

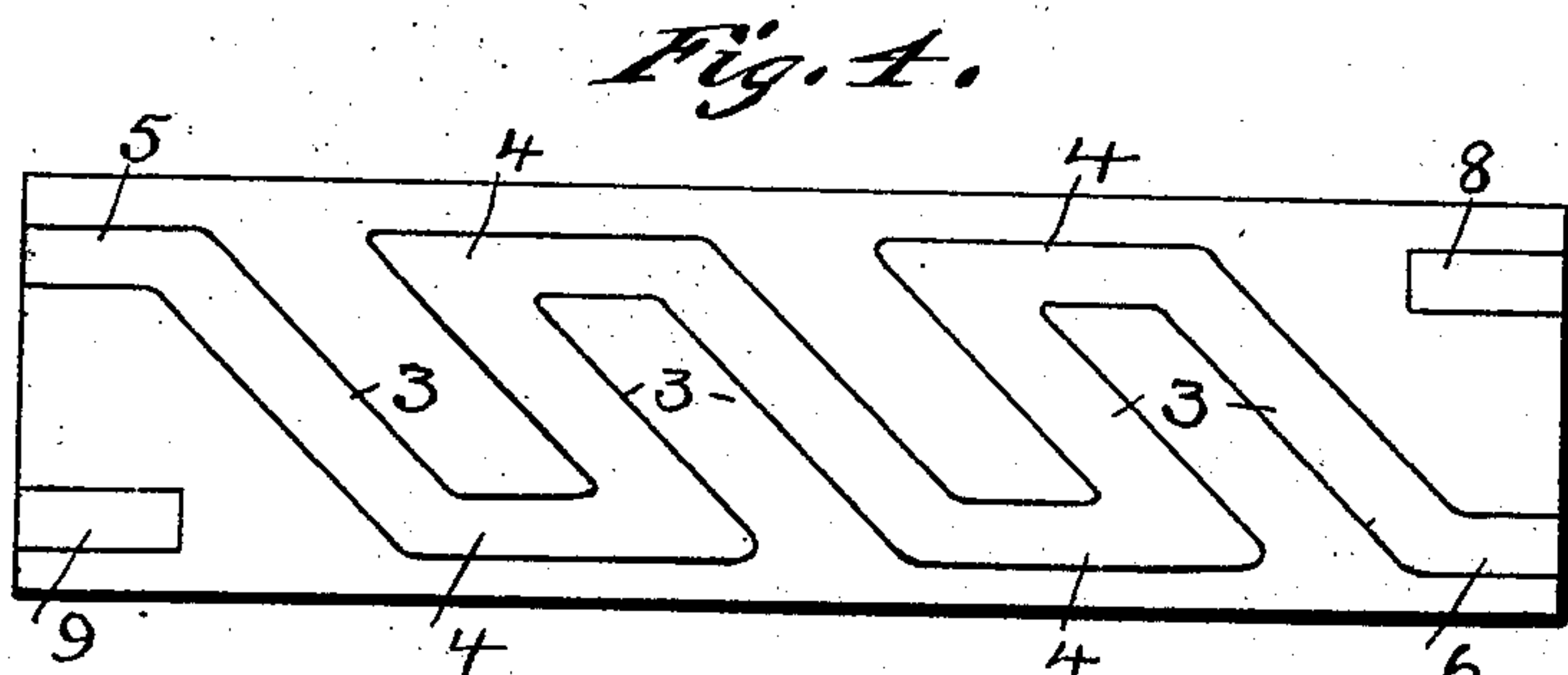
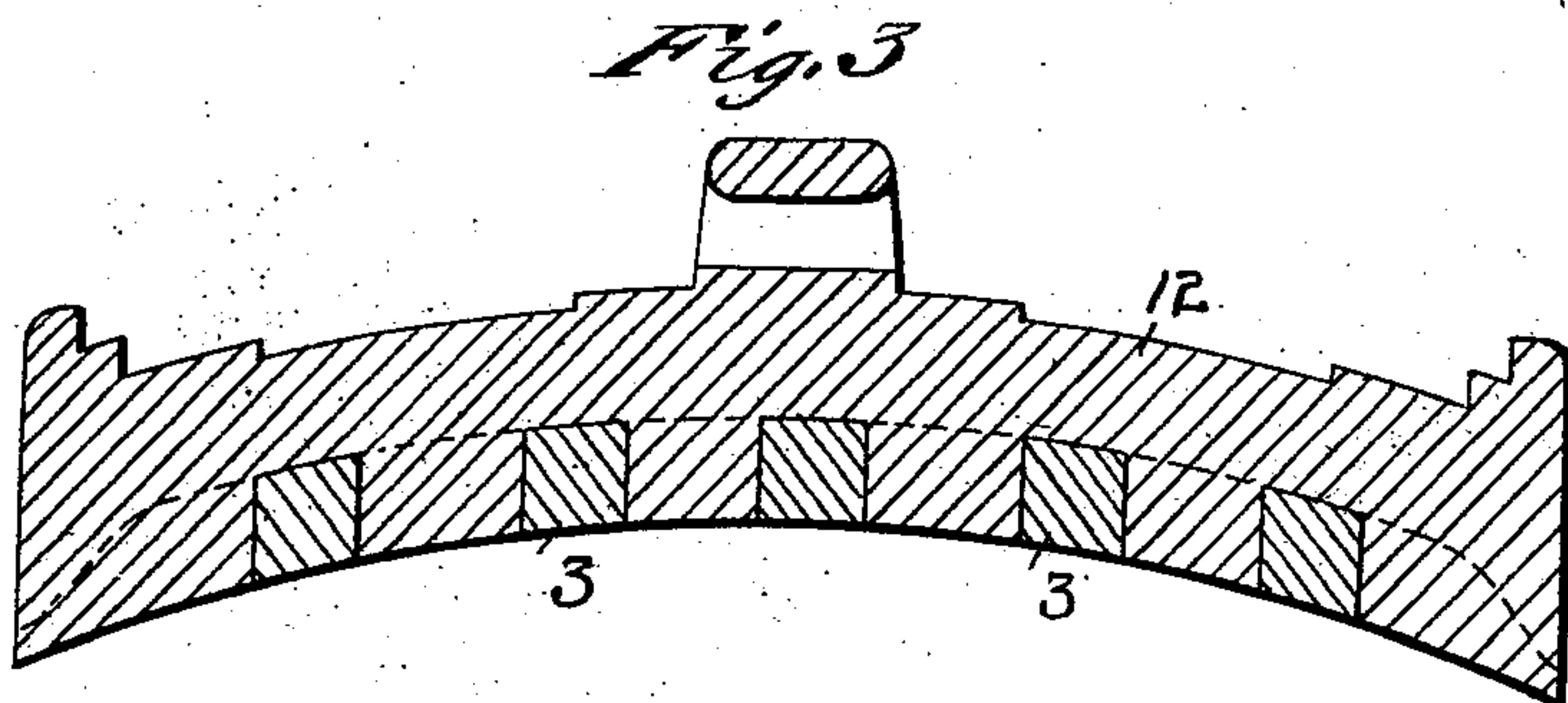
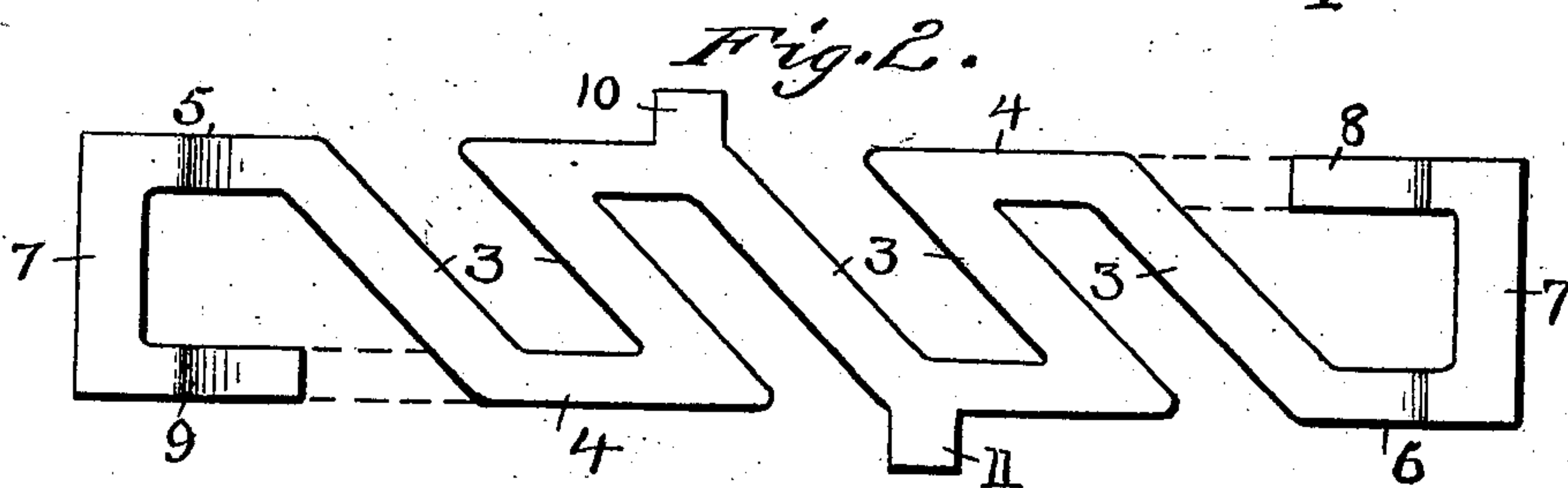
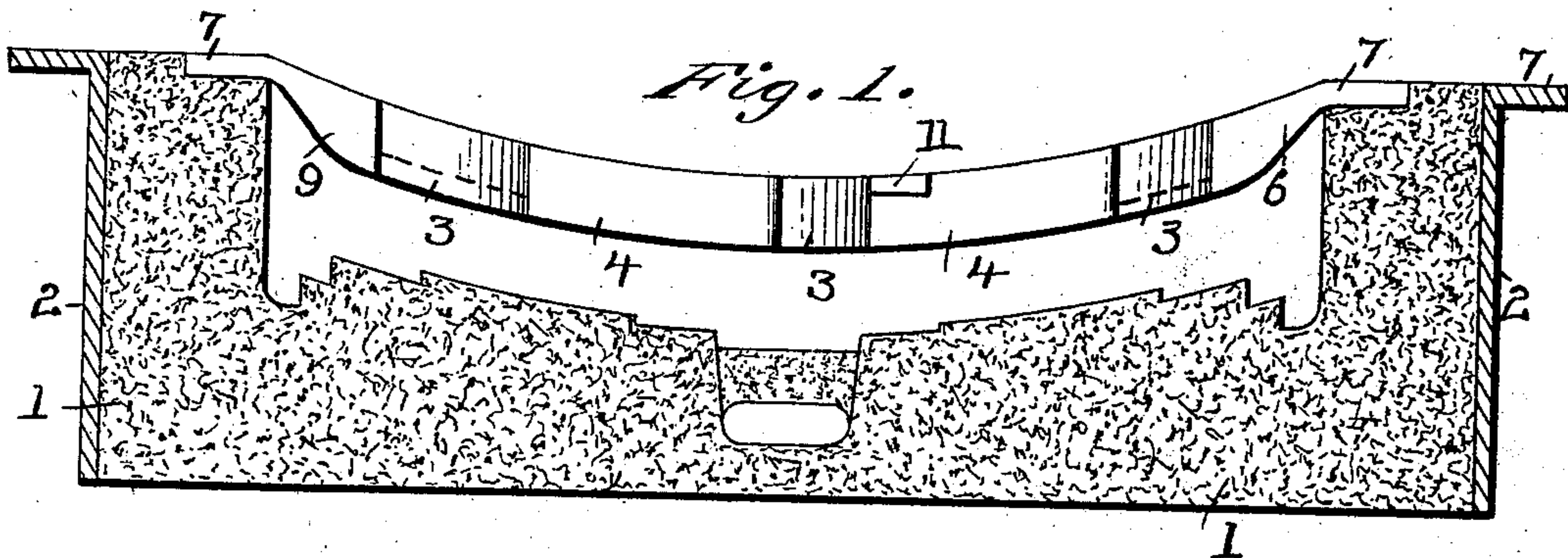
No. 715,712.

Patented Dec. 9, 1902.

T. E. TWIST.
BRAKE SHOE.

(Application filed Sept. 16, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS E. TWIST, OF MILTON, PENNSYLVANIA.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 715,712, dated December 9, 1902.

Application filed September 16, 1902. Serial No. 123,649. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. TWIST, a citizen of the United States, residing at Milton, county of Northumberland, and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

My invention relates to brake-shoes, and more particularly to the wearing-face thereof. The object of the invention is the provision of a hard-metal insert, preferably chilled cast-iron, which will be molded into the wearing-face of a brake-shoe during the manufacture of the shoe and will be adapted to give to the wearing-face and to the shoe a much greater length of life than heretofore obtainable, while also distributing and taking up the wear more evenly over the wearing-face of the shoe.

A further object is to provide for securing the insert in the mold in position for casting of the shoe thereabout, so that the insert will be incorporated into the face of the shoe.

To accomplish the foregoing objects, I provide a hard-metal insert, preferably of chilled cast-iron, formed in a single continuous strip, having portions disposed at an angle to the length of the shoe and other portions extending lengthwise of the shoe, all as set forth in the following specification and claims. I also provide lugs or ears on the insert, at the ends and sides thereof, whereby it is held in the mold or flask in position for casting of the shoe thereabout, said lugs being intended to be cut off after the shoe has been completed.

In the accompanying drawings, Figure 1 is a longitudinal section of a flask, showing my insert in position for casting of the brake-shoe thereabout; Fig. 2, a plan or face view of the insert as ready for insertion in the mold; Fig. 3, a longitudinal section of the brake-shoe in which the insert has been cast; and Fig. 4, a face view of the brake-shoe of Fig. 3, showing how the lugs have been cut off after casting of the shoe.

The numeral 1 designates the mold of a flask 2, used for forming the brake-shoe.

Reference to Figs. 1 and 2 will disclose the construction of the hard-metal insert, which I preferably form of cast-iron, as it appears when ready for placing in the mold for casting of the brake-shoe thereabout to incorporate the insert in the wearing-face of the

brake-shoe. The insert consists of a continuous strip of hard metal, such as chilled cast-iron, having the parallel portions 3 disposed angularly and transversely of the length of the insert and of the shoe, and the longitudinally-extending portions 4 joining the ends of the portions 3 and alternating from one side of the insert to the other. The ends of the insert have the portions 5 and 6 arranged at opposite sides of the insert, the transverse lugs 7, and the backturned extremities 8 and 9 arranged at opposite sides of the insert. Formed with the insert, on opposite sides thereof, are the lugs 10 and 11. As shown in Fig. 1, the insert has a dish or curve throughout its length, and prior to casting of the brake-shoe 12, Fig. 3, in the mold 1 the insert is positioned in the mold with the lugs 7, 10, and 11 resting on the mold. The metal from which the brake-shoe 12 is to be cast is then poured into the mold, and the insert thus becomes embedded and incorporated into the face of the brake-shoe, as shown in Figs. 3 and 4. After removal of the brake-shoe with incorporated insert from the mold the lugs 7, 10, and 11 will be clipped off, so that no portion of the insert extends beyond the margin of the brake-shoe.

I am aware that it has been proposed heretofore to incorporate or embed in the wearing-face of a brake-shoe a strip or strips to take up the wear, and such I do not claim, broadly; but so far as I know no hard-metal insert such as set forth heretofore has been employed by others. The peculiar form of my insert distributes the wear evenly over the face of the brake-shoe, giving great life thereto, besides improving its braking qualities.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hard-metal insert for the face of a brake-shoe consisting of a strip cast in the shoe with separated portions arranged in a general transverse direction and other portions joining their opposite ends in alternation.

2. A hard-metal insert for the face of a brake-shoe consisting of a strip cast in the shoe with separated portions disposed transversely and angularly to the length of the

shoe, and longitudinally-extending portions joining their opposite ends in alternation.

3. A hard-metal insert for a brake-shoe having integral projections flush with the
5 face of the shoe and adapted to form a support for the insert in the brake-shoe mold.

4. A hard-metal insert for a brake-shoe having projections at its ends and sides to

form a support for the insert in the brake-shoe mold.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THOMAS E. TWIST.

Witnesses:

W. HORACE AUNKST,
EDWIN PAUL.