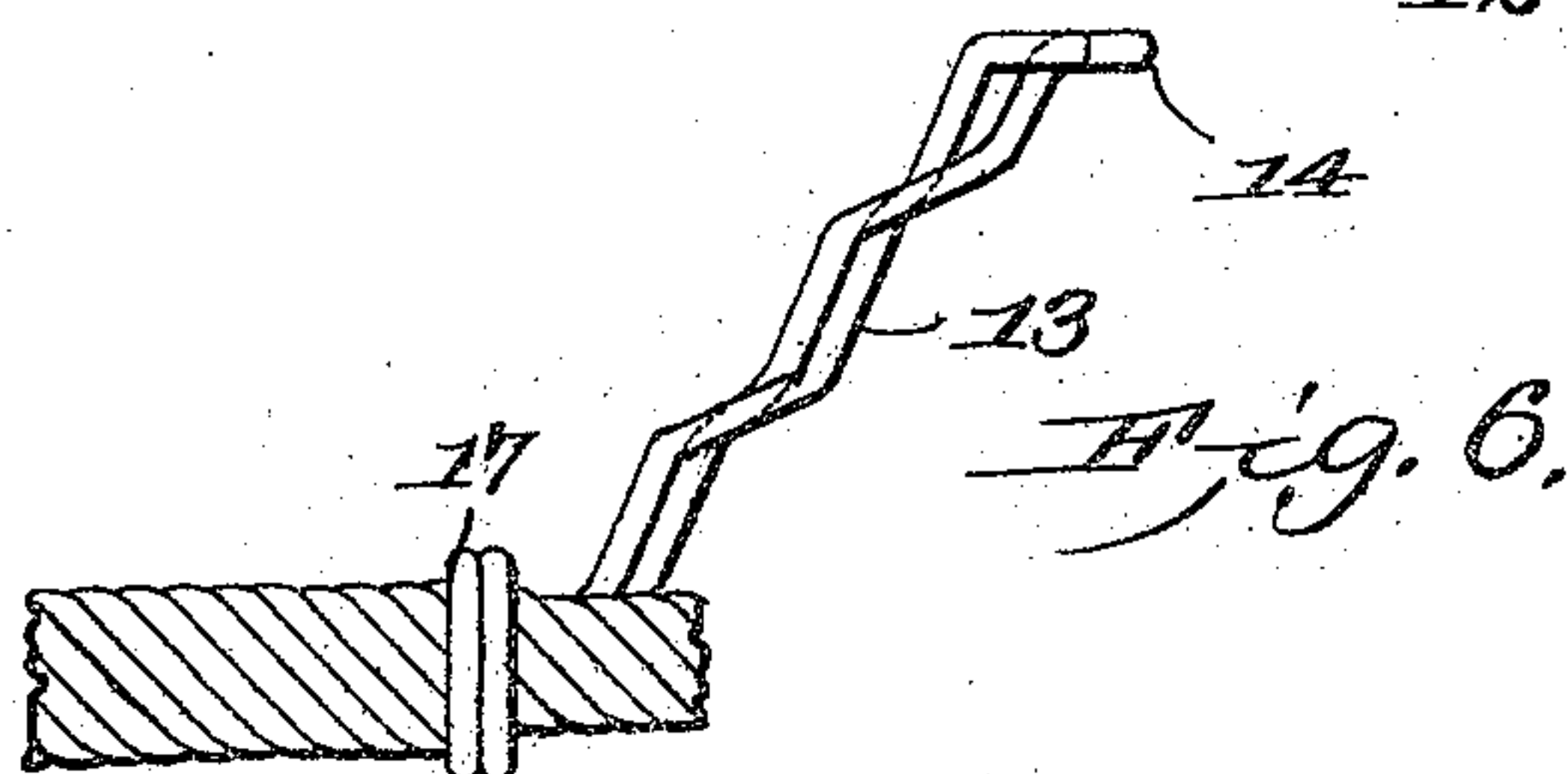
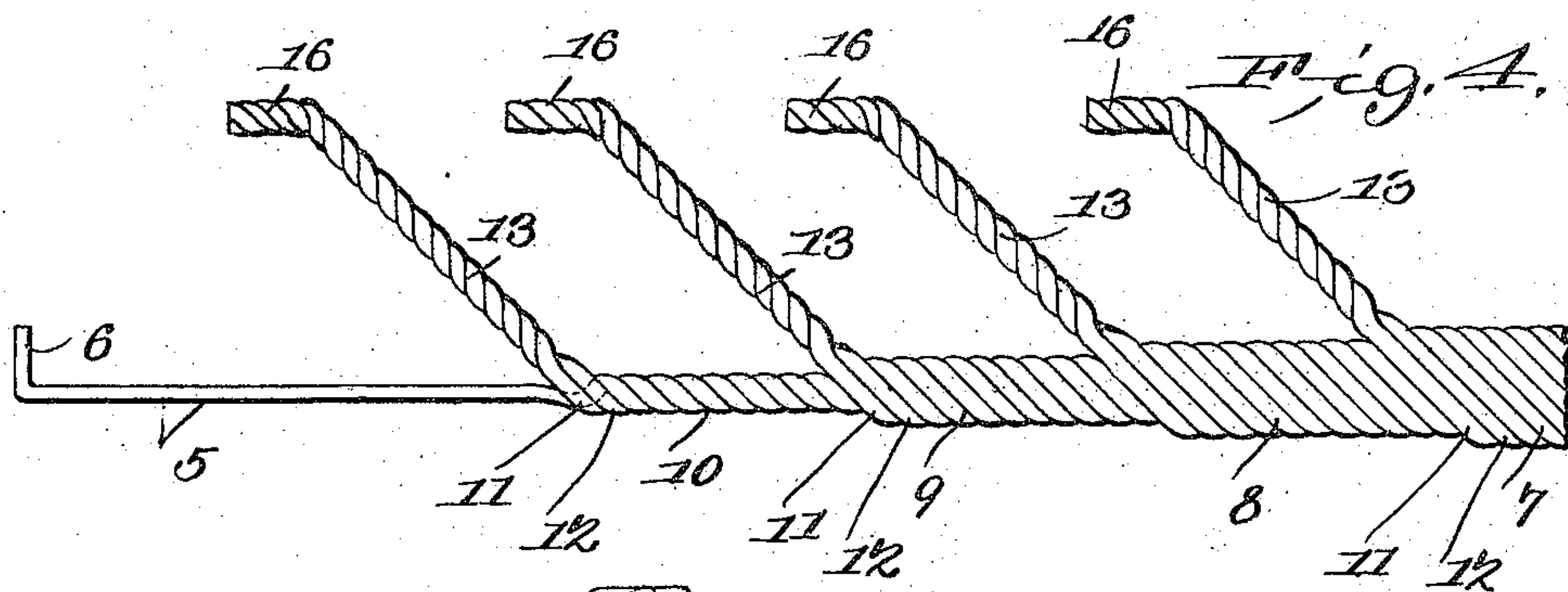
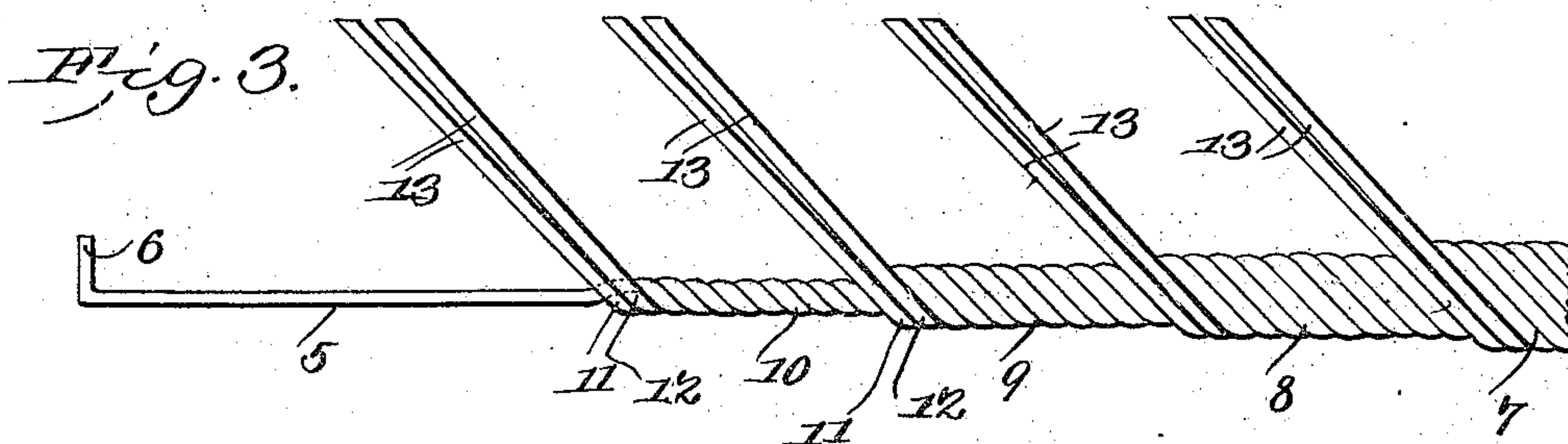
C. A. Snow & Co.
ATTORNEYS

No. 841,014.

PATENTED JAN. 8, 1907.

L. HUNT.
REINFORCING BAR.
APPLICATION FILED JULY 31, 1905.

2 SHEETS—SHEET 2.



Witnesses
E. D. Stewart
J. A. Allen

Leigh Hunt,
Inventor,
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

LEIGH HUNT, OF IOLA, KANSAS.

REINFORCING-BAR.

No. 841,014.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed July 31, 1905. Serial No. 272,011.

To all whom it may concern:

Be it known that I, LEIGH HUNT, a citizen of the United States, residing at Iola, in the county of Allen and State of Kansas, have
5 invented a new and useful Reinforcing-Bar, of which the following is a specification.

This invention relates to certain improvements in reinforcing bars or rods of that general class designed for use in the construction
10 of concrete walls, floors, columns, partitions, and similar artificial-stone structures.

The object of the invention is to provide an inexpensive, durable, and efficient device of this character adapted to be embedded in the
15 cement, concrete, or other material, whereby the latter will be materially strengthened, so as to effectually resist both tensile and shearing strains.

A further object of the invention is to provide a tension bar or rod formed of a plurality of superposed strands or bars of different lengths, said strands or bars being twisted together and having their ends extended laterally at any desired angle to the longitudinal
25 plane of the main supporting-rod to form a series of spaced shearing members.

A still further object is to form the bar in such a manner as to increase its elastic limit and cement-engaging surface, and, further,
30 to construct the shearing-arms so as to create the highest mechanical bond between the concrete and metal.

With these and other objects in view the invention consists in the construction and
35 novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportions, and minor details of construction may
40 be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a reinforcing bar or rod constructed in accordance with my invention. Fig. 2 is a top plan view of a portion of one of the shearing arms or anchors. Fig. 3 is a
50 side elevation of a modified form of the invention. Fig. 4 is a similar view of a modification of Fig. 3, and Figs. 5 and 6 are similar views showing further modified forms of the invention.

55 Similar numerals of reference indicate cor-

responding parts in all the figures of the drawings.

In constructing the preferred form of the device shown in Fig. 1 of the drawings I employ a main supporting bar or rod 5, preferably of high tensile strength, and bend the
60 opposite ends thereof at right angles to form terminal anchors or extensions 6. Intercoiled or intertwined with the main supporting bar or rod 5 are a plurality of superposed
65 auxiliary rods or bars 7, 8, 9, and 10, each auxiliary rod being preferably formed of two strands of metal or other suitable material 11 and 12, the opposite ends of which are bent
70 laterally at any desired angle to the general plane of the main supporting-rod 5 to form a series of spaced shearing-arms 13, adapted to be embedded in the cement, concrete, or
other material. The shearing-arms in this form of the device are disposed in alinement
75 on one side of the rod; but it will be understood that said arms may be positioned on either or both sides of the rod or arranged in staggered relation with their terminal portions inclined toward or away from the center of the rod, as desired. The ends of the
80 metal strands forming the shearing-arms are preferably kinked or corrugated and arranged one slightly in advance of the other, as shown, so as to increase their cement-
85 engaging surface, and thereby form a perfect mechanical bond between the concrete and metal. One strand of each shearing-arm is also bent parallel with the main supporting-rod 5 and the end thereof curved to form a
90 terminal hook or loop 14, in which is centered the end of the adjacent strand. By constructing the reinforcing-bar in this manner the greatest strength is obtained with a minimum of cross-section and weight of metal employed.

In Fig. 3 of the drawings there is illustrated a modified form of the invention in which the shearing-arms are straight and the terminal hooks or loops dispensed with, while
100 in Fig. 4 the strands comprising the arms are twisted together and the ends thereof bent laterally, as indicated at 16. In Fig. 5 the laterally-extending arms present a smooth continuous surface from the main supporting-rod to the terminal hooks or loops, while
105 in Fig. 6 the arms are similar to those shown in Fig. 1, with the exception that the strands or bars forming said arms are twisted or coiled around the adjacent convolutions at
110

right angles to the general plane of the main supporting-rod before being bent laterally on either or both sides of said rod, as shown at 17.

5 The reinforcing-bars shown in the several figures of the drawings may be formed of wires, rods, bars, or strands of any desired thickness and shape in cross-section, and the location and shape of the shearing-arms may
10 be changed to conform to the different load conditions.

From the foregoing description it will be seen that there is provided a comparatively inexpensive device admirably adapted for
15 the attainments of the ends in view.

Having thus described the invention, what is claimed is—

1. A reinforcing-bar comprising a plurality of rods or strands of different lengths arranged in pairs and twisted together to form
20 inclined shearing members, one of the rods of each pair being provided with a terminal loop adapted to receive the end of the adjacent rod.

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

30 3. A reinforcing-bar comprising a plurality of rods or strands of different lengths arranged in pairs and twisted together, the ends of each pair of rods being extended laterally on one side of the bar and crimped to
35 form a series of spaced corrugated shearing members.

4. A reinforcing-bar comprising a plurality of superposed rods or strands of different lengths arranged in pairs and twisted to-

gether, the rods of each pair having their free
40 ends corrugated and extended laterally to form spaced shearing members.

5. A reinforcing-bar comprising a plurality of intertwisted rods of different lengths, said rods being each formed of a plurality of
45 strands the ends of which are corrugated and bent laterally to form shearing members.

6. A reinforcing-bar comprising a plurality of intertwisted rods of different lengths, said rods being each formed of a pair of strands
50 the ends of which are corrugated and extended laterally to form shearing members.

7. A reinforcing-bar comprising a plurality of intertwisted rods of different lengths, said rods being each formed of a pair of strands
55 the ends of which are bent laterally to form shearing members, the end of one strand of each pair terminating in a loop or hook adapted to receive the end of the adjacent strand.
60

8. A reinforcing-bar comprising a main supporting-rod having a plurality of superposed auxiliary rods of different lengths arranged in pairs and intertwisted therewith,
65 the ends of the auxiliary rods being extended laterally in opposite directions from the center of the main rod to form shearing members, and each having one end thereof provided with a terminal loop adapted to receive the end of the adjacent rod.
70

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEIGH HUNT.

Witnesses:

L. L. STORN,
DAN. F. LEWAY.