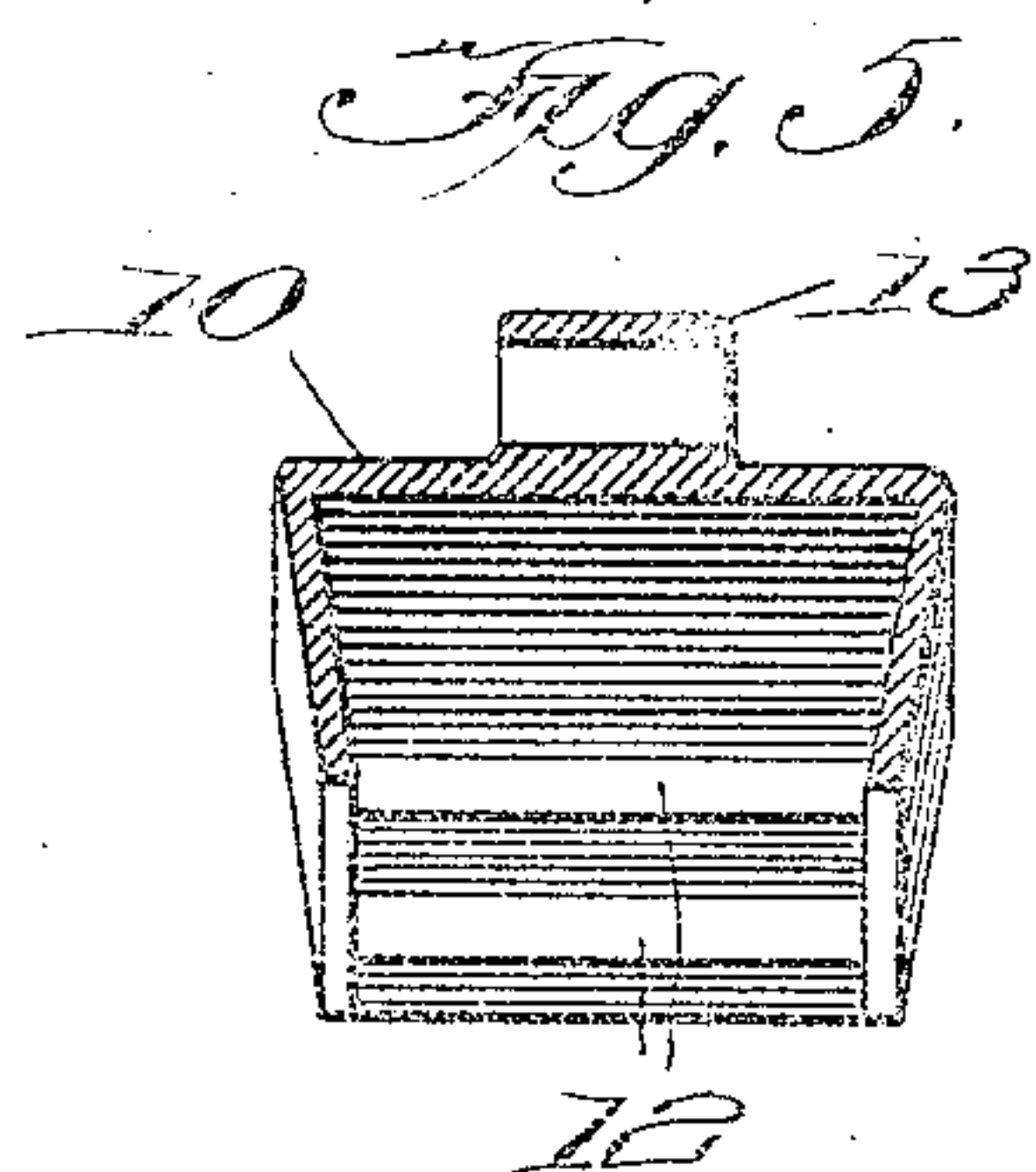
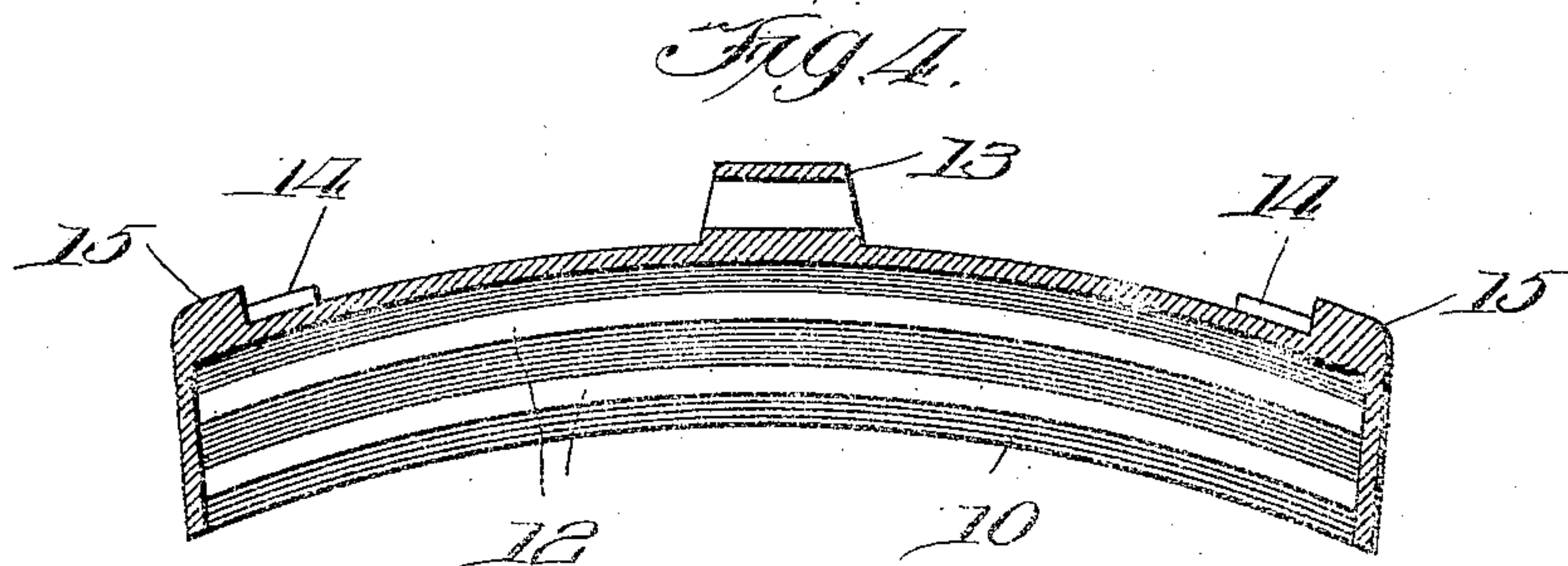
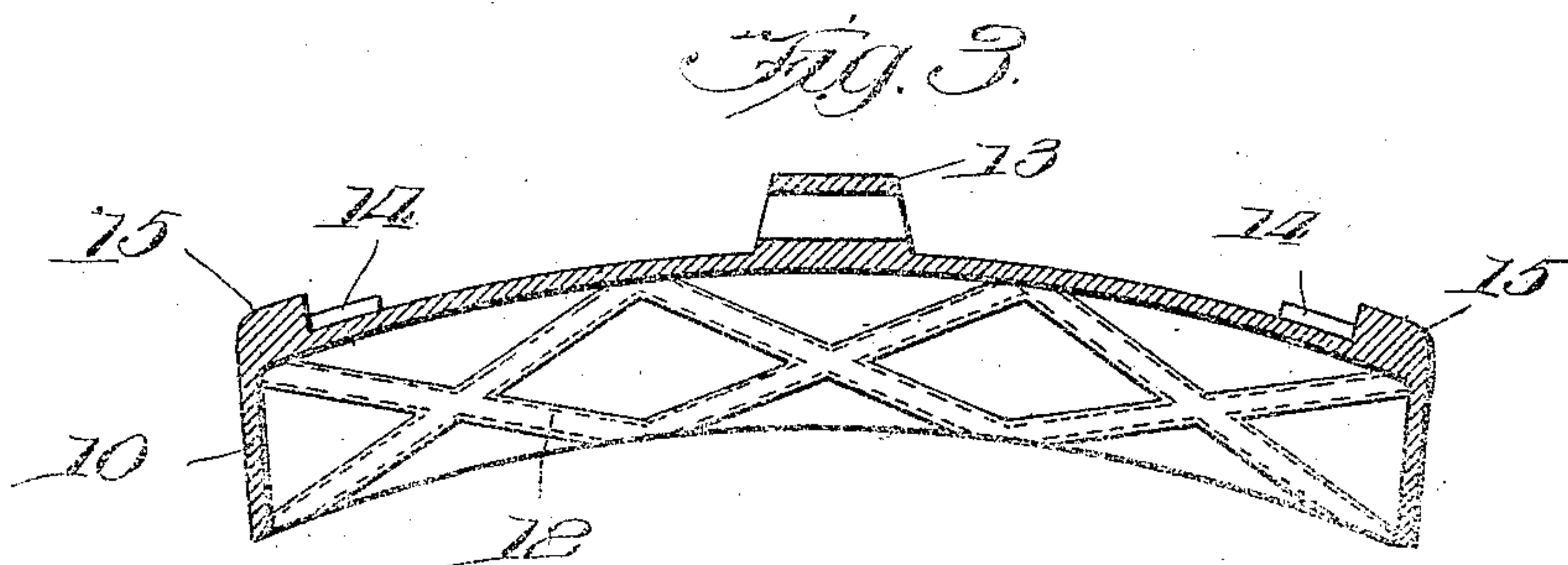
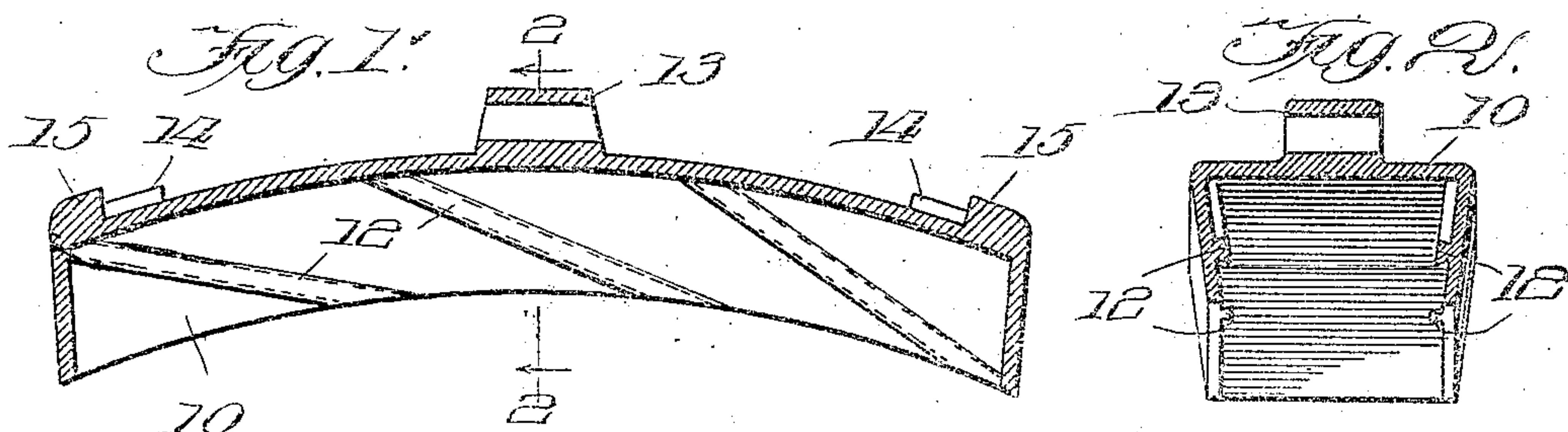


No. 832,146.

PATENTED OCT. 2, 1906.

J. F. MORRISON.  
BRAKE SHOE.  
APPLICATION FILED JAN. 9, 1906.



Witnesses:  
H. S. Patton  
M. A. Riddis

Inventor:  
James F. Morrison  
By Wm. H. Bell  
att'y

# UNITED STATES PATENT OFFICE.

JAMES F. MORRISON, OF CHICAGO, ILLINOIS, ASSIGNOR TO MARY  
RANDOLPH MORRISON, OF CHICAGO, ILLINOIS.

## BRAKE-SHOE.

No. 832,146.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed January 8, 1906. Serial No. 295,126.

*To all whom it may concern:*

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

This invention is an improvement on my Patent No. 786,373, dated April 4, 1905; and its object is to provide for securing the body of a brake-shoe within a cast malleable-iron shell in a simple and permanent manner.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a shell embodying the invention. Fig. 2 is a transverse sectional view on the line 2 2 of Fig. 1, showing the filler in the shell. Figs. 3 and 4 are longitudinal sectional views of shells, showing other embodiments of the invention. Fig. 5 is a transverse sectional view of a shell, showing the end provided with ribs.

I employ a cast malleable-iron shell 10, constructed to receive and hold the body. (Not shown.) The shell may be filled with a composite body or a composition body or a solid metal body, and as these are familiar in the art I have not deemed it necessary to illustrate them in this application.

The shell is provided interiorly with ribs 12, which are of dovetailed form, as shown in Fig. 2, and make locking engagement with the body when pressed or cast in the shell. These ribs may be variously located and arranged within the shell, and they may be provided on the sides and ends, or on one side and end, or on both sides or both ends, as described. In Fig. 1 I have shown diagonal ribs, in Fig. 3 cross-ribs, and in Fig. 4 longitudinal ribs,

conforming to the curvature of the shoe. The attaching-lug 13, the guide-lugs 14, and the end lugs 15 are made integral with the shell.

My improved shoe is strong and substantial, and the shell will hold the body securely in place therein even if the body should fracture in service. The shell will not fracture, and it will not injure steel tires. The shell is first cast like an ordinary casting and then annealed, and consequently the ribs can be formed on the shell in any desired shape and arrangement and without materially increasing the cost of manufacture.

While I have shown the invention embodied in a car-shoe, it will be understood that it can be embodied in shoes of any size and shape and with a body of any kind, which can be pressed or cast therein.

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

1. A brake-shoe comprising a body, a cast malleable-iron shell inclosing the body, and ribs on the sides of said shell making locking engagement with the body.

2. A brake-shoe comprising a body, a cast malleable-iron shell inclosing the body and diagonal ribs on the sides of said shell making locking engagement with said body.

3. A brake-shoe comprising a body, a cast malleable-iron shell inclosing the body, and dovetailed ribs on the sides of said shell making locking engagement with the body.

JAMES F. MORRISON.

Witnesses:

PAUL L. SCHMECHEL,  
M. A. KIDDIE.