

No. 854,818.

PATENTED MAY 28, 1907.

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CONCRETE INSERT.

APPLICATION FILED JAN. 17, 1907.

Fig. 1

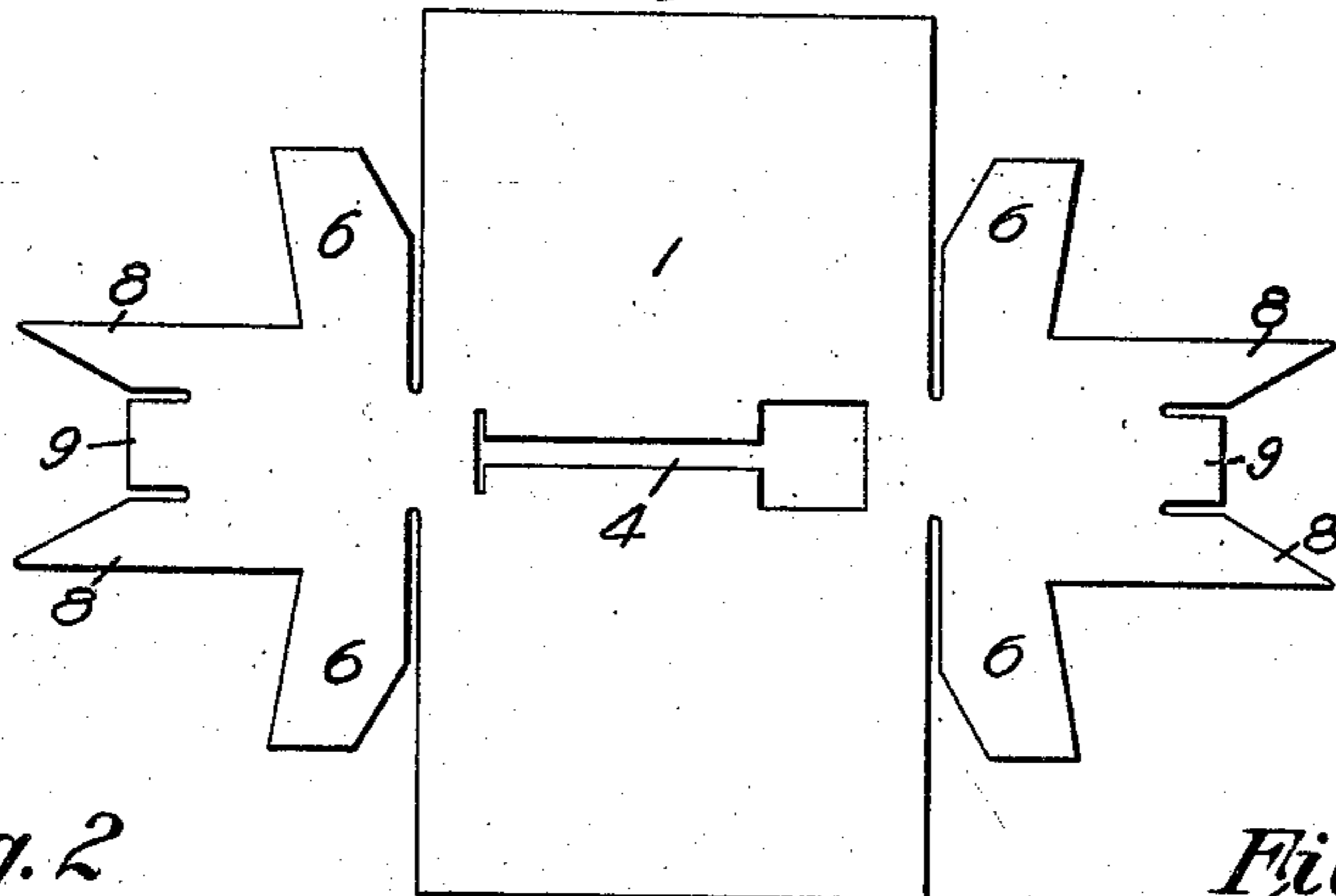


Fig. 2

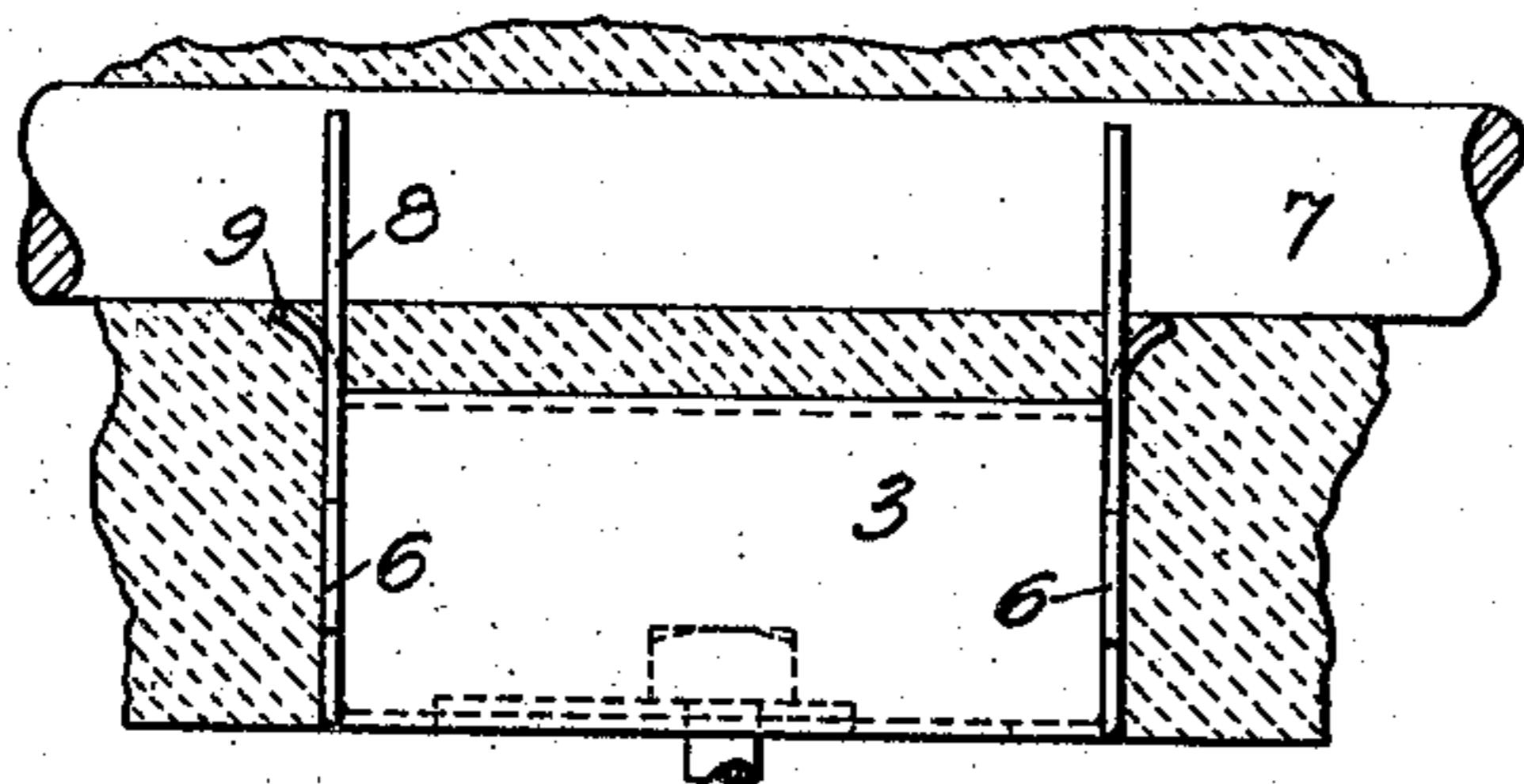


Fig. 3

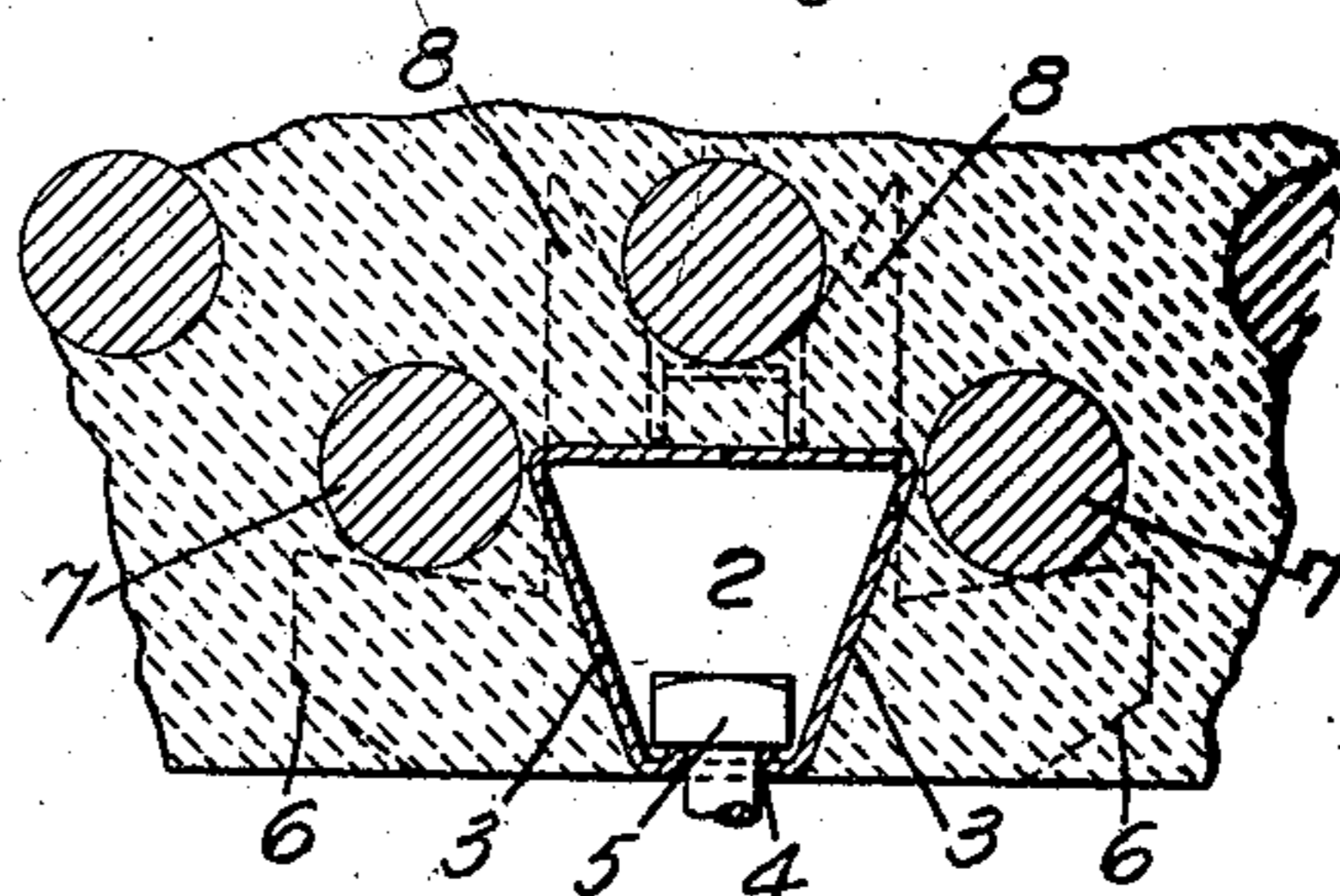


Fig. 4

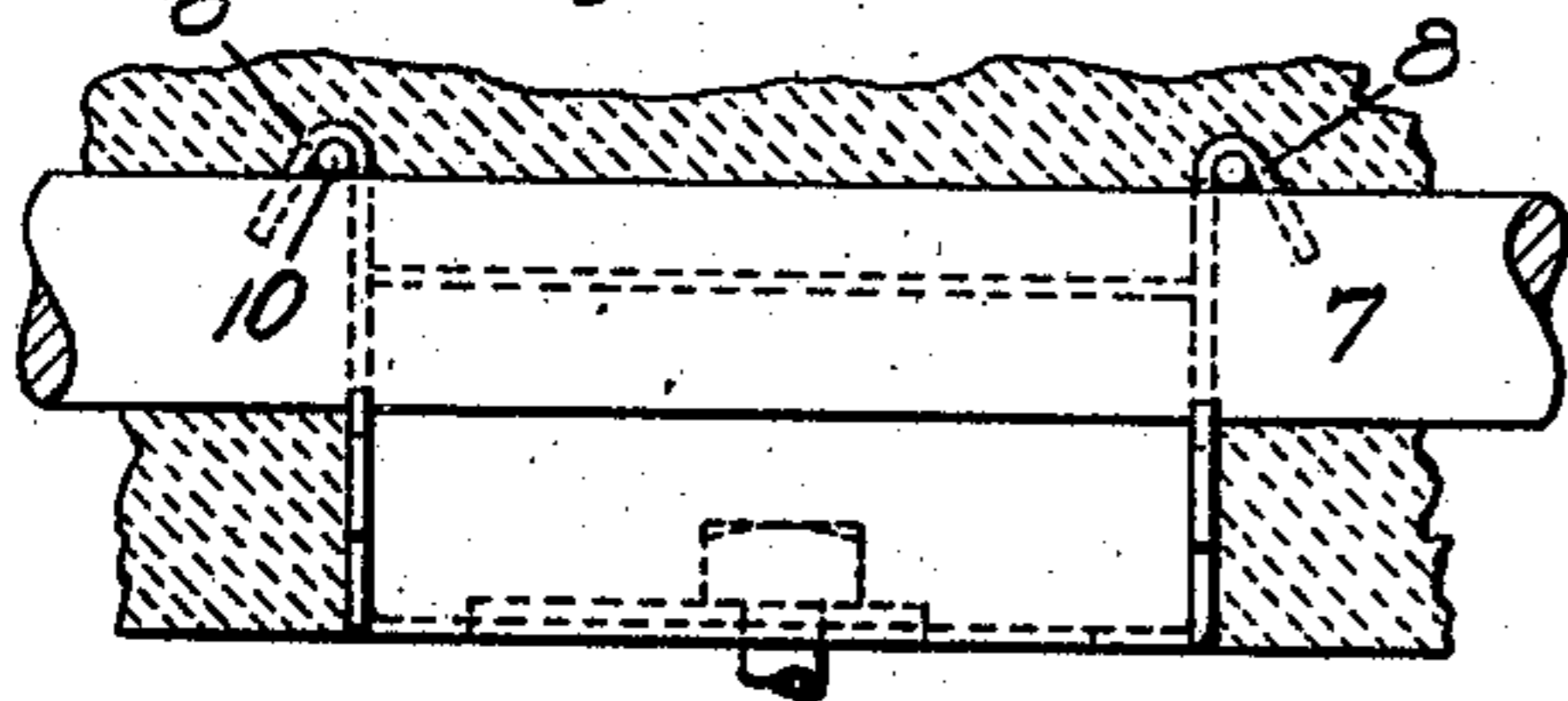


Fig. 5

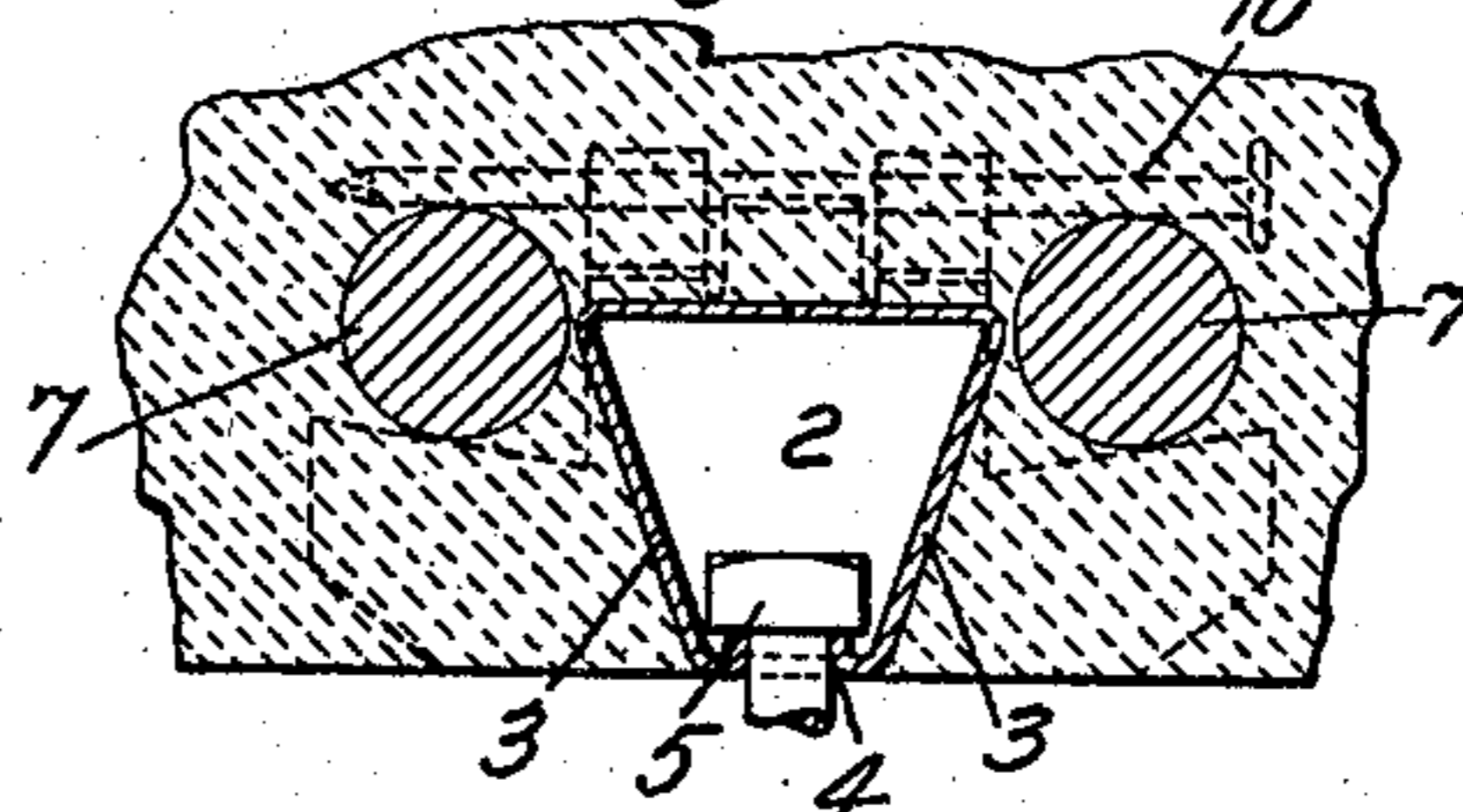
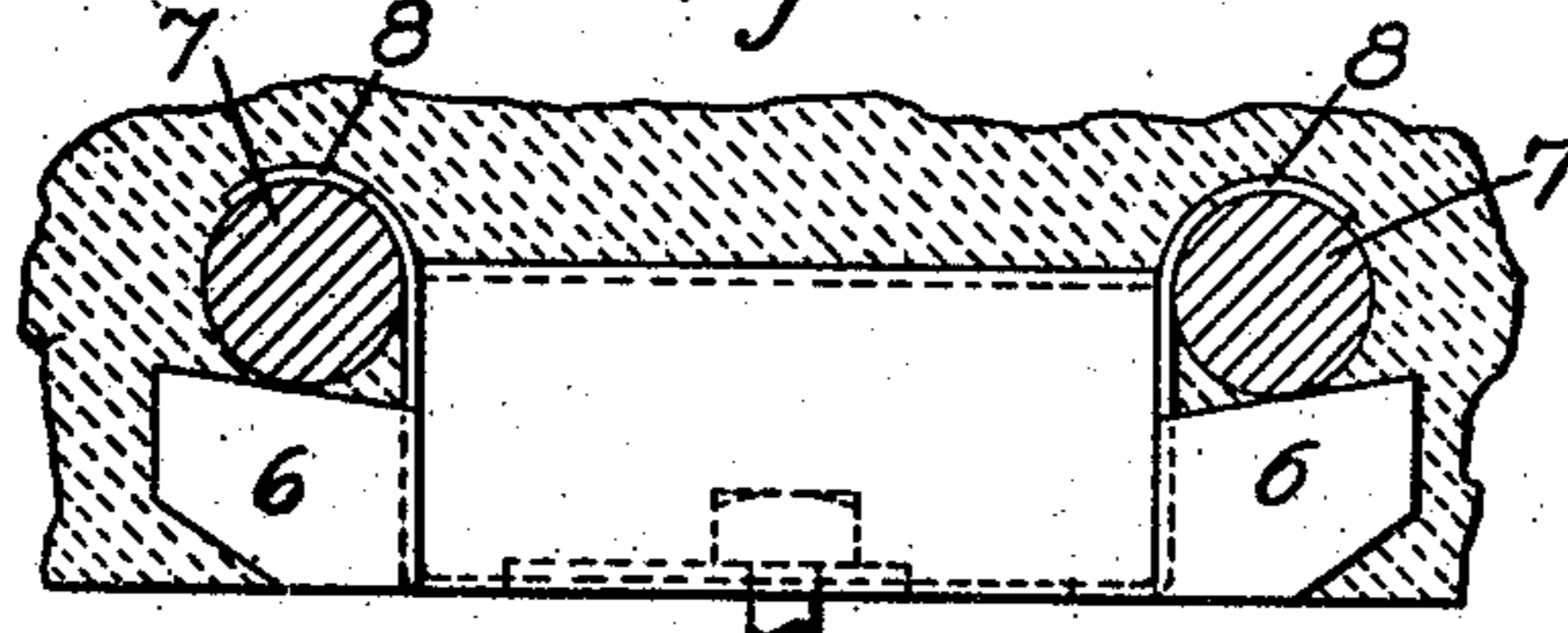


Fig. 6



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FERRIS L. R. FRANCISCO AND JAMES C. THOM, OF NEW YORK, N. Y.

CONCRETE INSERT.

No. 854,818.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed January 17, 1907. Serial No. 352,829.

To all whom it may concern:

Be it known that we, FERRIS L. R. FRANCISCO and JAMES C. THOM, citizens of the United States, residing at New York, in the county and State of New York, have invented a new and useful Concrete Insert, of which the following is a specification.

This invention relates to an improvement in concrete inserts.

10 In the construction of concrete buildings, particularly that class in which reinforced concrete is used, it is necessary to insert devices from which pipes or shafting may be suspended. This is usually done during the
15 construction of the building to avoid the necessity for drilling the hardened concrete afterward. Certain devices have been employed for this purpose but these devices are objectionable for the reason that they are
20 frequently displaced when the concrete is poured into the forms and when so displaced become practically useless.

It is one of the objects of this invention to provide a concrete insert having means for
25 preventing its displacement during the operation of filling the forms.

A further object of the invention is to provide a device of this character which may be anchored to the reinforcing bars.

30 Still another object is to provide a device of this character constructed of sheet metal bent to suitable form whereby the initial cost of the device is decreased.

With this and other objects in view, the
35 invention consists in certain constructions which will be hereinafter fully described and then specifically set forth in the claims hereunto appended.

Referring to the drawings which form a
40 part of this specification and in which like characters of reference indicate the same parts, Figure 1 is a plan view of a blank from which an insert is formed; Fig. 2 is a side elevation of a formed insert illustrating one
45 method of holding the device in position during the operation of filling the forms; Fig. 3 is a cross-sectional view illustrating the parts of the insert in the same position in which they are shown in Fig. 2; Fig. 4 is a
50 side elevation illustrating another method of anchoring the insert to the reinforcing bars; Fig. 5 is a cross-sectional view illustrating the parts in the same position in which they are shown in Fig. 4; and Fig. 6 is a side elevation
55 illustrating a method of anchoring the insert to the reinforcing bars when the latter

lie in planes at right angles to the axis of the insert.

In carrying the invention into effect, an insert is employed which is provided with
60 means for holding it in position during the operation of filling the forms and this means may vary widely in character.

In the device selected to illustrate the invention, the holding means are integral with
65 the insert and consist of wings extended from one or from both ends of the body of the insert and arranged to contact with the wooden form in which the concrete is poured.

In the best constructions and as shown,
70 there is provided a sheet metal blank 1, so shaped that the main section thereof may be bent to form a body portion 2, having flaring walls 3. The body portion 2 is provided with a slot 4 arranged to receive a bolt-head
75 5, to which pipes or shafting may be secured. The edges of the blank along the slot 4 are bent upwardly, as is clearly shown in Fig. 3, for the purpose of providing a double edge
80 upon which the bolt-head 5 rests.

For the purpose of holding the body portion 2 in proper position during the operation of filling the forms, the body portion 2 of the insert is provided with wings 6 which rest
85 upon the form and provide an extended base to prevent the upsetting of the insert when the concrete is thrown in the mold.

In the best constructions and as shown, the wings 6 are also arranged to contact
90 with the reinforcing bars 7. When the reinforcing bars lie parallel to the axis of the insert, the wings 6 are extended at right angles to the axis of the body portion 2, but when the reinforcing bars lie at right angles to the axis of the insert, the wings 6 are bent
95 so that they lie parallel to the axis of the body portion 2, as is clearly shown in Fig. 6.

Means are provided for anchoring the insert to the reinforcing bars so that the bars themselves will be caused to carry a portion
100 of the load on the bolt and insert. For this purpose, in the best constructions and as shown, there are provided extensions 8 and 9 rising from the end wall of the insert, and these extensions may be bent over a nail or
105 bar lying across two or more of the reinforcing bars 7, as clearly shown in Figs. 4 and 5.

It will be readily understood that when the blank has been bent to form the insert and has been anchored to the reinforcing bars
110 that there can be no displacement of the insert when the concrete is poured into the

mold. Furthermore, the insert when anchored to the reinforcing bars serves to space the latter from the forms, thus obviating the necessity of providing independent V's for this purpose.

It will readily be understood also that the operation of bending up the wings of the blank into the position shown in Figs. 2, 4 and 6 closes the ends of the body portion so that the concrete cannot flow into the interior of the insert. It will be readily understood also that, after the extensions 8 have been bent to their proper position and the concrete poured into the mold and allowed to harden, it will be impossible for any part of the device to move.

Changes and variations may be made in the structure by means of which the invention is carried into effect. The invention therefore is not to be restricted to the precise structure shown and described.

What is claimed is:—

1. A concrete hanger insert constructed of sheet metal comprising a body portion having a plurality of extended wings arranged to be bent to anchor the insert to the reinforcing bars, substantially as described.

2. A concrete hanger insert constructed of sheet metal comprising a slotted hollow body portion having flaring sides and extended anchoring wings, substantially as described.

3. A concrete hanger insert comprising a slotted hollow body portion having flaring sides and extended anchoring wings, substantially as described.

4. A concrete hanger insert constructed of sheet metal formed from a single blank and having a slotted body portion and extended anchoring wings, substantially as described.

5. A concrete hanger insert constructed of sheet metal comprising a slotted hollow body portion having wings extended therefrom arranged to be bent to anchor the insert to the reinforcing bars, substantially as described.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

FERRIS L. R. FRANCISCO.
JAMES C. THOM.

Witnesses:

L. O. KUHN,
SYDNEY J. PRESCOTT.