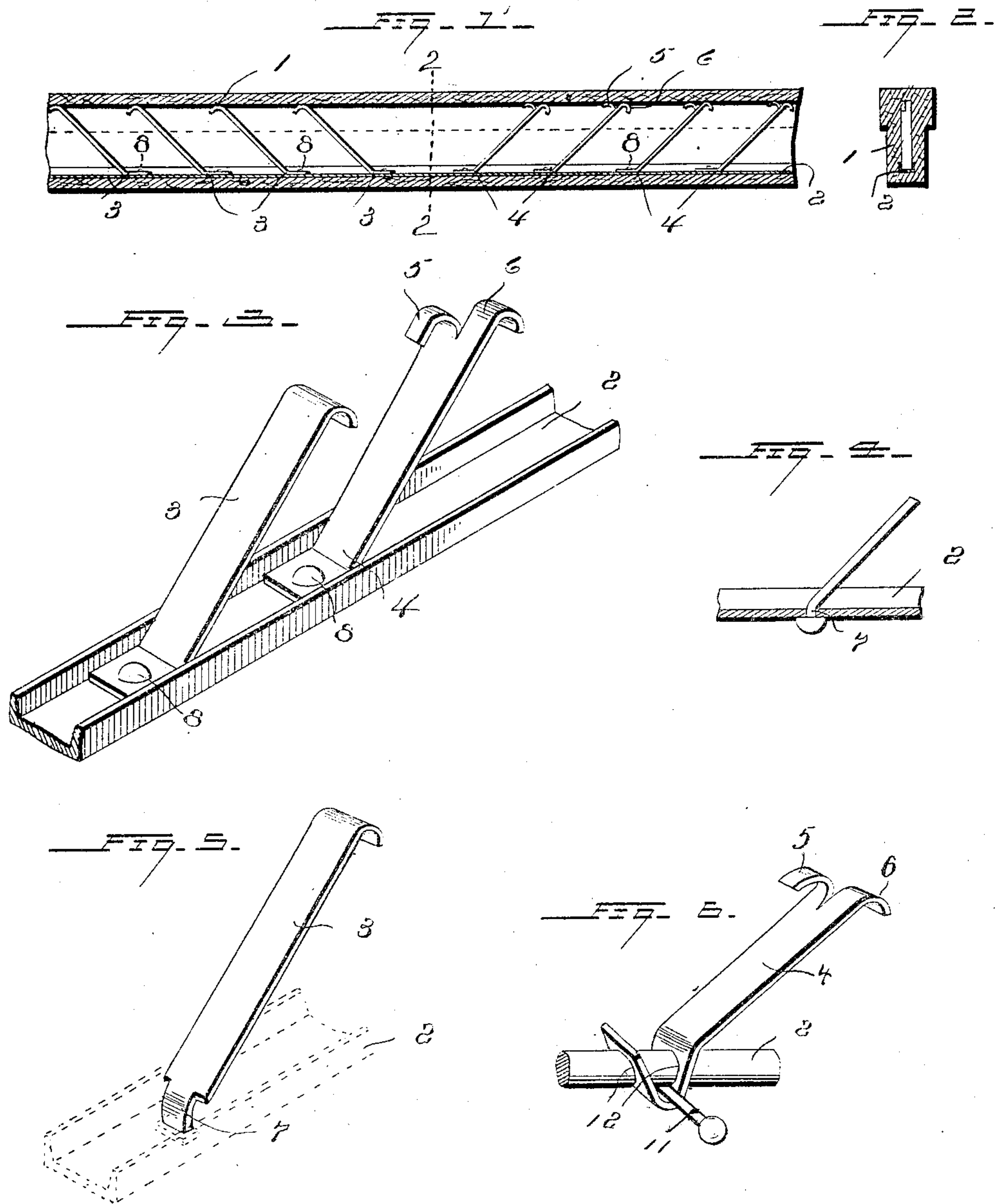


No. 836,683.

PATENTED NOV. 27, 1906.

J. B. HINCHMAN.
CONCRETE BUILDING CONSTRUCTION.
APPLICATION FILED SEPT. 9, 1905.



WITNESSES:

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CONCRETE BUILDING CONSTRUCTION.

No. 836,683.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Original application filed June 24, 1904, Serial No. 213,970. Divided and this application filed September 9, 1905. Serial No. 277,683.

To all whom it may concern:

Be it known that I, JAMES B. HINCHMAN, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Concrete Building Construction, of which the following is a specification, reference being had therein to the accompanying drawings, this application being a division of an application filed by me June 24, 1904, Serial No. 213,970.

This invention has relation to shearing-arms for tension-rods, and more particularly to that class of tension-rods employed in connection with fireproof building construction, being constructed with especial reference to its employment in fireproof floorings, ceilings, beams, tanks, walls, columns, culverts, slabs, independent blocks, gutters and curbs, bridges, and, in fact, for almost any use in which concrete and metal are employed; and it has for its primary object to provide a shearing-arm that is comparatively inexpensive to manufacture and one which at the same time may be applied to the various bar shapes used in building construction.

My invention consists in the novel form of shearing-rod and the simple means for attaching the same to the various shapes of bar-iron hereinafter described and claimed.

Referring to the accompanying drawings, forming a part of this specification, wherein corresponding numerals in the several figures designate like parts, Figure 1 is a longitudinal sectional view of a concrete beam or slab constructed in accordance with my improvement. Fig. 2 is a cross-sectional view on the line 2 2 of Fig. 1. Fig. 3 is a detached detail perspective view of a portion of a channel-bar provided with a novel form of shearing-arm. Fig. 4 is a fragmentary sectional view showing a novel manner of attaching a shearing-arm to a channel-bar. Fig. 5 is a detail perspective view showing a shearing-arm attached to a channel-bar in the same manner as shown in Fig. 4, and Fig. 6 is a detail perspective view showing a modified form of attaching the shearing-arm to a tension-rod.

In Fig. 1 of the drawings, 1 designates a solid concrete beam or slab having a channel-bar or other form of tension-rod 2 embedded therein. 3 and 4 denote respective series of shearing-arms having their base secured in any desirable manner to the channel-bar 2, each series extending in opposite directions

from the other. The series designated 3 is of the ordinary construction; but the series designated 4 is constructed according to my improvement, the shearing-arms in this series having their arms split a short distance, the split portions 5 and 6 being bent in opposite directions.

In Figs. 4 and 5 I have shown novel means for securing the form of shearing-arm shown in Fig. 3 to a channel or other form of bar, as the case may be, this means consisting in cutting a tenon 7 on the end of the arm, passing the same through a corresponding opening in the web portion of the bar, and then upsetting the tenon.

The shearing-arms shown in Figs. 1, 2, and 3 are secured in position upon the bar 2 by means of rivets 8, which are passed through openings in the ends of the shearing-arms and the channel-bar, respectively, and then riveted in the ordinary manner.

The modified construction shown in Fig. 6 is along the same broad lines as the construction shown in Figs. 1 to 5 and shows how the arm 4 may be connected to the tension-bar without riveting. In this instance the shearing-arm is made entirely of sheet metal and has its lower end provided with two openings 12 and bent upon itself, so that the openings 12 are oppositely disposed to one another. As shown in Fig. 6, the shearing-arm is applied to a bar circular in cross-section; but it is obvious that it could be as well applied to a bar of any other shape by varying the size and contour of the openings 12. However, in every instance the openings must be somewhat larger than the diameter of the bar itself to make allowance for the space taken up in the diagonal direction of the openings with respect to the bar. The form of shearing-arm shown in Fig. 6 is fastened to the bar by means of a nail, wedge, or other similar member 11, the member 11 being inserted between the under surface of the bar and the bent portion of the shearing-arm.

Having described my invention, I claim—

1. A tension-rod for building purposes consisting of a tension-rod having a plurality of shearing-arms, each shearing-arm being composed of a flat bar having its free end slit and the two portions formed by slitting the ends being bent in opposite directions.

2. A tension-rod for composite building purposes consisting of a tension-rod having shearing-arms removably mounted at an angle thereon, said shearing-arms consisting

each of a flat bar having its free end formed with a plurality of projecting members bent in opposite directions.

3. A tension-rod for composite building purposes comprising a rod and a movable flat shearing-arm, said arm having two holes in its end and that end bent on itself between said holes, said rod passing through said holes, and means securing the arm against longitudinal movement on the rod.

4. A tension-rod for composite building purposes having shearing-arms removably mounted at an angle thereon, the said arms

having one of their ends bent downwardly and upwardly at angles to the body of the arm and said bent end having apertures through which the tension-rod extends, and segregable means for securing the shearing-arms to the tension-rod. 15

In testimony whereof I affix my signature in the presence of two witnesses. 20

JAMES B. HINCHMAN.

Witnesses:

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