

No. 784,363.

PATENTED MAR. 7, 1905.

J. S. THOMPSON.  
BRAKE SHOE.

APPLICATION FILED APR. 6, 1904.

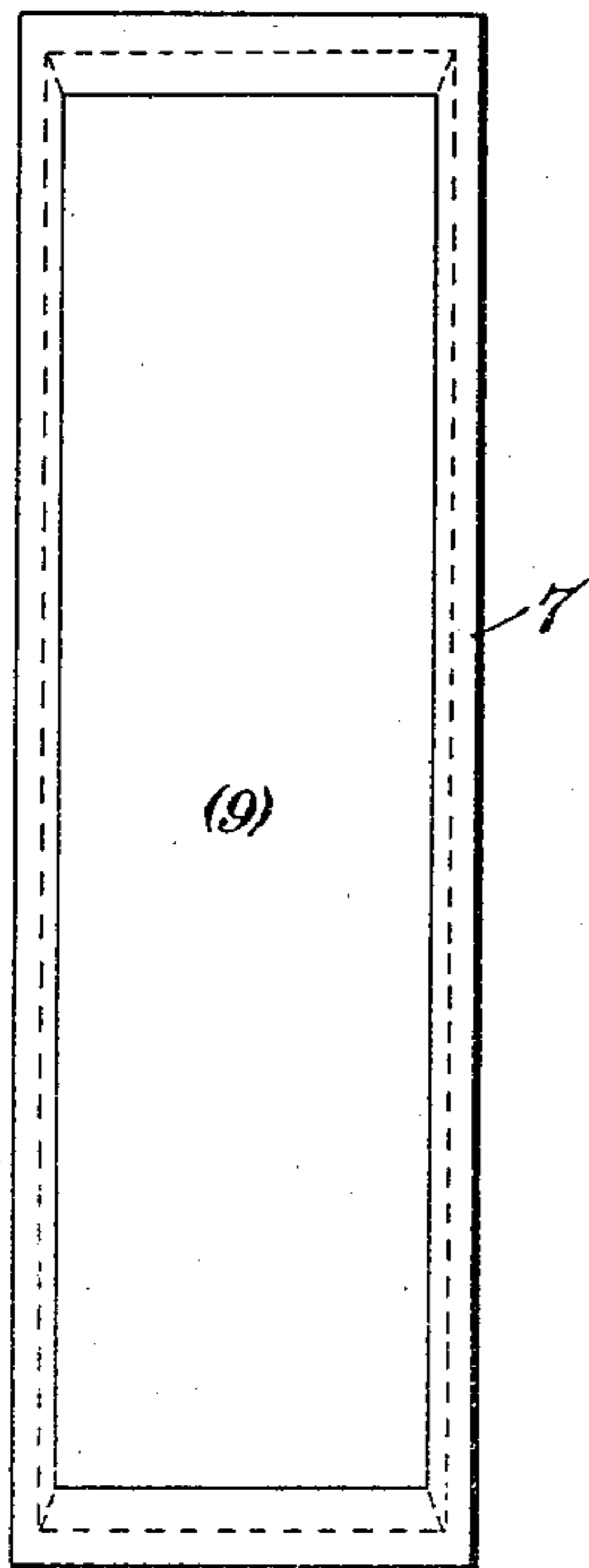


Fig. 3

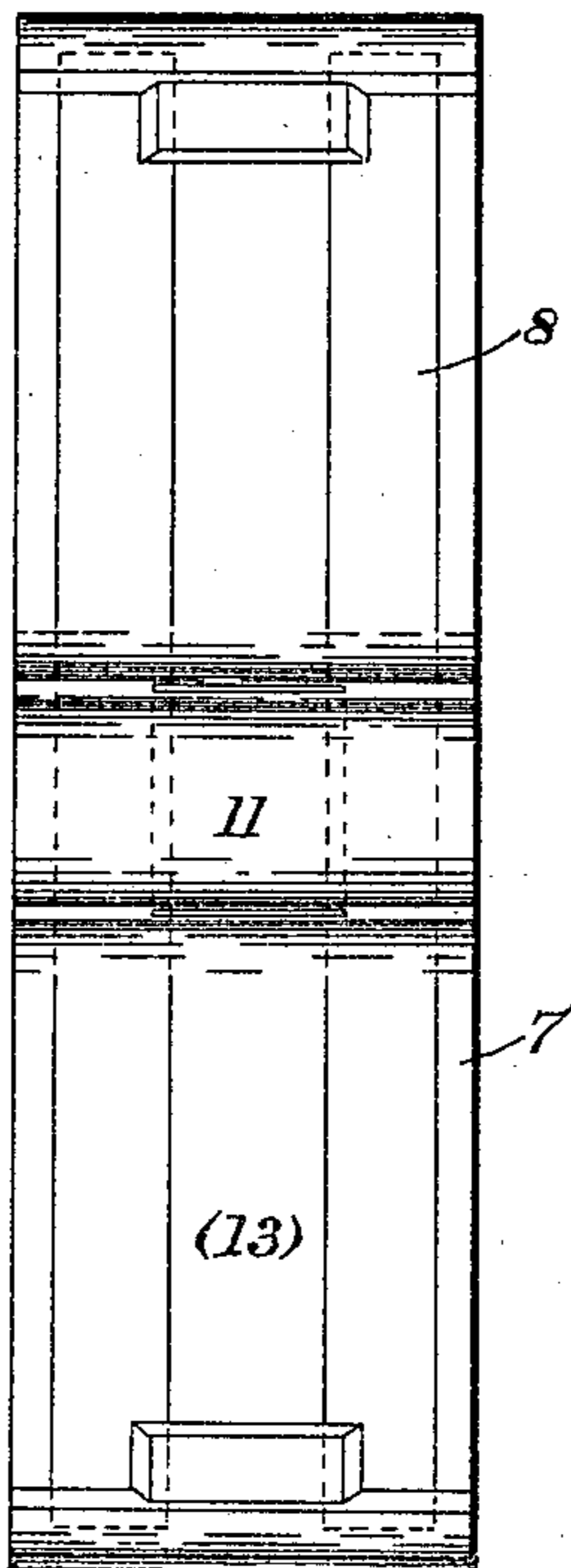


Fig. 2.

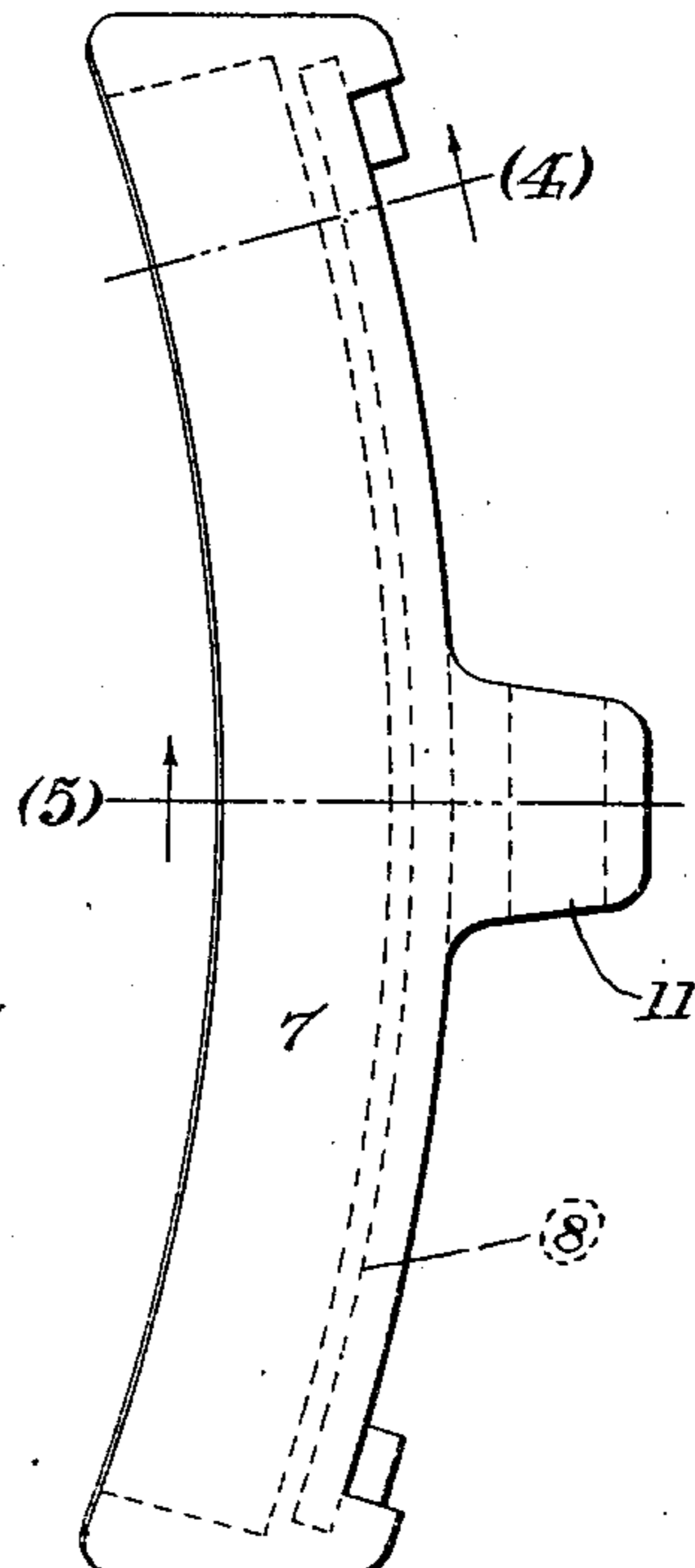


Fig. 1.

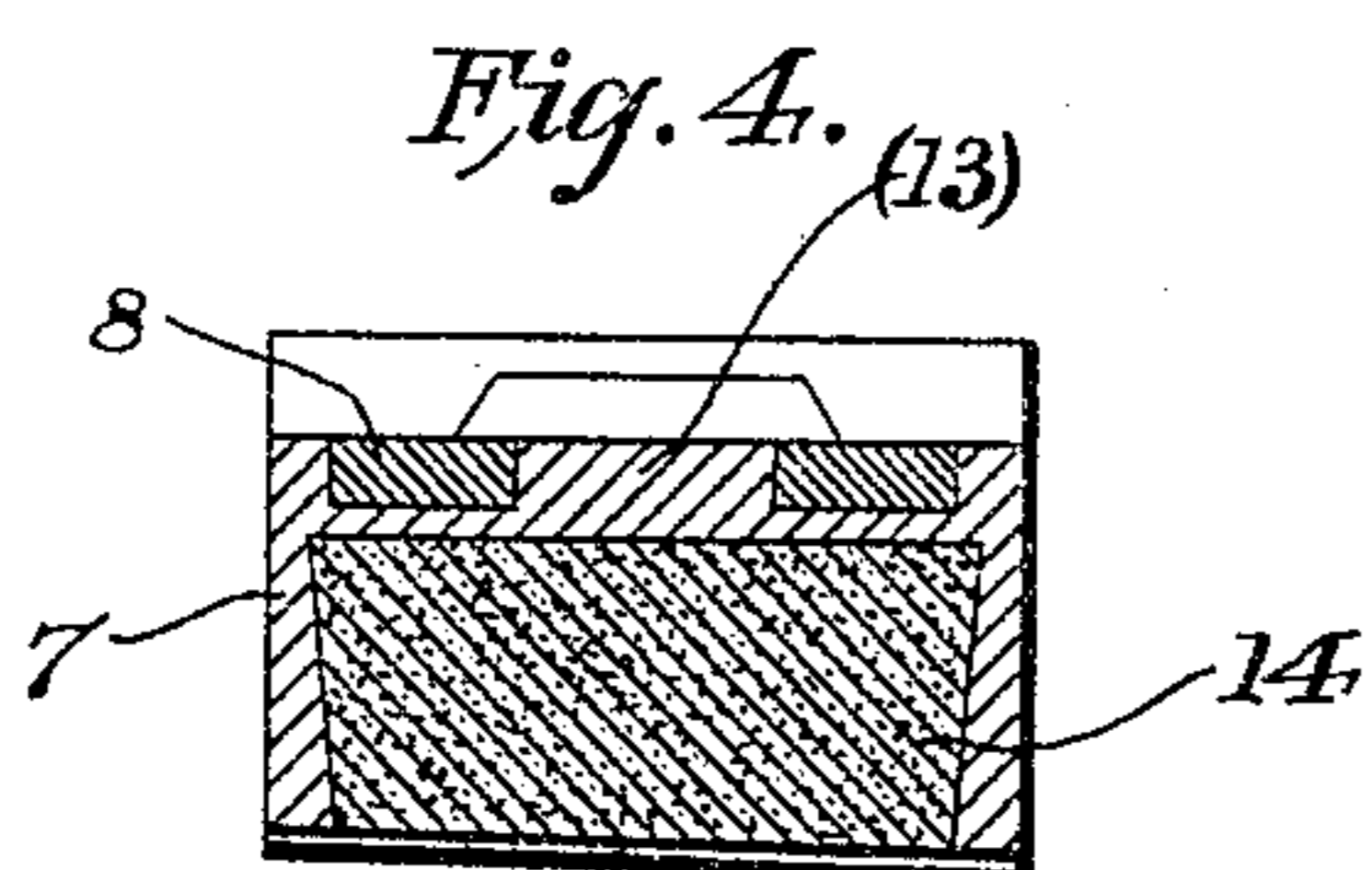


Fig. 4.

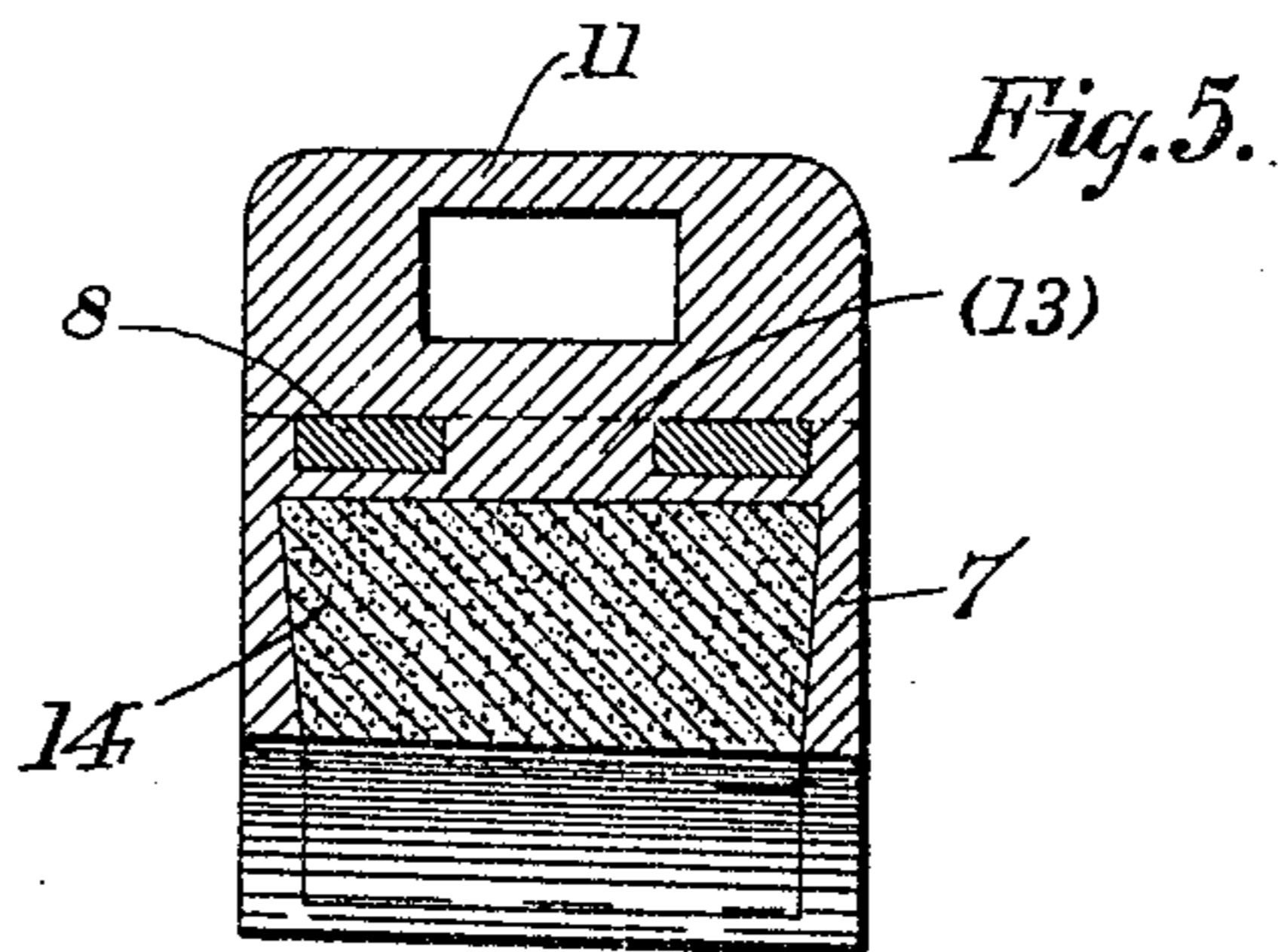


Fig. 5.

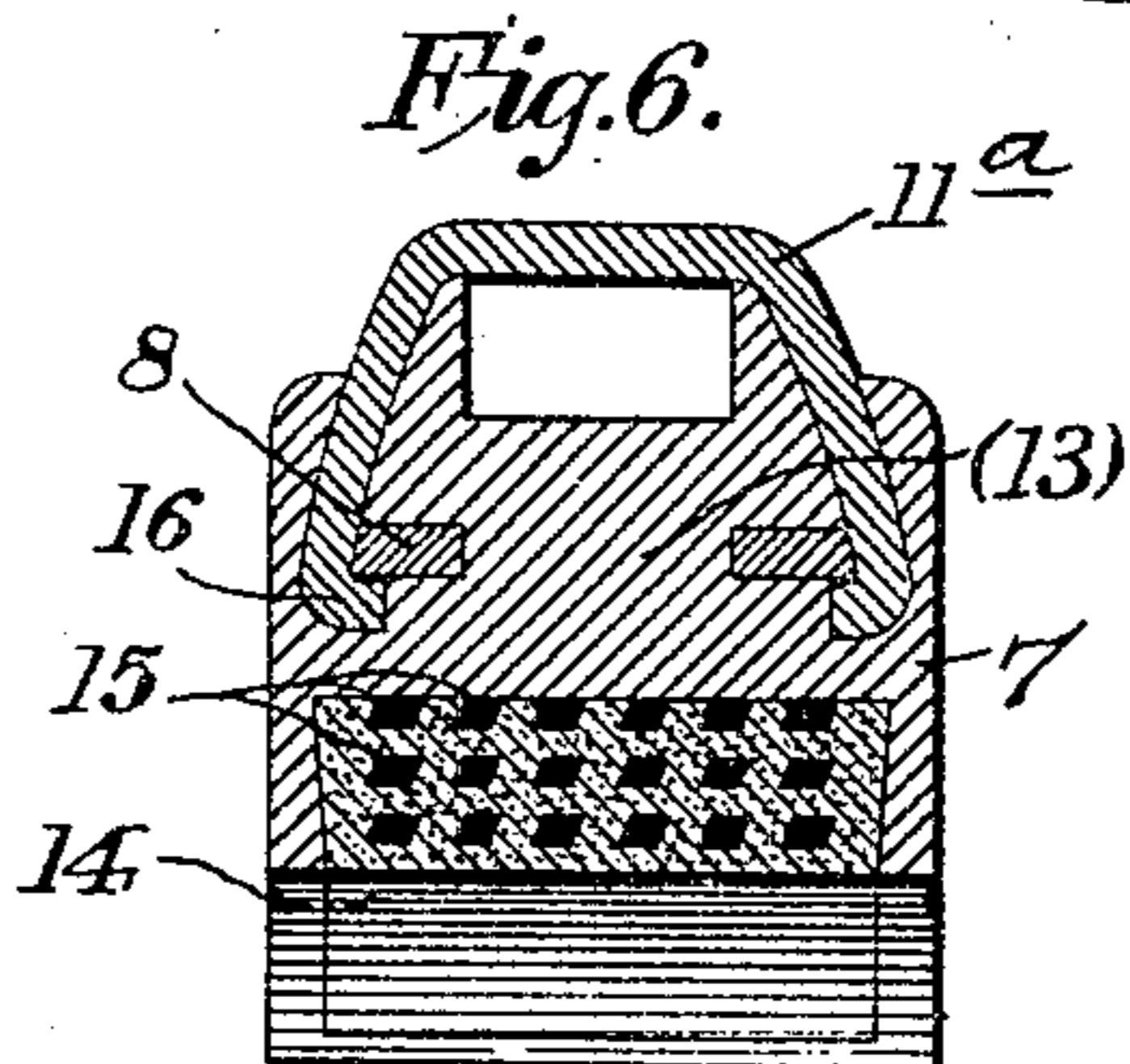


Fig. 6.

Witnesses;

Cyril C. Bricker.  
Chas. H. Ebert

Inventor;

James S. Thompson  
per Paul Symmetts  
Att'y.

# UNITED STATES PATENT OFFICE.

JAMES SHIELDS THOMPSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO  
AMERICAN BRAKE SHOE & FOUNDRY COMPANY, OF JERSEY CITY,  
NEW JERSEY, A CORPORATION OF NEW JERSEY.

## BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 784,363, dated March 7, 1905.

Application filed April 6, 1904. Serial No. 201,924.

*To all whom it may concern:*

Be it known that I, JAMES SHIELDS THOMPSON, a citizen of the United States, residing at Chicago, in the State of Illinois, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

My invention relates to the wearing blocks of railway brakes and the like, and particularly to brake shoes having a wearing face of composition metal and a strengthening back. The objects of the invention are to provide a shell with a composition filling forming the sole and having a strengthening back for the shoe, to provide superior strengthening means for the back and a superior method of attaching the lug thereto, and to generally improve the structure and efficiency of brake shoes. These objects, and other advantages which will hereinafter appear, I attain by means of the construction illustrated in preferred forms in the accompanying drawings, wherein—

Figures 1, 2, and 3 are respectively a side elevation, a top-plan view, and an under-plan view, of the brake shoe before the filling for the face is placed therein;

Figures 4 and 5 are cross sections, respectively on the lines (4) and (5) of Figure 1, of the completed shoe, and

Figure 6 is a central cross section of a modified form of the shoe in which there is a different filling in the face and a modified form of the attaching lug.

In order to provide a strong and safe support for the composition filling of the shoe, I provide a shell 7 which is strengthened by a series of bars or rods 8 on the back thereof, and the front side has a large open space 9 with undercut sides, for containing the filling 14 for the wearing face. The strengthening bars or rods 8 may lie flush with the surface of the shell and are secured thereto by being buried under the end seat for the brake head and under the central attaching lug 11. Other-

wise they may be formed with edges of irregular contour to secure a firm anchorage in the cast shell 7 of the shoe.

The reinforced shell of the first three figures is provided with a filling 14 in the face thereof which may be a simple composition such as comminuted iron and asphaltum, as shown in Figure 4 at 14, or the composition may have additional strength and body by embedding therein a series of pieces of expanded steel 15 as shown in Figure 6.

In Figure 6 I have shown a modification in which instead of the cast attaching lug 11 of Figure 5 I have provided a ductile metal strap 11<sup>a</sup> for this purpose, which it will be seen has inturned lower edges to engage the strengthening bars 8 in order to thoroughly bind the lug to the backing of the shoe. This lug 11<sup>a</sup> may be covered with cast metal or not as desired. It will be understood also that this strap 11<sup>a</sup> may be otherwise anchored, as by engaging the inner edge of the bars 8 when desired.

By this construction I provide a brake shoe in which the service is almost entirely composed of a composition, and thoroughly and safely supported by means of a shell with a strengthening steel back which provides against falling apart in case of breakage, and makes up the strength of the shell necessary to support the soft composition against the wheel at all points of the shoe.

Having thus described my invention and illustrated its use, what I claim as new, and desire to secure by Letters Patent, is the following:

1. A brake shoe comprising a hollow cast shell having a non-metallic composition filling in the face thereof, and a backing consisting of ductile metal rods cast in the shell, substantially as described.

2. In a brake shoe, the combination of a hollow cast shell, a composition filling therein for the wearing face of the shoe, a strength-

ening back comprising a series of malleable bars buried in the cast metal, and an attaching lug comprising a malleable metal strap with its ends anchored under said back rods, 5 substantially as described.

3. In a brake shoe the combination with a cast shell and a composition body therein, of a backing consisting of embedded steel bars and an attaching lug consisting of a steel strap

with its ends embedded and engaging the bars 10 of the back.

In testimony whereof I have hereunder signed my name in the presence of the two subscribed witnesses.

JAMES SHIELDS THOMPSON.

Witnesses:

CHAS. H. EBERT,  
EDWARD C. BURNS.