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A. J. BOSSYNS.

REINFORCEMENT FOR CONCRETE BEAMS.

APPLICATION FILED AUG. 28, 1903.

NO MODEL.

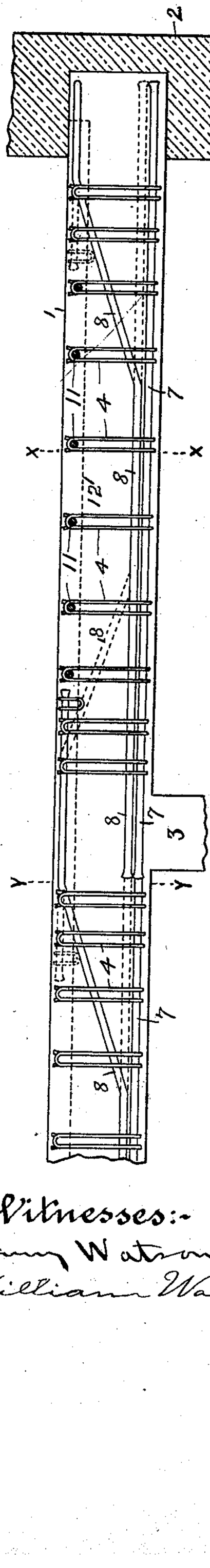

Fig. 1.

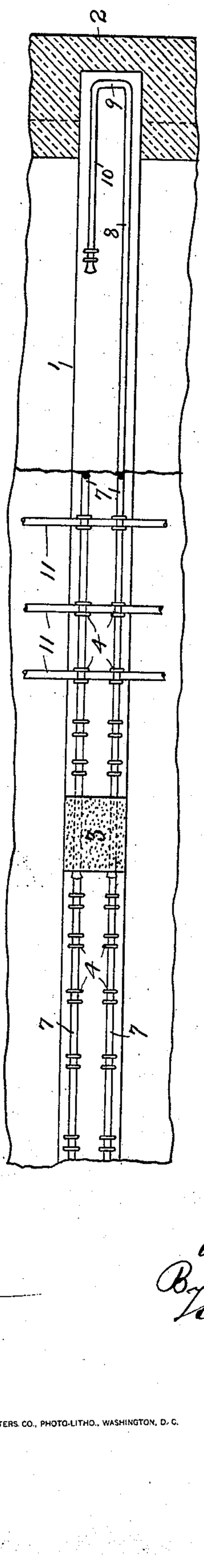

Fig. 2.

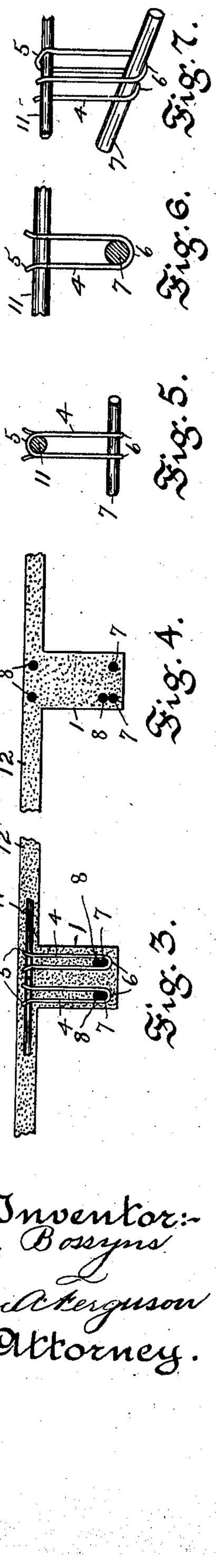

Fig. 7.

Fig. 6.

Fig. 5.

Fig. 4.

Fig. 3.

Witnesses:-
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 751,427. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

ALBERT J. BOSSYNS, OF MOUNT WASHINGTON, MARYLAND, ASSIGNOR TO FERDINAND BARRE, OF BALTIMORE, MARYLAND.

REINFORCEMENT FOR CONCRETE BEAMS.

SPECIFICATION forming part of Letters Patent No. 751,427, dated February 2, 1904.

Application filed August 28, 1903. Serial No. 171,043. (No model.)

To all whom it may concern:

Be it known that I, ALBERT J. BOSSYNS, a citizen of the United States, residing at Mount Washington, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Reinforcements for Concrete Beams, of which the following is a specification.

This invention relates to improvements in reinforcements for concrete beams.

The object of the invention is to provide a cheap, simple, and efficient means for the reinforcement of beams constructed of concrete or other similar material.

Other features of the invention will be fully set forth in the accompanying specification and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a beam resting on one column and having one end projecting into the masonry or side wall, the concrete being omitted. Fig. 2 is an inverted plan view with the lower bars broken away at one end and showing the end of the upwardly-inclined bar that projects into the masonry. Fig. 3 is a vertical sectional view on the line X X of Fig. 1. Fig. 4 is a vertical sectional view on the line Y Y of Fig. 1. Figs. 5, 6, and 7 are detailed views of one of the stirrups, showing the position of the bars that rest in the lower end and the bars that project through the upper end thereof.

Similar reference-numerals designate like parts throughout the several views.

Referring to the accompanying drawings, forming part of this specification, 1 designates the concrete beam, 2 the masonry or side wall, and 3 one of the columns. The stirrups 4 are formed of metal or other suitable material, the ends being first bent downwardly and then upwardly, forming the bend 5 at the upper end and the two bends 6 at the lower end, the extremities terminating on a plane with the upper bend 5. The bends 6 at the lower end are at right angles to the bend 5 at the upper end. The extremities and the upper bend 5 of the stirrup 4 diverge to form a wide opening to the rods 7 when the latter are being placed in the said stirrups. These stirrups 4 are placed along the beams in rows, in the present instance two rows, as seen in Figs. 2 and 3, at a suitable distance apart. The straight rods 7 rest in the lower ends of the stirrups and have one end projecting into the masonry and the other end resting over the column 3, or each end of the rod 7 may rest over one of the columns 3. A rod 8 rests in the stirrups 4 above the rod 7 and has one end resting above the column 3 and the other end extending upwardly on an incline and projects into the masonry 2 near the top of the beam. The end projecting into said masonry is bent at right angles at 9 and then bent back parallel with the beam at 10. When the rods 8 project from one column to another column, they are not bent back at their upper ends; but said upper end extends beyond the column, over which it projects and extends into the upper ends of two or more of the stirrups 4, as seen in Fig. 1. The rods 11 project through the upper ends of the stirrups 4 at right angles to the rods 7 and 8 and extend from one beam to another through the floor 12, as shown in Figs. 1, 2, and 3. After the stirrups 4 and rods 7, 8, and 11 are placed in position the concrete or other material is filled in and the beam formed to any desired shape.

Having thus described my invention, what I claim is—

1. The stirrups formed of metal, or other suitable material, having the ends bent downwardly and then upwardly and terminating on a plane with the upper bend, forming four vertical rods, the bends at the lower end being at right angles to the bend at the upper end, the upper bend and the extremities diverge to form a guide.

2. The stirrups formed of metal, or other suitable material, having the ends bent downwardly and then upwardly, and terminating on a plane with the upper bend, forming four vertical rods with two bends at the lower end and one bend at the upper end, the bends at the lower end being at right angles to the bend at the upper end, the upper bend and the extremities diverge to form a guide.

3. The combination with a beam formed of

concrete or other suitable material, of the stirrups, 4, having the ends bent downwardly and then upwardly and terminating on a plane with the upper bend, forming four vertical rods, the bends at the lower end being at right angles to the bend at the upper end, the upper bend and the extremities diverge to form a guide.

4. The combination with a beam formed of concrete or other suitable material, of the stirrups, 4, having the ends bent downwardly and then upwardly and terminating on a plane with the upper bend, forming four vertical rods, the bends at the lower end being at right angles to the bend at the upper end, the upper bend and the extremities diverge to form a guide; the rods, 7, resting in the lower ends of the stirrups; and the rods, 11, projecting through the upper ends of the stirrups at right angles to the rods, 7.

5. The combination with a beam formed of concrete or other suitable material, of the stirrups, 4; having the ends bent downwardly and then upwardly and terminating on a plane with the upper bend, the lower bends being at right angles to the upper bend; the rods, 7, resting in the lower ends of the said stirrups; and the rods, 8, resting in the stirrups and projecting upwardly at one end to near the top of the beam.

6. The combination with a beam formed of concrete or other suitable material, of the stirrups, 4; having the ends bent downwardly and then upwardly and terminating on a plane with the upper bend, the lower bends being at right angles to the upper bend; the rods, 7, resting in the lower ends of the stirrups; the rods, 8, resting in the stirrups above the rods, 7, and having one end projecting upwardly to near the upper end of the beam; and the rods, 11, projecting through the upper ends of the stirrups at right angles to the rods, 7 and 8, as and for the purpose described.

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

ALBERT J. BOSSYNS.

Witnesses:
CHAPIN A. FERGUSON,
THOMAS B. MCALLISTER.