

No. 849,722.

PATENTED APR. 9, 1907.

G. W. BOOTH.
BRAKE SHOE.

APPLICATION FILED JUNE 19, 1905.

Fig. 1.

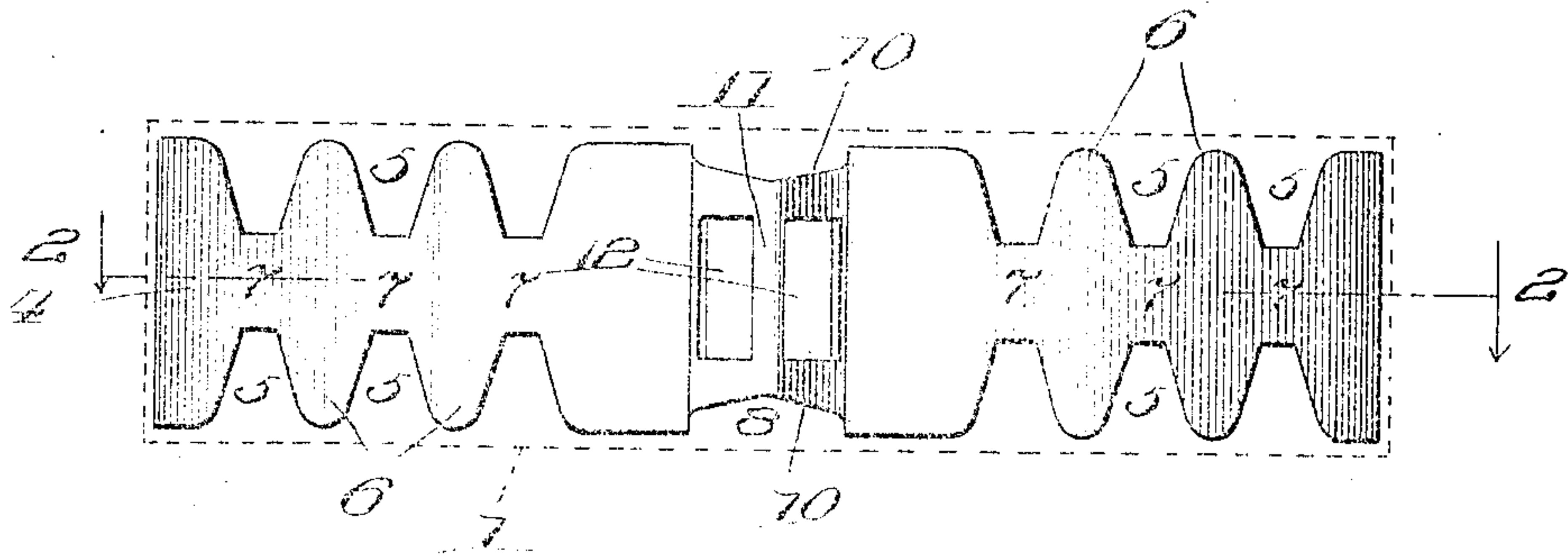


Fig. 2.

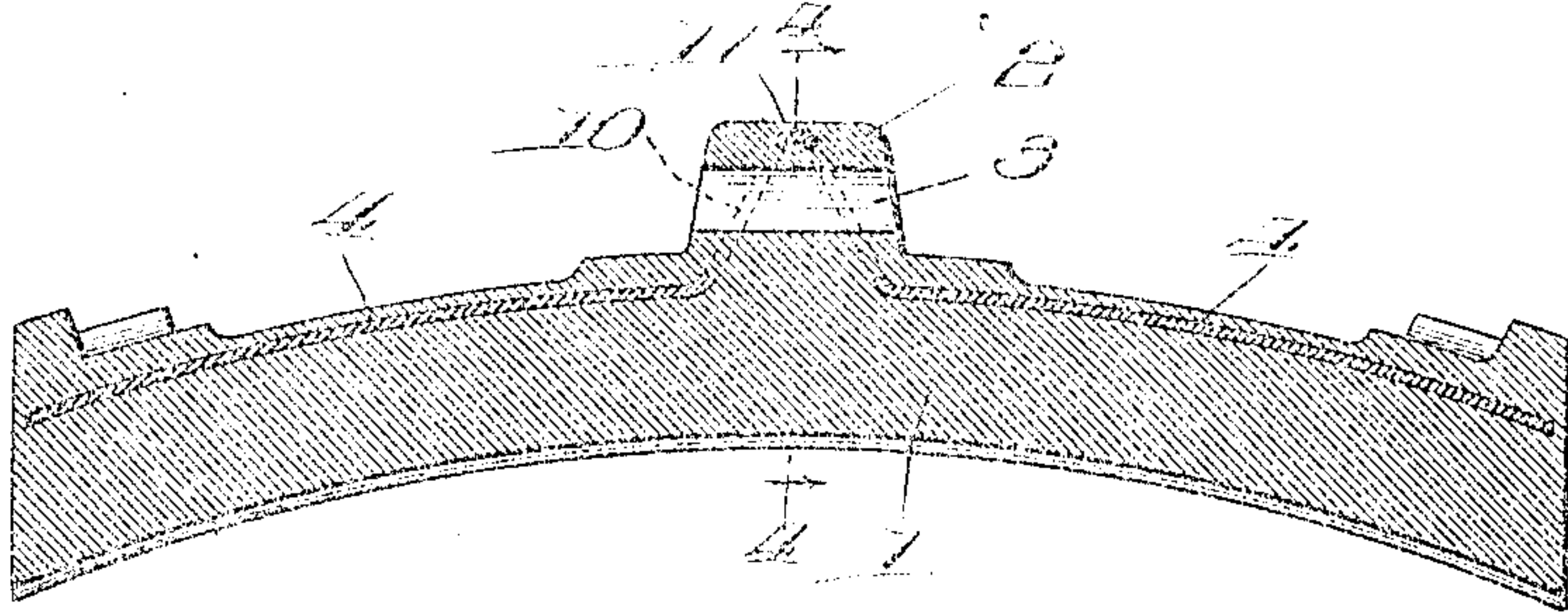


Fig. 3.

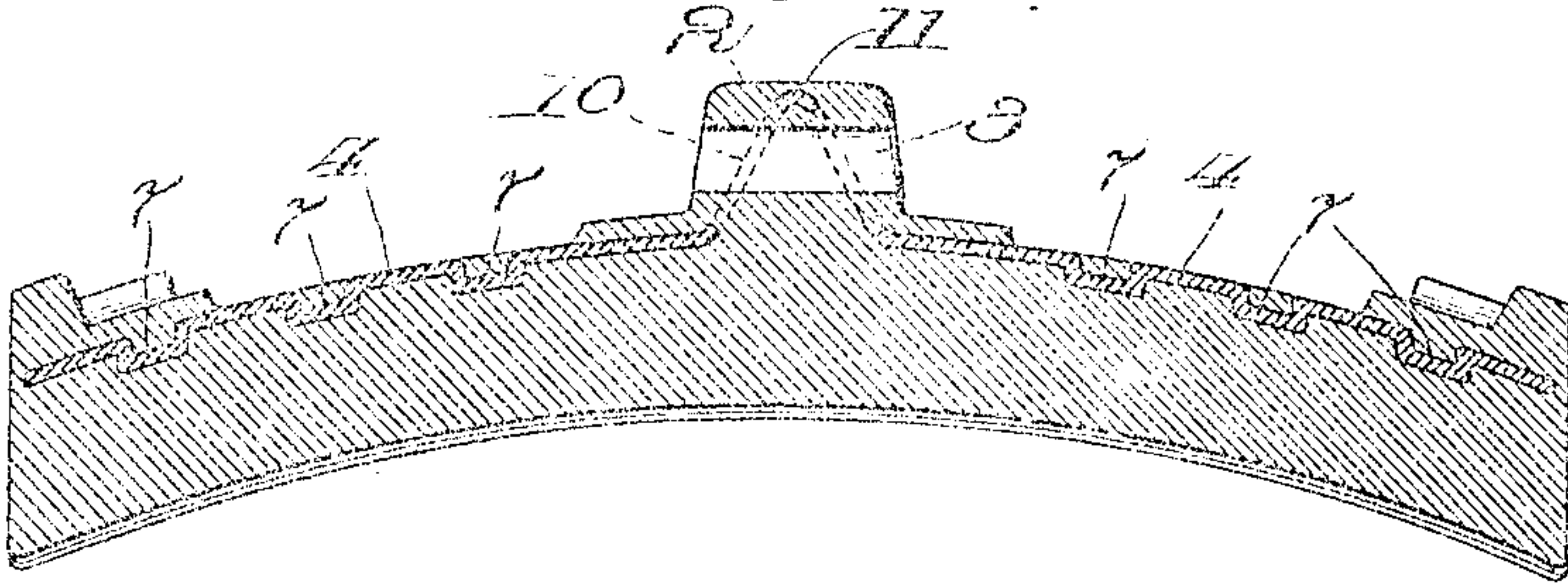
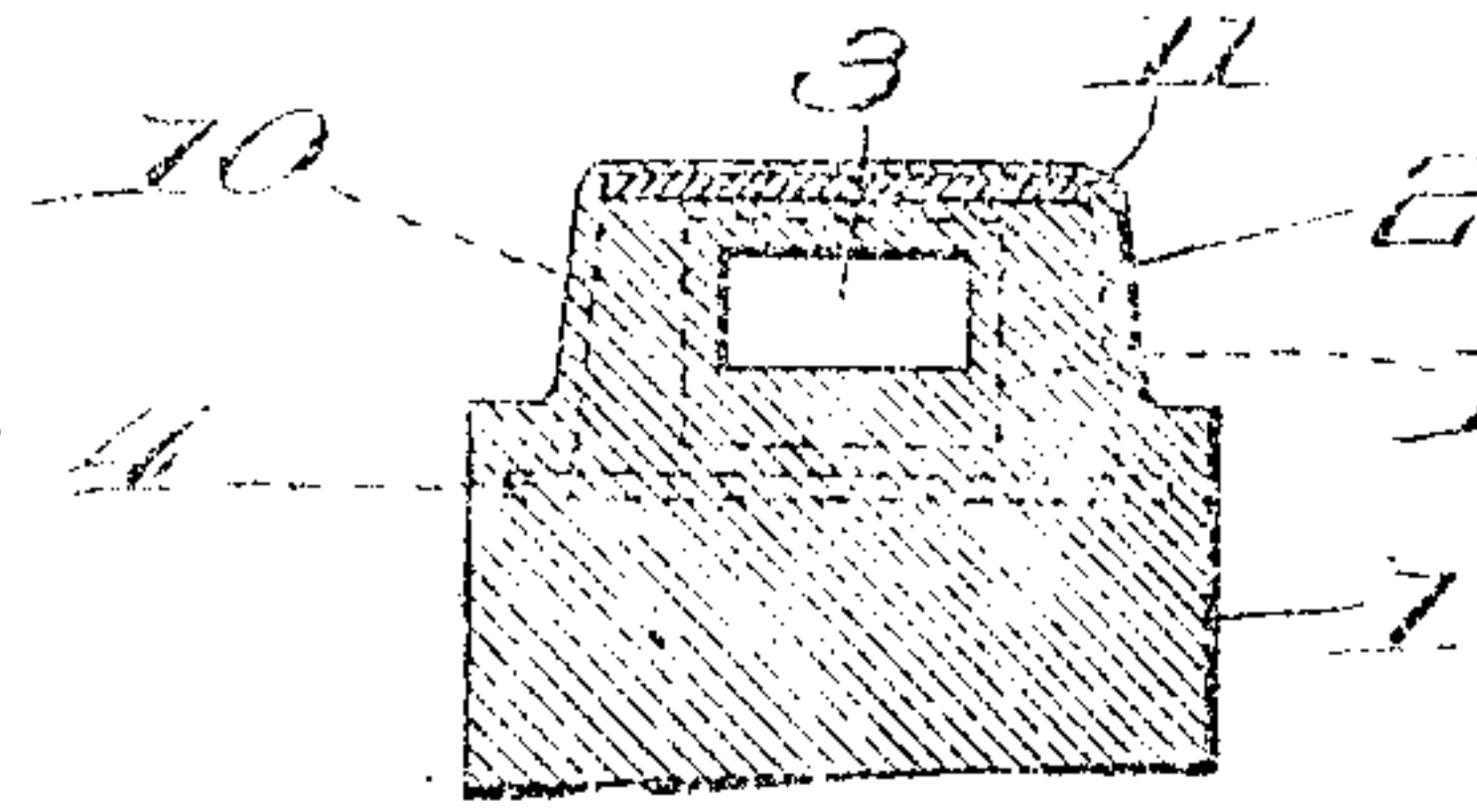


Fig. 4.

Witnesses:
H. S. Grier
Wm. H. Gage



Inventor:
Charles W. Booth
by *Wm. E. Walden*
att'y

UNITED STATES PATENT OFFICE.

CHARLES W. BOOTH, OF MILWAUKEE, WISCONSIN.

BRAKE-SHOE.

No. 849,722.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed June 19, 1905. Serial No. 265,854.

To all whom it may concern:

Be it known that I, CHARLES WEBSTER BOOTH, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

This invention relates to brake-shoes, and relates particularly to brake-shoes of the type comprising a plate of malleable metal secured adjacent to the back thereof.

A primary object of the invention is to provide a brake-shoe comprising a malleable plate in which said plate and the body of the shoe will be securely tied together to prevent pieces of said shoe from falling in case the body portion of the shoe should break in operation.

A further object of the invention is to provide means to reinforce or strengthen the attaching-lug of a cast-metal shoe, particularly in connection with the malleable tie-plate, while at the same time retaining the full strength of the cast connection between said attaching-lug and the body portion of the shoe.

To effect these ends, a brake-shoe of my invention consists of the various features, combinations of features, and details of construction hereinafter described and claimed.

In the accompanying drawings, in which a brake-shoe of my invention is fully illustrated, Figure 1 is a plan view of the back of a tie-plate adapted to effect the objects of my invention, the body portion of the shoe being indicated in dotted lines. Fig. 2 is a sectional view of a brake-shoe of my invention on the line 2-2 of Fig. 1. Fig. 3 is a view similar to Fig. 2 of a modified form of brake-shoe of my invention, and Fig. 4 is a sectional view on the line 4-4 of Fig. 2.

Referring now to the drawings, 1 designates the body portion of the shoe, and 2 the attaching-lug thereof, said attaching-lug being formed integral with the body portion of said shoe and being provided with the usual keyway or opening 3.

Secured in the back of the shoe is a plate 4, of malleable metal, preferably sheet-steel of suitable thickness—say, one-eighth of an inch—the edges of which are notched, as shown at 5, forming prongs or projections 6 at the edges of said plates connected by relatively narrow intermediate portions 7.

In order that the body portion 1 of the

shoe and the plate 4 may be securely tied together transversely, the narrow portions 7 of said plate are entirely embedded in the body portion of the shoe, either by embedding the entire plate in the body of the shoe, as shown in Fig. 2, or by depressing the relatively narrow portions 7 of said plate and disposing said plate so that said narrow portions will be embedded, leaving the prongs or projections 6 flush with the back of the shoe, as shown in Fig. 3.

With the described construction it is obvious that the body portion of the shoe and the plate 4 will be securely tied together in all directions, the prongs or projections 6 operating to prevent pieces of the shoe pulling off from the plate in case said shoe breaks transversely, while the body of the shoe will be prevented from scaling off from said plate by the ties or connections which connect the same across the back of the plate 4 and particularly of the relatively narrow portions 7 thereof.

The attaching-lug 2 is reinforced by means of a skeleton plate 8 of suitable malleable metal, the lower ends or edges of which are embedded in the body portion of the shoe and the intermediate portion thereof in said attaching-lug and which comprises integral lateral webs 10 and a transverse web 11, which connects said lateral webs 10 outside of the keyway or opening 3 in the attaching-lug, leaving holes or openings 12 in said plate 8 in substantial register with the keyway or opening 3, but considerably larger than said keyway or opening, whereby the cast body portion and attaching-lug of the shoe on opposite sides of said plate 8 will be securely tied together by means of integral cast connections. By this construction it is obvious that the plate 8 will operate to greatly strengthen the attaching-lug, while at the same time leaving the cast connection between said attaching-lug and the body portion of the shoe practically unimpaired.

In the preferable construction shown the reinforcing-plates 4 and 8 are formed integral with each other, the plate 8 being formed by striking up the central portion of the blank into desired shape. It is obvious, however, that either of said plates may be used separately and independently of the other, if for any reason desired.

I claim as my invention—

1. A brake-shoe comprising a cast body portion and a tie-plate secured in the back

thereof, said plate being notched to form prongs or projections at the edges thereof and relatively narrow portions intermediate said prongs or projections, said intermediate portions being depressed and said plate being disposed with the backs of the prongs or projections thereof flush with the back of the shoe.

2. A brake-shoe comprising an integral body portion and attaching-lug of cast metal and a tie-plate secured to the back thereof comprising a skeleton portion which extends upwardly and is embedded in the attaching-lug, said skeleton comprising lateral webs and a transverse web which connects said lateral webs outside of the keyway in said attaching-lug, forming a hole or opening in alignment with the keyway in said attaching-lug.

3. A brake-shoe comprising an integral body portion and attaching-lug of cast metal and a tie-plate secured to the back thereof comprising a skeleton portion which extends upwardly and is embedded in the attaching-lug, said skeleton comprising lateral webs

and a transverse web which connects said lateral webs outside of the keyway in said attaching-lug, forming a hole or opening in said skeleton portion in alignment with and larger than the keyway in said attaching-lug.

4. A brake-shoe comprising an integral body portion and attaching-lug of cast metal and a skeleton reinforcing-plate for said attaching-lug, the lower ends or edges of which are embedded in the body portion of said brake-shoe and which comprises lateral webs and a transverse web which connects said lateral webs outside of the keyway in said attaching-lug, forming a hole or opening therein in alignment with and larger than the keyway in said attaching-lug.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two subscribing witnesses, this 12th day of June, A. D. 1905.

CHARLES W. BOOTH.

Witnesses:

J. A. SIMPSON,

JOHN H. FOWLES.