

No. 828,442.

PATENTED AUG. 14, 1906.

J. S. THOMPSON.

BRAKE SHOE.

APPLICATION FILED APR. 8, 1904.

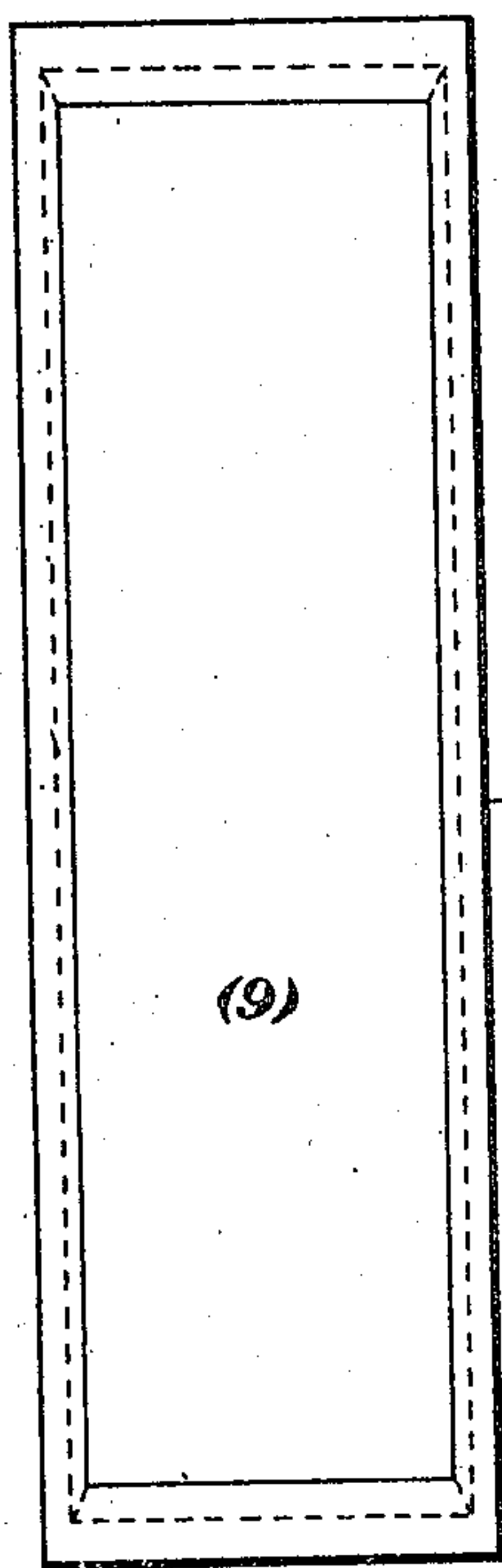


Fig. 3.

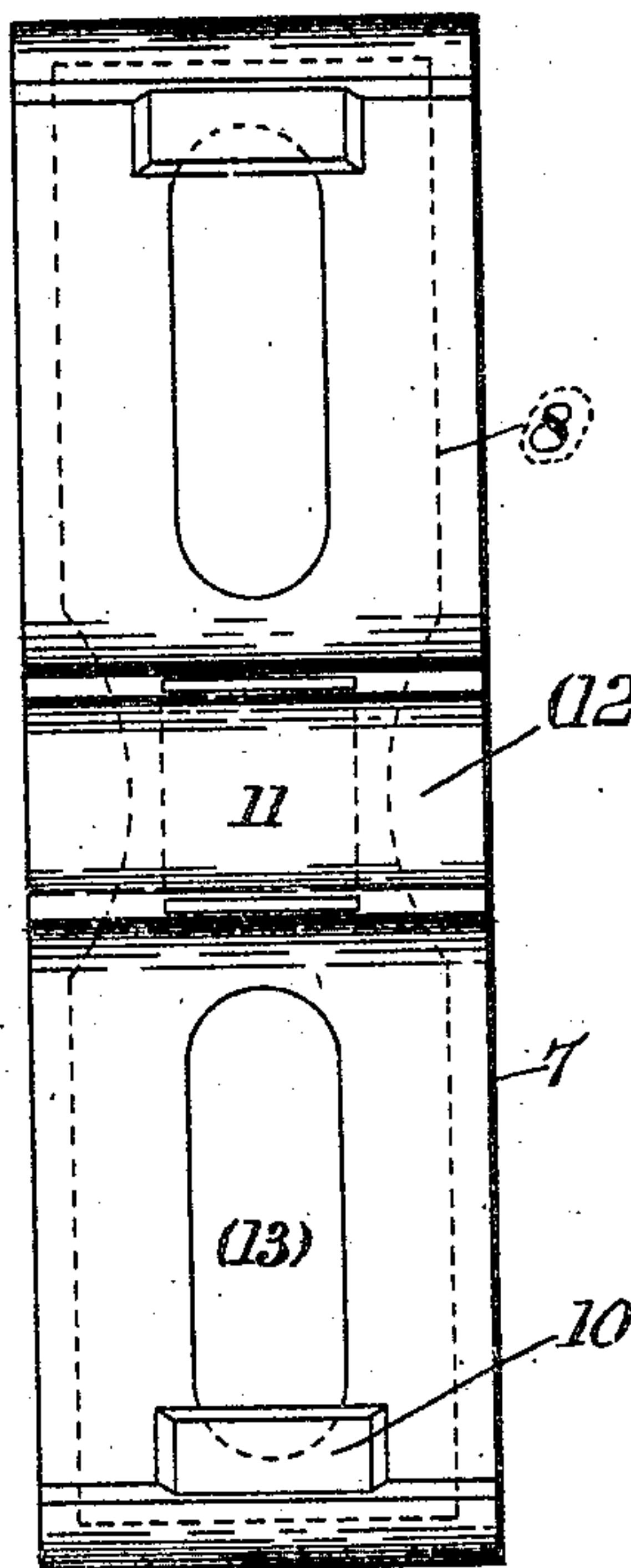


Fig. 2.

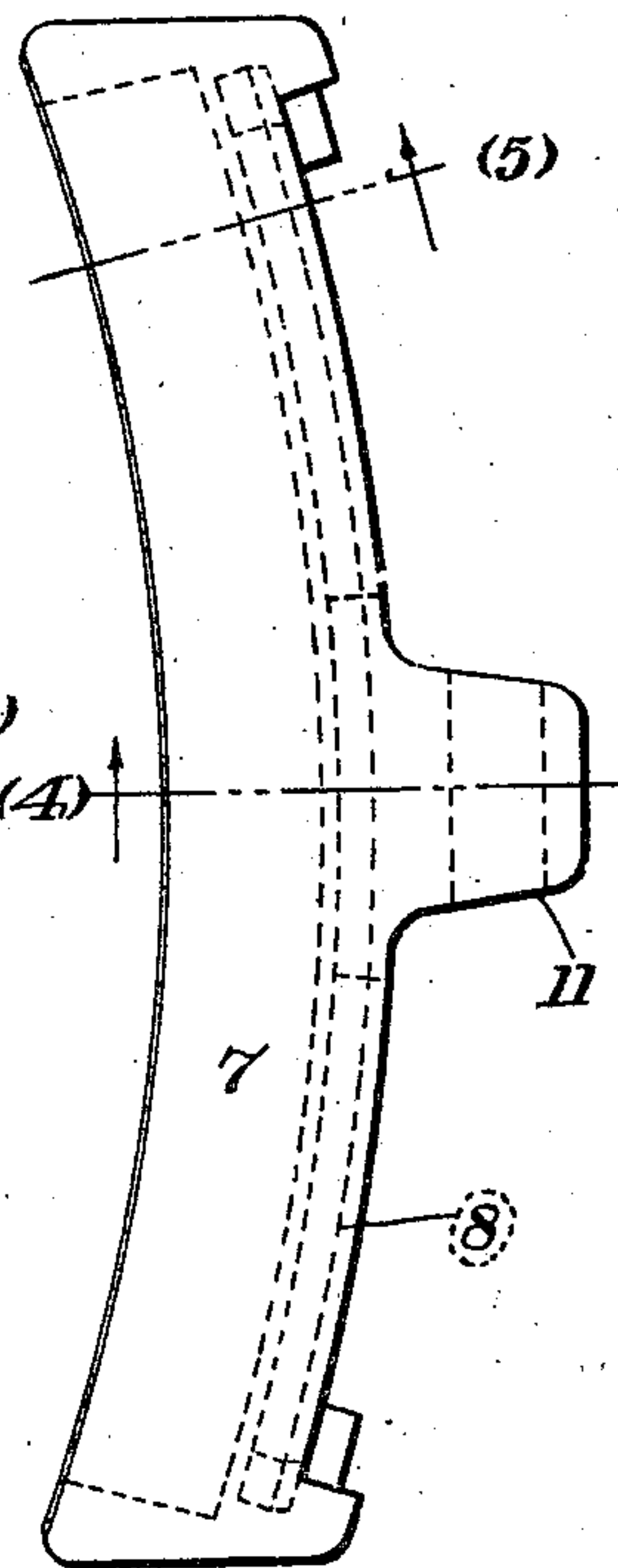


Fig. 1.

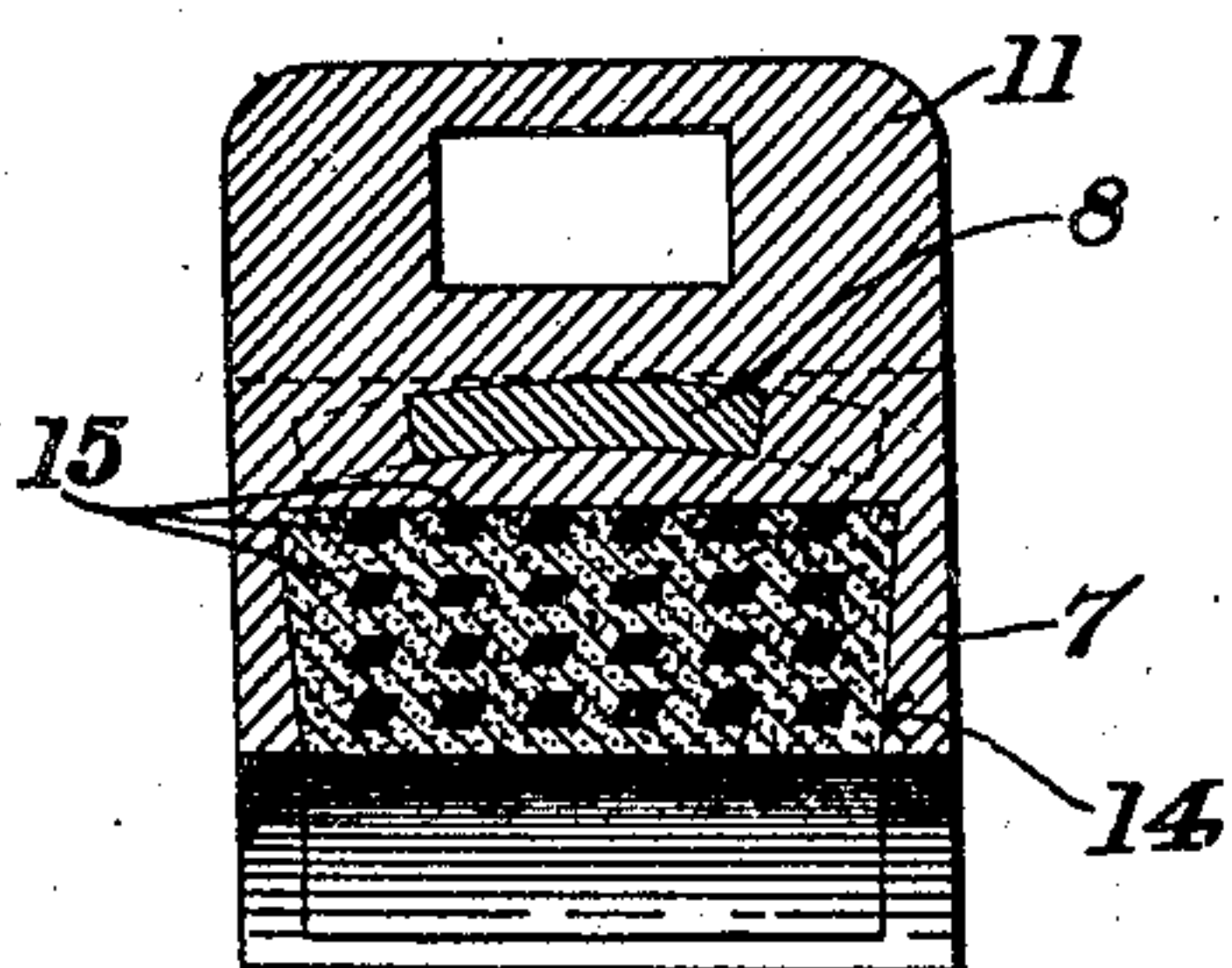


Fig. 4.

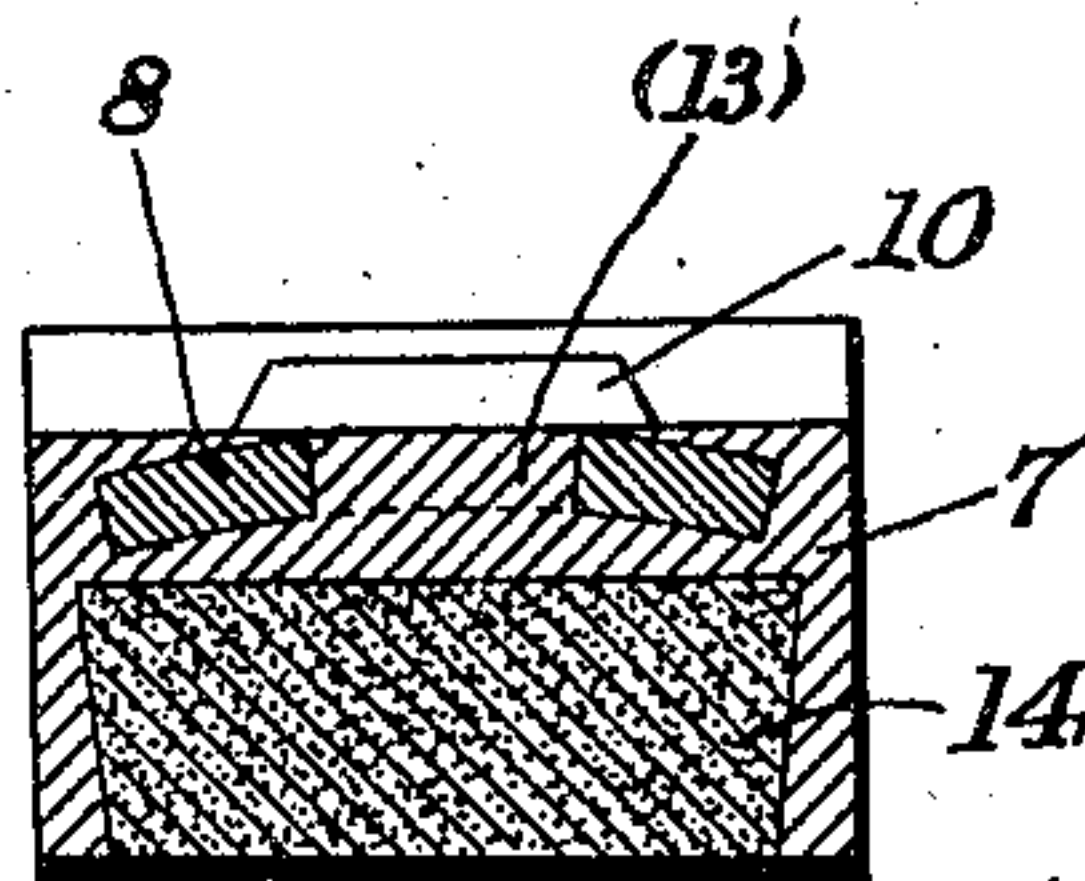


Fig. 5.

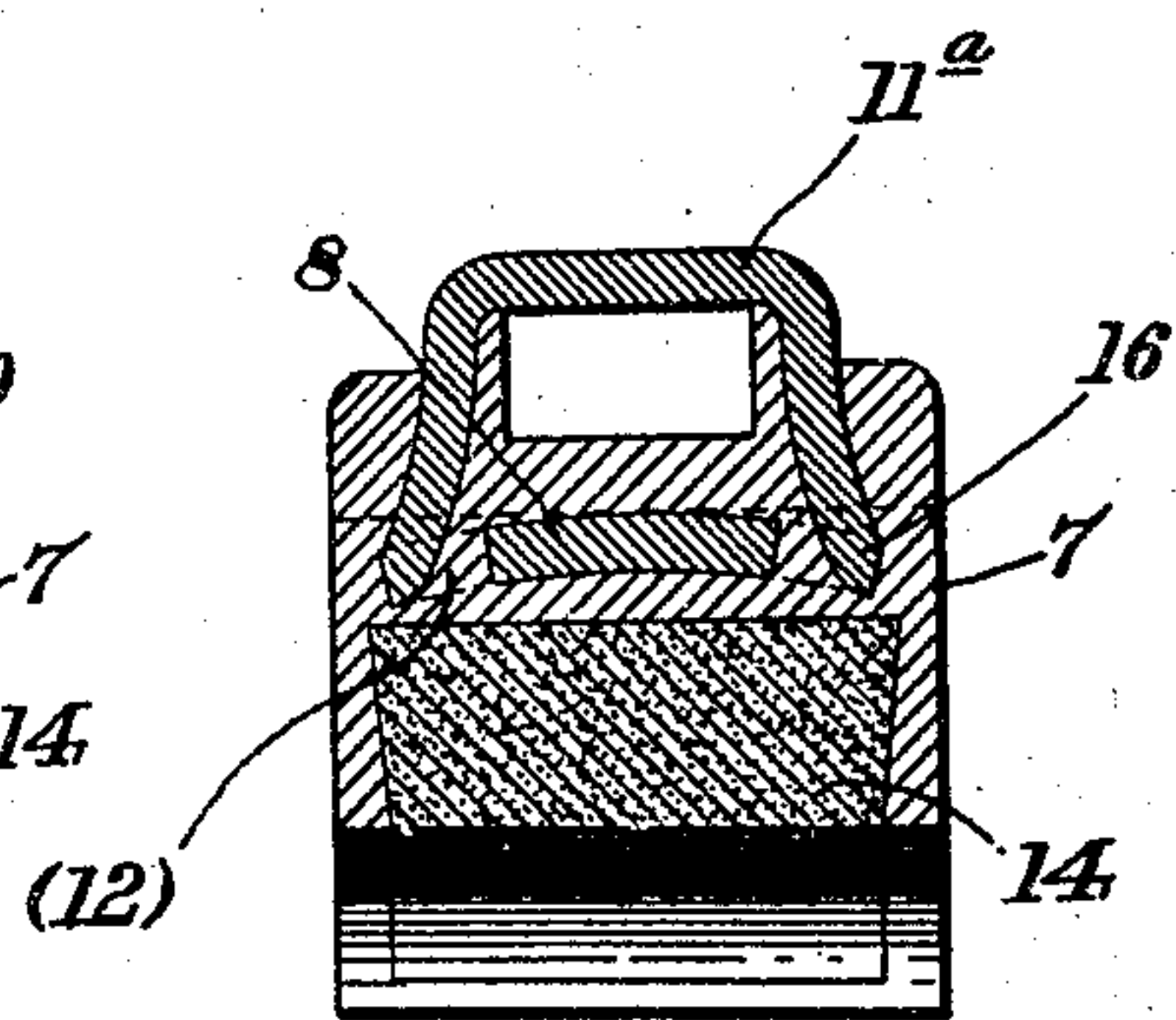


Fig. 6.

Witnesses;

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UNITED STATES PATENT OFFICE.

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BRAKE-SHOE.

No. 828,442.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed April 6, 1904. Serial No. 201,923.

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 used in railway brakes and the like, and particularly to brake shoes made of several combined forms of metal. The objects of the invention are, to provide a brake shoe having a wearing surface of compound material and being provided with a strengthening back, to provide a superior material for the wearing face of the brake shoe, to provide a superior mode of binding together the wearing surface and the strengthening back and an attaching lug for the shoe, and to generally improve the structure and efficiency of brake shoes. These objects, together with other advantages which will hereinafter appear, I attain by means of the construction illustrated in preferred forms in the accompanying drawing, wherein—

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

Figure 4 is a cross section taken on line (4) of Figure 1 showing the completed shoe with a filling containing expanded steel therein;

Figure 5 is a cross section taken on line (5) of Figure 1 of the shoe, with the filling omitting the expanded steel, and

Figure 6 is a central cross section of a modified form of the shoe in which is used a malleable metal strap for the attaching lug.

In order to provide for a superior uniform wearing material and surface on the face of the shoe of compound material, I provide a cast shell 7 having embedded therein a ductile metal steel back 8 and the face of the shoe having over nearly its entire surface a space 9 with undercut sides so as to safely retain the filler placed therein. The backing 8 may be made of steel plate and is preferably of curved cross section and its ends are embedded under the seat 10 for the brake head

and under the lugs 11, and has cut-out portions near the center at 12, and open spaces 13, through which the cast metal of the shell may run to securely anchor the back.

The main body and the wearing face of the shoe is a filling in some cases made of composition of comminuted iron and asphaltum 14, and in other cases this also has embedded therein a series of layers of fragmentary steel such as common "expanded metal" 15, as shown in Figure 4.

In Figure 6 I have shown a modification in which in place of the cast attaching lug 11, I provide a lug made of a malleable steel strap, 11^a as shown in Figure 6. It has its lower ends 16 somewhat turned outward so as to secure a firm anchorage in the cast metal of the body 7 and it will be seen that this strap fits in the cut-out portions 12 of the steel back 8.

By this construction I provide a secure means of holding the composition filling and at the same time provide a shell which is thoroughly braced and supported by the steel back and in the case of Figure 6 an additional feature is the malleable strap for the attaching lugs. Other advantages will occur from inspection of the drawings.

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 having a supporting back and a wearing face composed of asphaltum with comminuted iron and expanded sheet metal embedded therein.

2. In a brake shoe the combination of a cast shell, a composition filling in the face forming the wearing surface of the shoe, a ductile metal backing embedded in the metal of the shell, and a ductile metal lug formed of a strap anchored in the metal of the shell, substantially as described.

3. A brake shoe having a steel strengthening back and a wearing face composed of asphaltum with comminuted iron and expanded steel embedded therein.

4. In a brake shoe a cast shell for the body of the shoe, in combination with a ductile

metal backing embedded therein, said backing being of curved cross section and having its edges entirely embedded in the metal for anchorage, and a malleable strap for the attaching lug also embedded in the cast metal of the shell.

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.