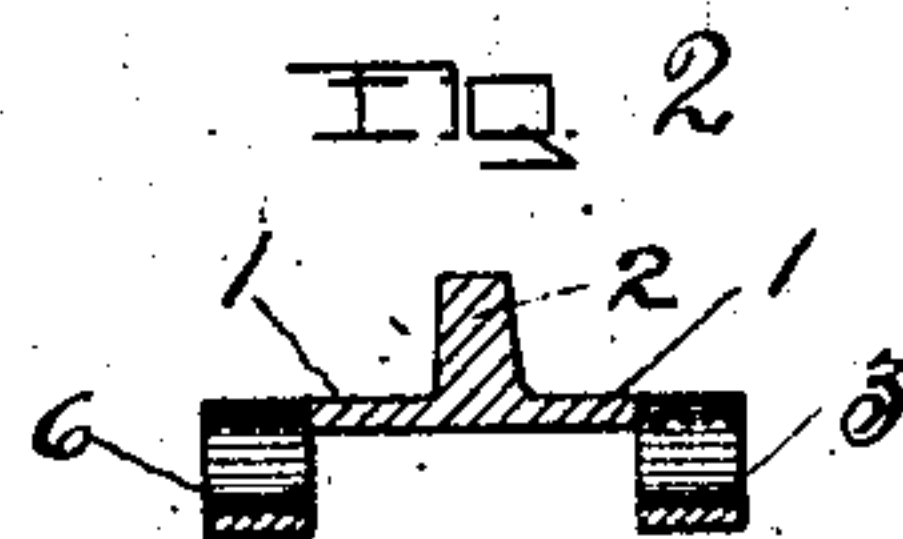
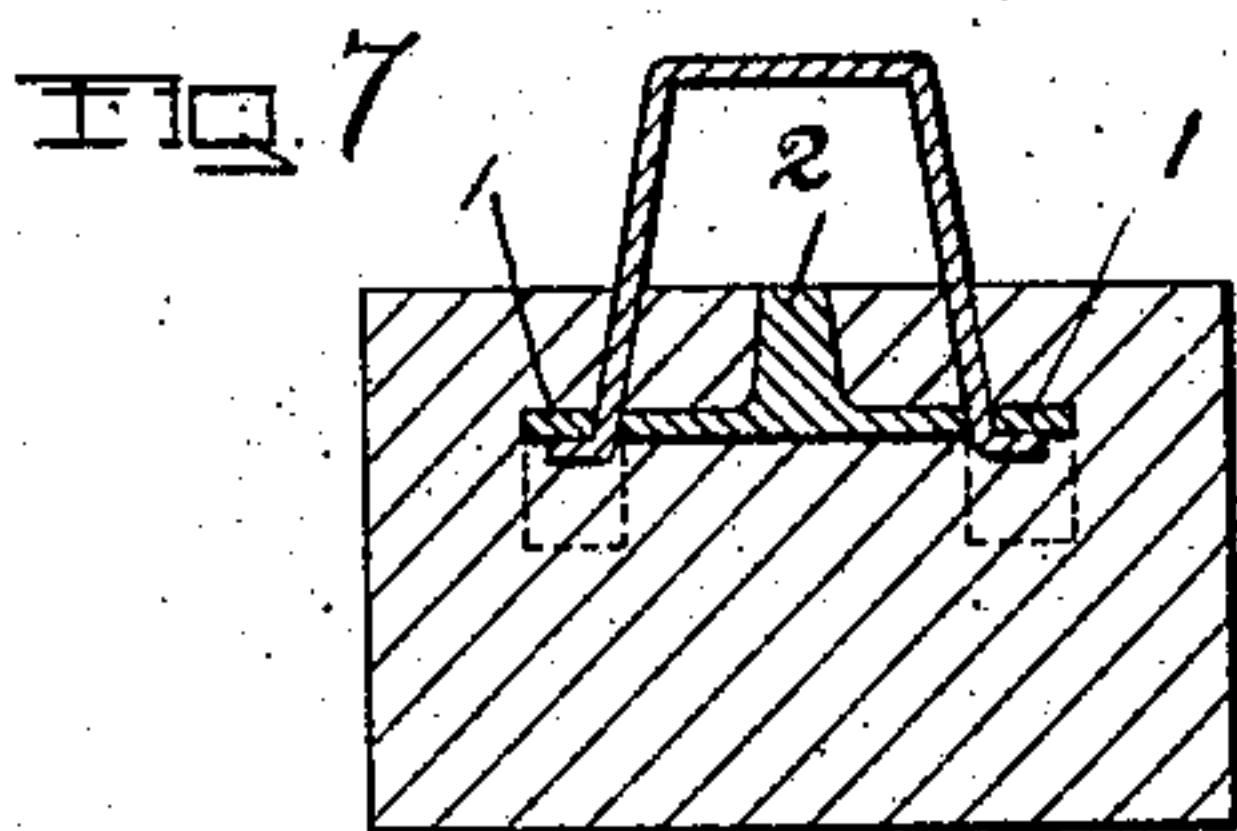
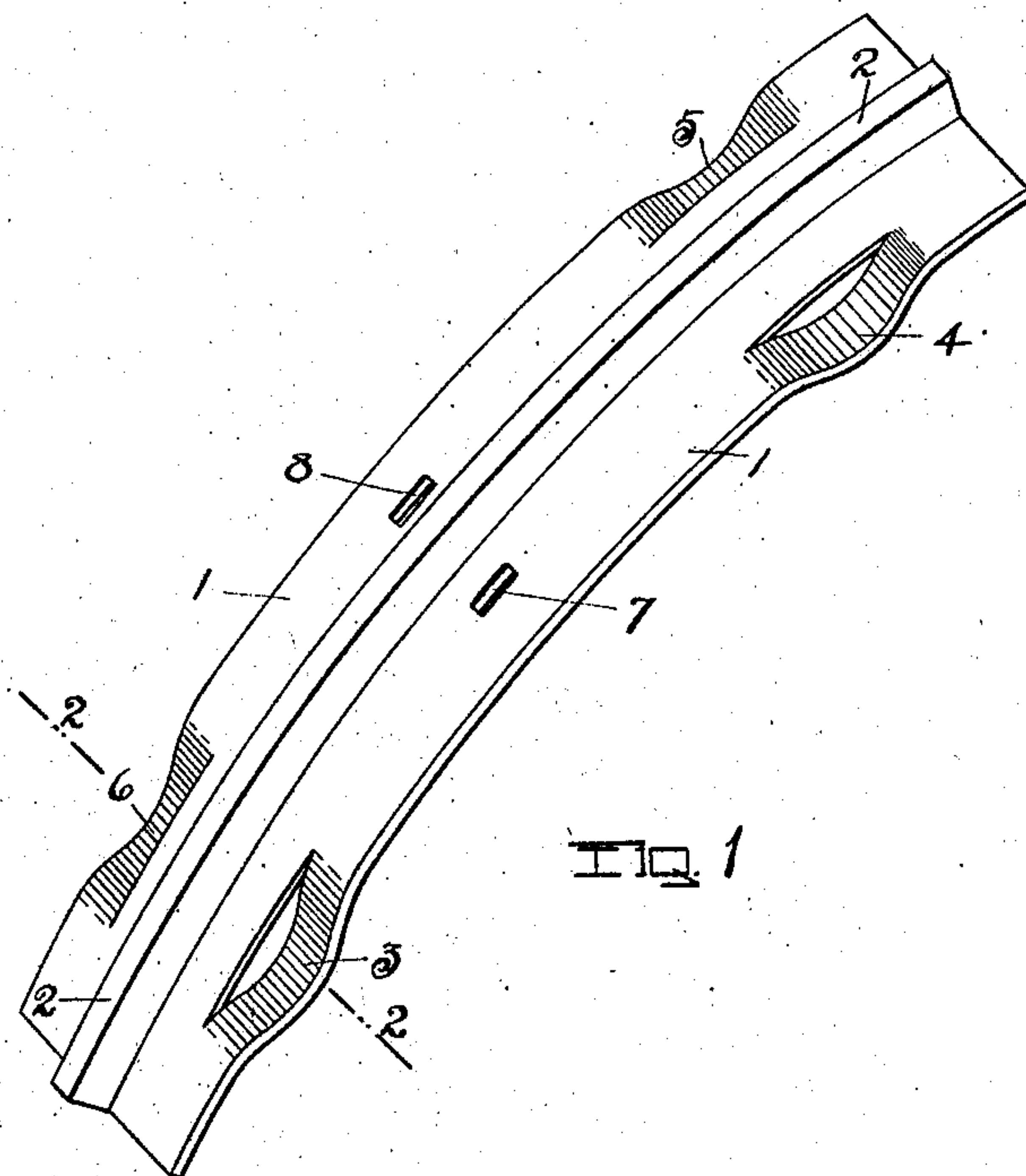


C. S. SHALLENBERGER.
BRAKE SHOE.
APPLICATION FILED JUNE 24, 1908.

900,601.

Patented Oct. 6, 1908.

2 SHEETS—SHEET 1.



WITNESSES

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G. V. Manning

INVENTOR

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by Moshier & Curtis
attys. re.

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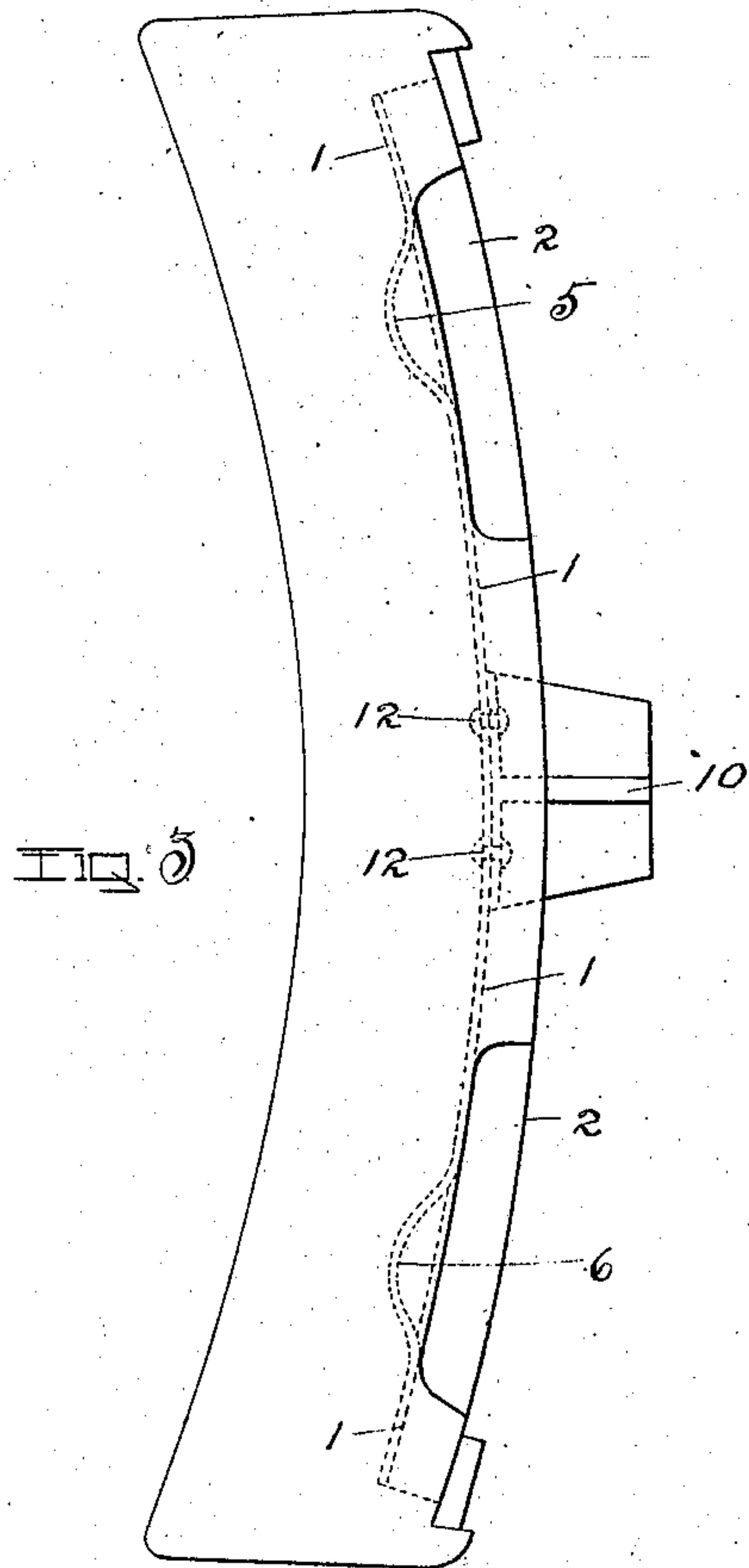
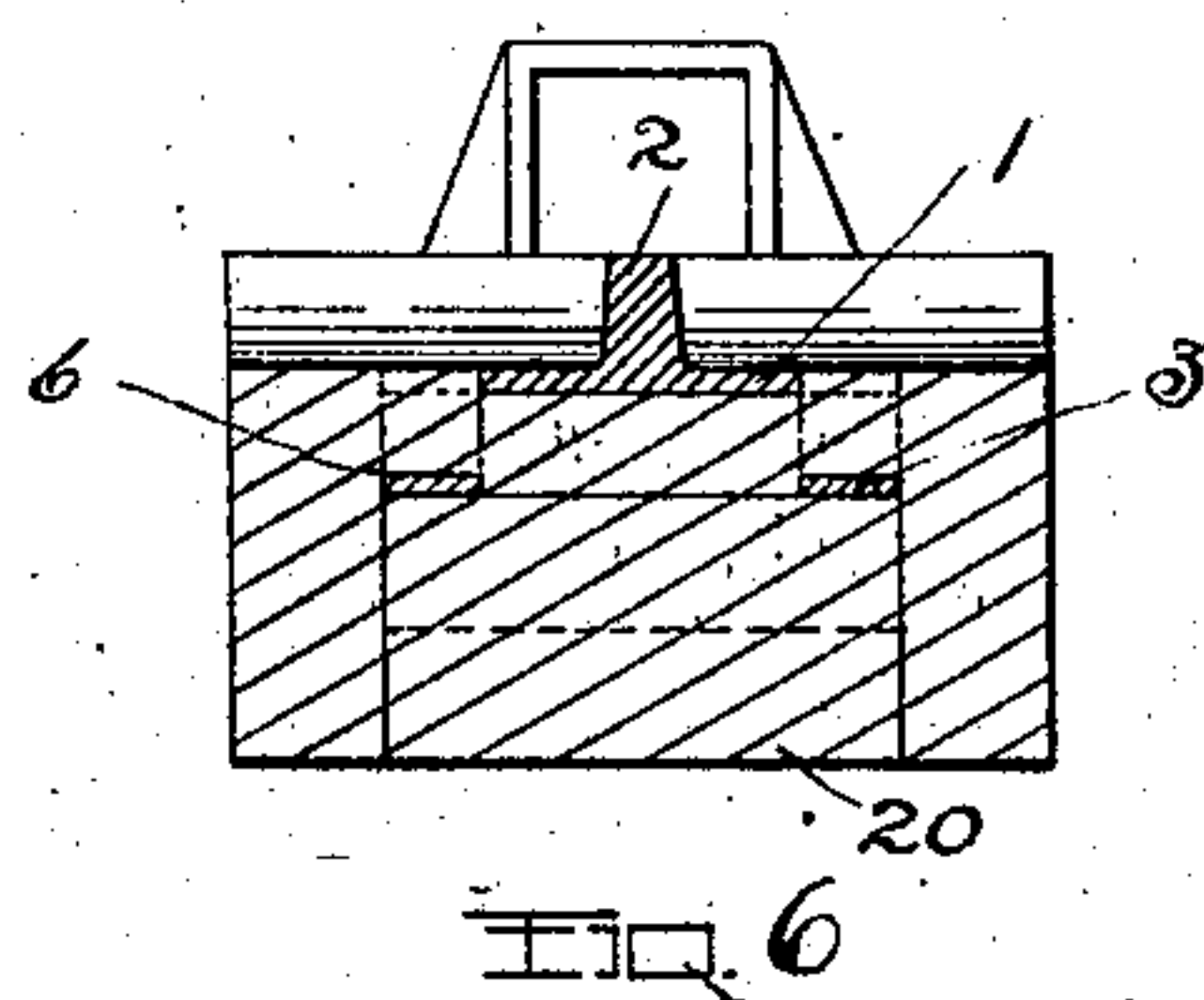
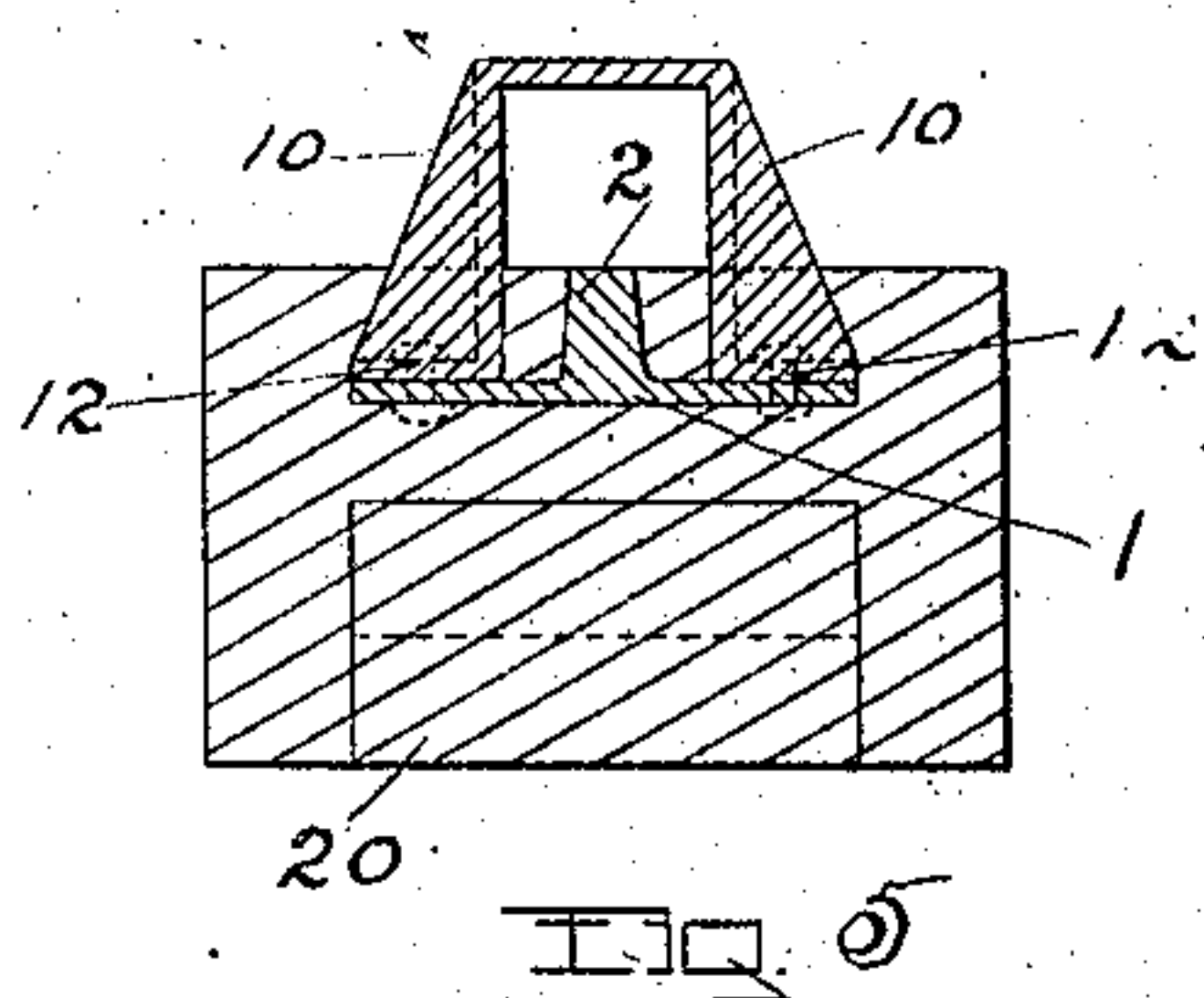
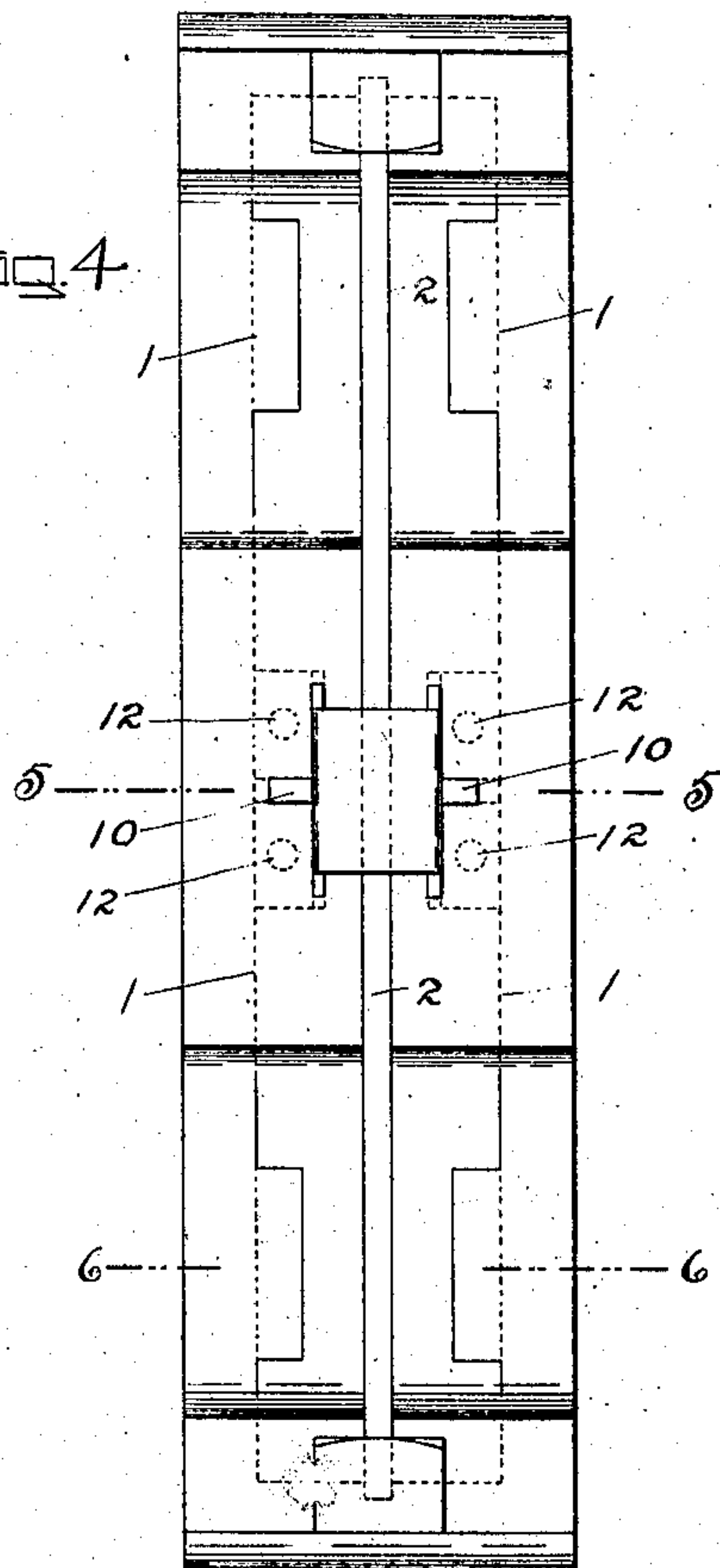


FIG. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES S. SHALLENBERGER, OF ST. LOUIS, MISSOURI.

BRAKE-SHOE.

No. 900,601.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed June 24, 1908. Serial No. 440,067.

To all whom it may concern:

Be it known that I, CHARLES S. SHALLENBERGER, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

This invention relates to brake-shoes suitable for use on railway cars, and consists of a face-insert of comparatively hard metal, a back-insert comprising a ductile metal plate provided with a longitudinal strengthening flange on the back of the plate, and on the face of the plate support-projections in engagement with the back of the face-insert, an attaching loop or key-way secured to the middle portion of the back-insert, and a metal body cast upon such inserts, with the key-way projecting therefrom, and the inserts in contact with each other.

The object of the invention is to reinforce and strengthen the casting to permit the wearing away of a considerable portion of the casting without danger of breaking or otherwise injuring the shoe, all of which will be hereinafter more fully described and subsequently pointed out in the claims.

Figure 1 of the drawings is a view in perspective of the back-insert detached. Fig. 2 is a cross-section taken on the broken line 2—2 in Fig. 1. Fig. 3 is an edge view of the completed shoe. Fig. 4 is a back plan view of the same. Fig. 5 is a cross-section taken on the broken line 5—5 in Fig. 4. Fig. 6 is a cross-section taken on the broken line 6—6 in Fig. 4. Fig. 7 is a sectional view showing a modified form of attaching the key-way to the insert-plate.

The back-insert comprises the ductile metal plate, 1, provided on its back with the longitudinal strengthening flange, 2, and on its face with the projections, 3, 4, 5 and 6, and with the apertures 7 and 8.

The face projections may be formed by pressure, which serves to stretch and bend the parts to the form shown in Fig. 1.

The key-way attachment may be made of

comparatively nonductile metals, as drop-forgings or malleable castings in the form shown in Figs. 4 and 5, wherein the loop is strengthened by the strengthening flanges 9 and 10. When made in this form, the attachment is secured to the body part of the plate by means of rivets, 12.

20, represents a face-insert, which may be of any known form, and of sufficient width to form a support for the back-insert during the process of casting the body part around the inserts.

As seen in Fig. 6, the face projections, 4 and 5, of the back-insert engage and rest upon the face-insert, 20, while the strengthening flange, 2, projects in the opposite direction from the back of the back-insert.

When desired, the key-way attachment may be in the form of a simple loop, as shown in Fig. 7, with its end lugs passed down through the apertures, 7 and 8, in the back insert-plate, and bent against the same as shown in Fig. 7.

The rivets 12, by which the key-way attachment is secured to the body part of the back insert-plate, are usually formed integral with the attachment.

It is obvious that when the body part of the shoe is cast upon the insert-plates the metal will flow over the projections 3, 4, 5 and 6 of the back insert-plate to a considerable depth, and thus firmly anchor the back-insert in the casting independently of the position or presence of the face-insert.

What I claim as new and desire to secure by Letters Patent is—

1. In a brake-shoe, the combination with a metal face-insert; of a back-insert comprising a longitudinally flanged ductile plate provided with oppositely disposed supports in engagement with the back of the face-insert; a key-way attachment; means for securing the same to the middle portion of the back-insert; and a metal body cast upon such inserts.

2. In a brake-shoe, the combination with a metal face-insert; of a back-insert comprising a ductile metal plate having a central longitudinal flange on its back, and on its face a plurality of supporting projections in engagement with the back of the face-insert; and a metal body cast upon such inserts.

3. In a brake-shoe, the combination with a back-insert comprising a ductile metal plate; of a comparatively nonductile key-

way attachment; means for riveting the attachment to the plate; and a metal body cast upon such insert.

4. In a brake-shoe, the combination with
5 a face-insert; of a back-insert comprising a ductile metal plate provided with a longitudinal strengthening flange, and having support-projections in engagement with the back of the face-insert; and a metal body
10 cast upon such inserts.

5. In a brake-shoe, the combination with
a face-insert: of a back-insert comprising a ductile metal plate having on one side a longitudinal strengthening flange, and on its
15 opposite side support-projections in engagement with the back of the face-insert; and a metal body cast upon such inserts.

6. In a brake-shoe, the combination with
a back-insert comprising a ductile metal
20 plate provided with rivet apertures in its

transverse middle portion; of a comparatively non-ductile key-way attachment provided with attaching rivets integral therewith, and secured in the rivet apertures in the plate; and a metal body cast upon such
25 back-insert.

7. In a brake-shoe, the combination with a back-insert comprising a ductile metal plate provided with a central longitudinal flange on its back, and on its face a plurality
30 of projections; of a comparatively nonductile key-way attachment; means for securing the attachment to the plate; and a metal body cast upon such insert.

In testimony whereof, I have hereunto set
35 my hand this 12th day of June, 1908.

CHARLES S. SHALLENBERGER.

Witnesses:

FRANCES B. WILKINSON,
LORNE PRICE.