

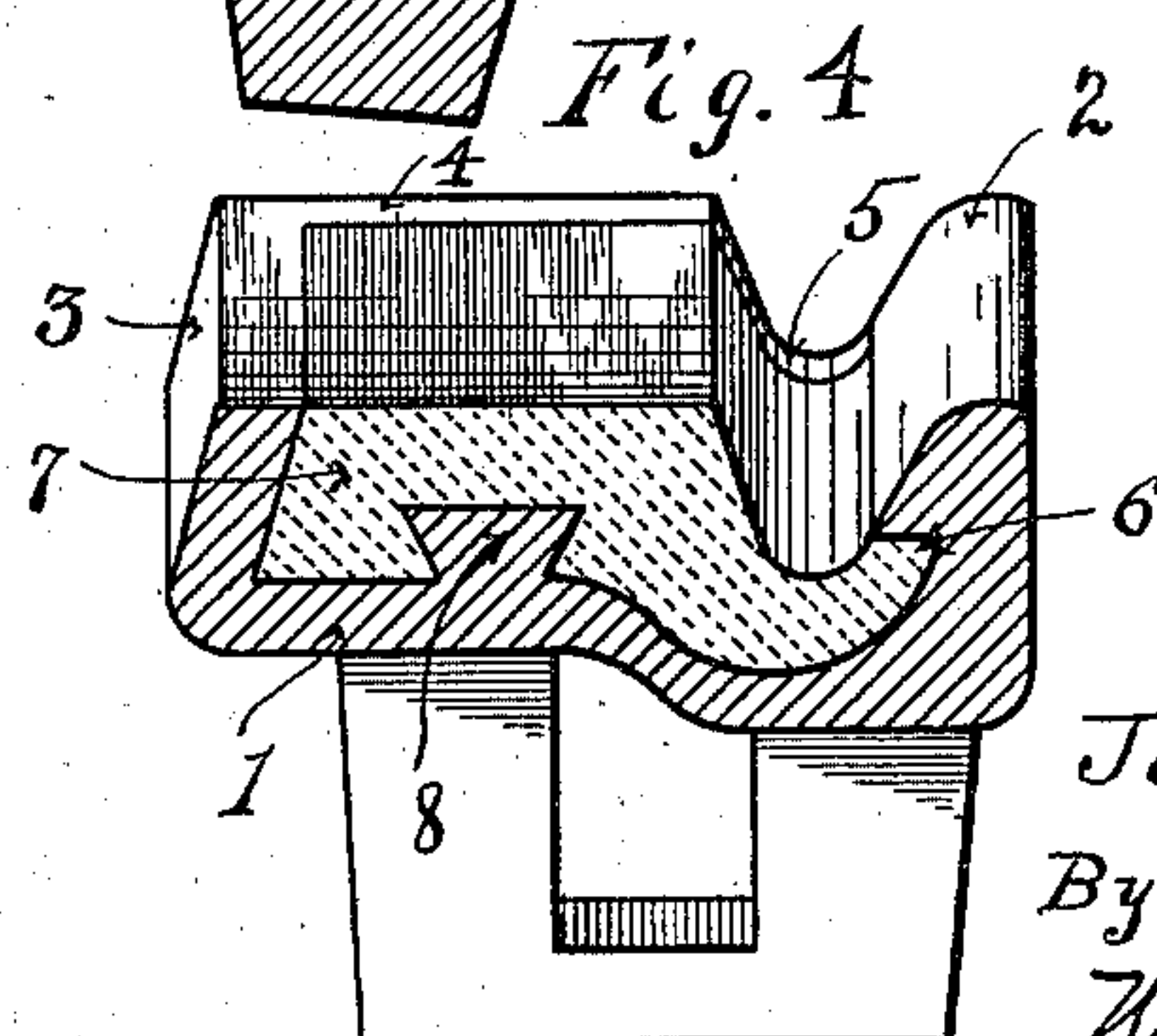
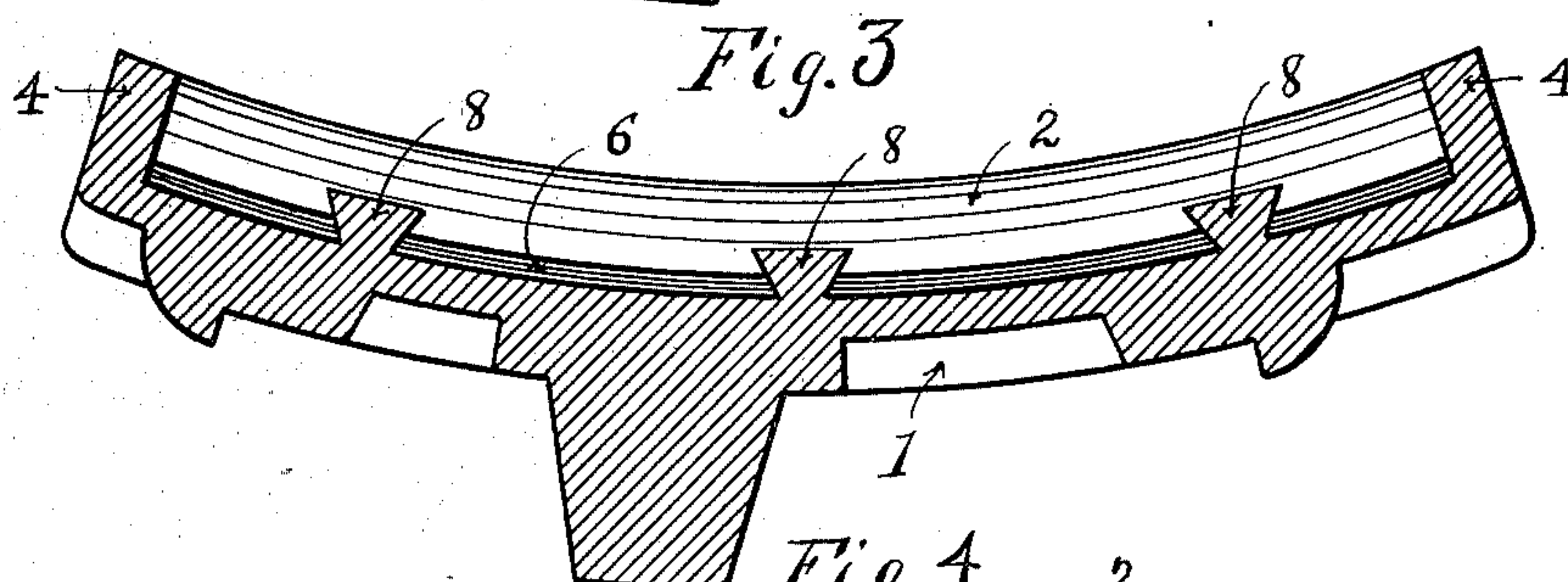
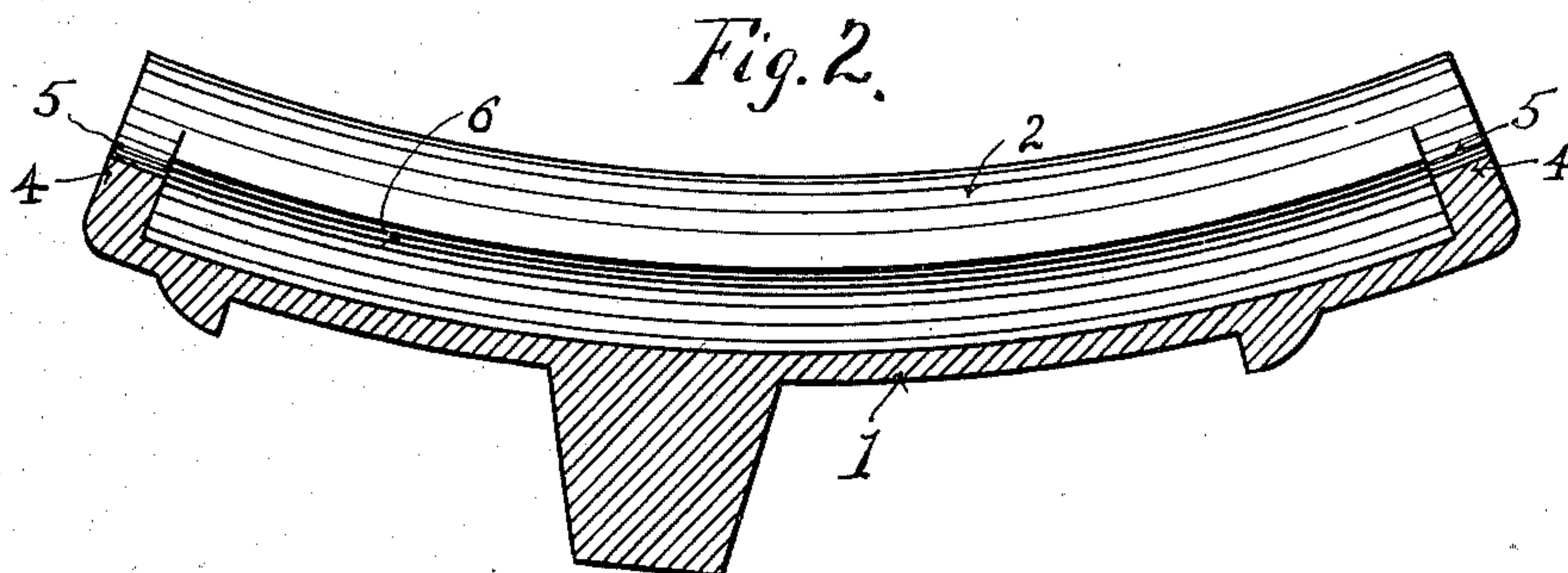
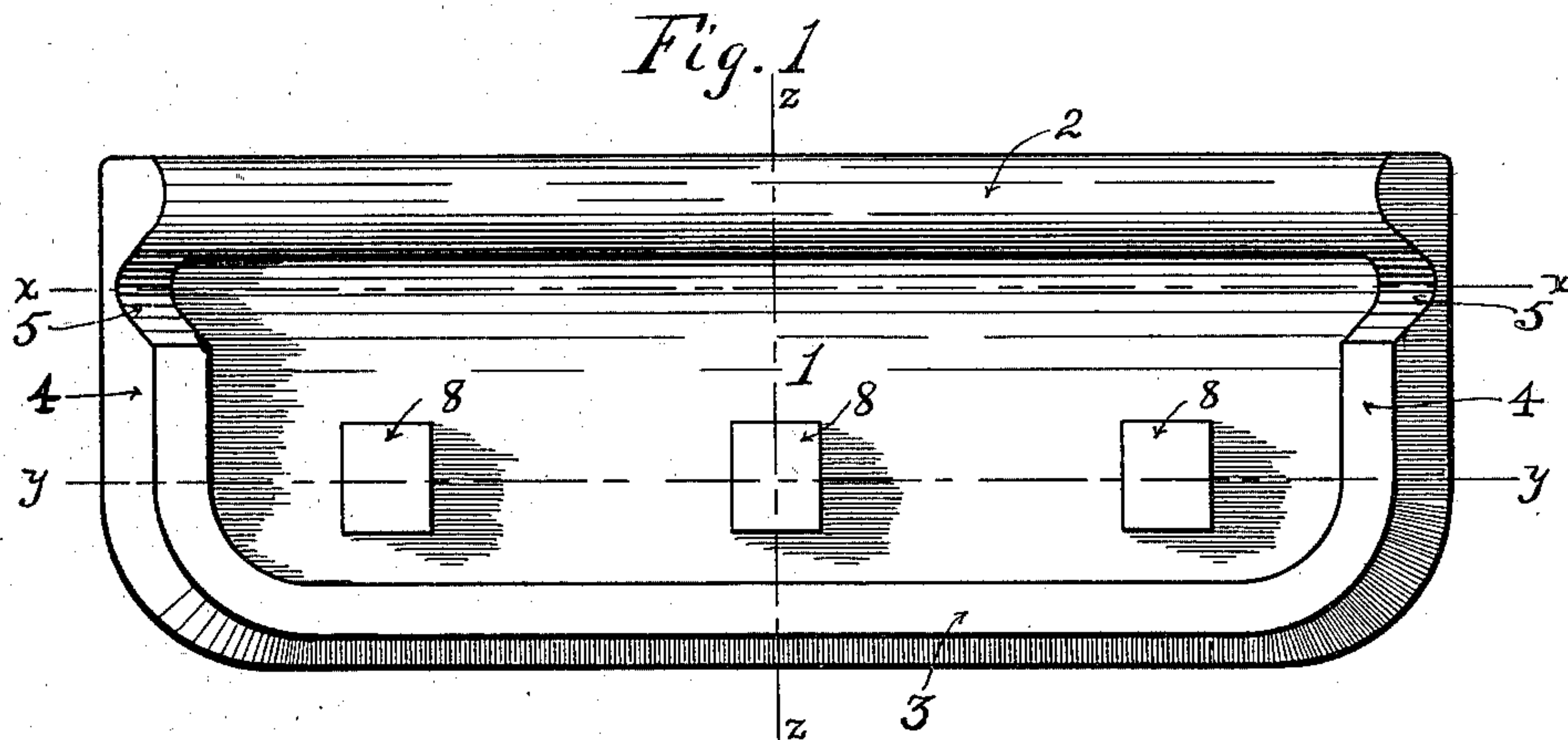
No. 734,745.

PATENTED JULY 28, 1903.

J. B. PERRY.
BRAKE SHOE.

APPLICATION FILED DEC. 29, 1902.

NO MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES B. PERRY, OF BUFFALO, NEW YORK.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 734,745, dated July 28, 1903.

Application filed December 29, 1902. Serial No. 136,936. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. PERRY, a subject of the King of Great Britain, residing at Buffalo, New York, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a full, clear, and exact description.

My invention relates to brake-shoes, and more particularly to improvements in the construction of the shoe and in providing the bearing-surfaces with an abrasive to increase the friction of the brake and to true the tread and flange of the wheel.

The object of my invention is to provide a construction of the brake-shoe which will successfully retain an abrasive or high-friction surfacing to meet the demands of practical use. This object will be readily understood by one skilled in the art, since it is well known that in filling or facing a brake-shoe with a high-friction substance great difficulty is found in retaining the same permanently. The presence of attaching parts—such as bolts, screws, or rivets—renders the same objectionable, since they tend to work loose, and the employment of retaining lugs and flanges must be so arranged as to meet the strain and also to meet the difficulty due to difference in expansion due to heat developed by friction.

A further object is to carry the abrasive surface over the flange of the wheel, so that the abrasive will act on the flange as well as on the tread.

To accomplish these ends and overcome the defects indicated, I employ the novel construction shown in the accompanying drawings, in which—

Figure 1 is a face view of my brake-shoe, the lining or facing being removed, as is also done in Figs. 2 and 3, to show the construction. Fig. 2 is a section on the line *x x* of Fig. 1. Fig. 3 is a section on the line *y y* of Fig. 1. Fig. 4 is a section on the line *z z* of Fig. 1, showing the filling or abrasive in place.

1 is the main body of the brake-shoe, made in the usual form to standard.

2 is a flange overlapping the wheel-flange. The face of the shoe is recessed to form a cavity to receive the filling, and I will now describe in detail the form and construction of this cavity.

3 is the side retaining-wall opposite the

flange, and 4 4 are the end retaining-walls. These three walls are inwardly inclined at a considerable angle to hold the side and ends of the filling. The walls 4 4 are recessed, as shown at 5 5, conformable to the flange of the wheel. The inner side of the flange 2 is recessed, as clearly shown at 6 in Fig. 4, to retain the side of the filling adjacent to the flange, and the floor of the cavity is sufficiently depressed underneath the wheel-flanges so that the filling has substantial thickness under the wheel-flange. This is clearly shown in Fig. 4.

7 is the filling. The walls described retain the filling upon its four sides; but to further secure it against loosening by the expansion of the walls engaging the sides and ends or loosening by fracture I provide the lugs 8 8, which are cast integral with the floor of the cavity and are beveled on their four sides, as shown in Figs. 3 and 4, and of course are entirely embedded within the filling. The shoe thus cast is filled with an abrasive or high-friction substance, so that the face of the shoe conforms to the tread and flange of the wheel. The material for filling may be any abrasive or substance which will produce good friction contact which can be embedded in the cavity. If it is an abrasive, it may be set by any of the well-known compounds for making non-vitrified corundum or emery wheels. If any other substance, it may be set by any of the well-known self-hardening compounds. Since the lugs 8 are so far removed from the surface where heat is developed, they are not directly affected, and it will be seen that since they are removed to the farthest limits, practically, from the edges of the walls, where the heat is developed and conducted to the shoe, there is the least probability of their disturbance by expansion. As the abrasive surface extends over both tread and wheel-flange, a greater friction-surface is attained, and at the same time both tread and flange are kept true.

Having thus described my invention, what I claim is—

1. In a brake-shoe, in combination with a filling capable of producing high friction, retaining-walls engaging the sides and ends of the filling, and retaining-lugs upon the floor of the cavity, embedded in the filling and

beveled so as to retain the same, substantially as and for the purposes set forth.

2. In a brake-shoe, in combination with an abrasive filling, retaining-walls engaging the
5 sides and ends of the abrasive, and retaining-lugs upon the floor of the cavity, embedded in the filling and beveled so as to retain the same, substantially as and for the purposes set forth.

10 3. In a brake-shoe, in combination with a composition filling, a flange engaging external to the wheel-flange, a retaining-wall on the tread side of the shoe, end retaining-walls, said wall adjacent to the tread and said end
15 walls being inwardly inclined to engage and retain the filling, a recess on the inner side of the flange external to the wheel-flange to engage and hold the edge of the filling adjacent to the wheel-flange, and lugs upon the
20 floor of the cavity embedded in the filling and having their sides beveled to retain the filling, substantially as and for the purposes set forth.

4. In a brake-shoe, in combination with an abrasive filling to act upon the tread and
25 flange of a wheel, a flange external to the wheel-flange, a retaining-wall on the tread side of the shoe, end retaining-walls, said wall adjacent to the tread and said end walls being inwardly inclined to engage and retain
30 the abrasive, a recess on the inner side of the flange external to the wheel-flange to engage and hold the edge of the abrasive adjacent to the flange, a depression in the floor of the
35 cavity to give thickness to the abrasive over the wheel-flange area, and lugs upon the floor of the cavity, embedded in the abrasive to retain the same, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my
40 hand in the presence of two witnesses.

JAMES B. PERRY.

Witnesses:

D. B. TUTTLE,
MARY E. CALLAN.