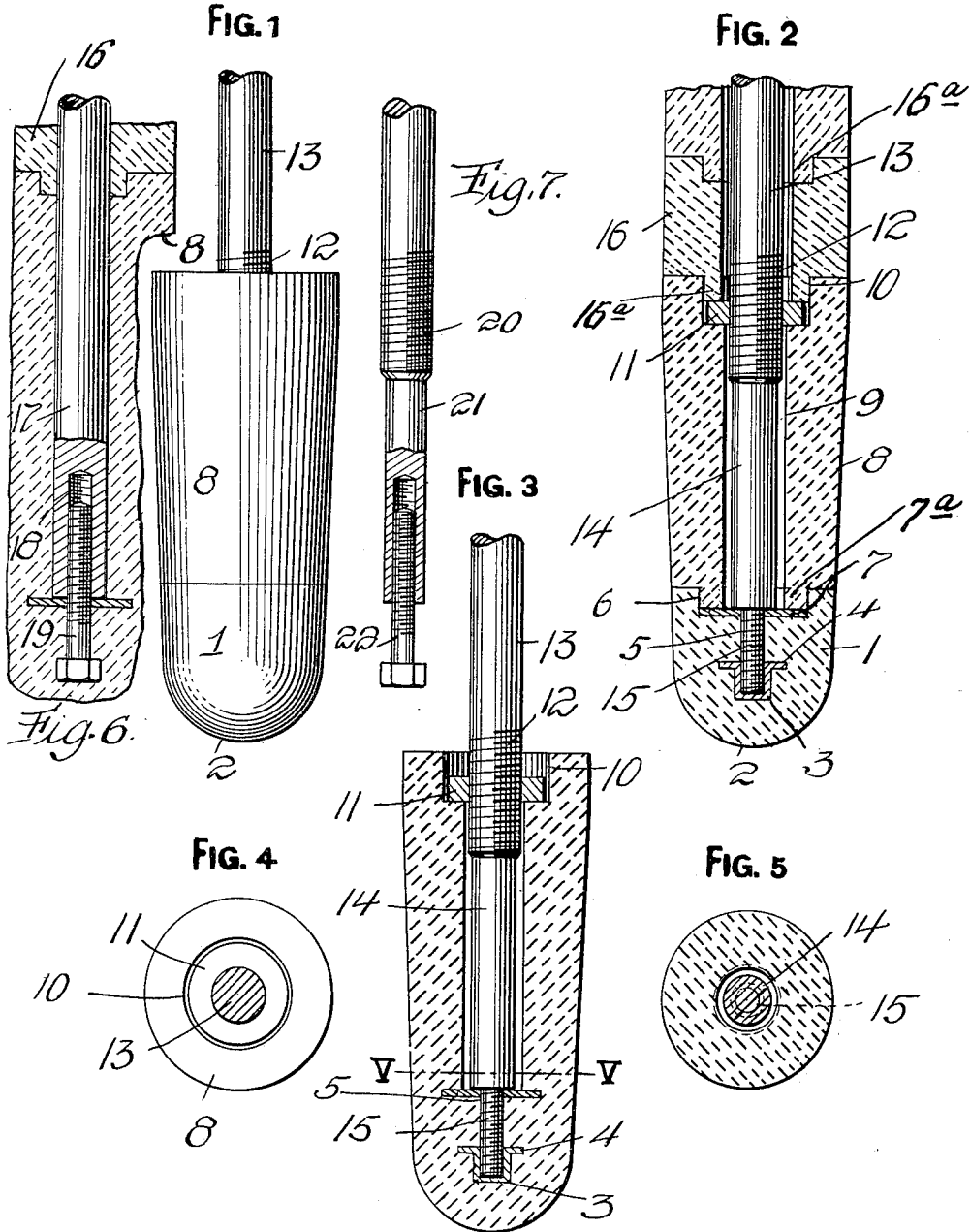


H. TEETER.
 STOPPER HEAD AND SLEEVE BRICK.
 APPLICATION FILED JUNE 18, 1913.

1,085,181.

Patented Jan. 27, 1914.



WITNESSES

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STOPPER-HEAD AND SLEEVE-BRICK.

1,085,181.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY TEETER, a citizen of the United States of America, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Stopper-Heads and Sleeve-Bricks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a stopper head and sleeve brick, and the primary object of my invention is to provide a novel non-fusible head that can be used as a stopper in connection with a nozzle brake containing molten metal or other material, the head being constructed whereby it can be safely manipulated without any danger of the suspension means of the head being burnt out or the head lost in the nozzle brake.

A further object of this invention is to provide a simple, durable and inexpensive non-fusible stopper that is secured upon an operating rod in a manner that permits of the rod being inclosed in a non-fusible sectional casing, whereby said rod will be fully protected from fire and excessive heat.

With the above and other objects in view the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of the preferred form of stopper, Fig. 2 is a longitudinal sectional view of the same, showing sleeve brick in position, Fig. 3 is a similar view of a modified form of stopper, Fig. 4 is a plan of the preferred form of stopper, Fig. 5 is a cross sectional view taken on the line V—V of Fig. 3, and Figs. 6 and 7 are views illustrating modified forms of a stopper rod.

Referring to Figs. 1, 2 and 4 the reference numeral 1 denotes a tip section made of a non-fusible material, as porcelain or fire clay. The tip section is molded with a rounded end 2 and embedded centrally of said tip is a metallic nut 3 having an annular flange 4 adapted to anchor the nut

within the tip section. The tip section has a bore 5 in communication with said nut and the flat end of said tip section is provided with an annular recess 6. Mounted within the recess 6 is a washer 7 that reinforces the flat end of the tip section 1 and prevents the nut 3 from being pulled out of the tip section when the stopper is raised. Mounted in the end of the tip section 1 against the washer 7 is the reduced end 7^a of a tapering sleeve 8 made of a non-fusible material similar to the tip section 1. The sleeve 8 has a longitudinal bore 9 and the inner end of said bore is enlarged, as at 10 to provide a recess for a nut 11. The nut 11 is screwed upon the threaded portion 12 of a stopper rod 13 that extends into the bore 9 of the sleeve 8. The end of the rod 13 is reduced, as at 14 to eliminate the necessity of screw threading the rod 13 from the end thereof, and the outer end of said rod terminates in a screw threaded stem 15 that extends into the bore 5 and is screwed into the nut 3. The sleeve 8 is coupled to the tip section 1 by the nut 11 and a plurality of sleeve bricks 16 having reduced and interlocking ends 16^a can be assembled upon the rod 13 whereby said rod will be protected from excessive heat while the stopper is in use.

In Figs. 3 and 5 of the drawing there is illustrated a modification of the invention wherein the tip section 1 and the sleeve 8 are integral. The rod 13 is of the same construction as shown in Fig. 2 and in this modification of the invention the washer 7 is dispensed with.

In Fig. 6 of the drawing, the outer end of the rod 17 is provided with a socket 18 having the walls thereof screw threaded to receive a screw bolt 19 and the head of the screw bolt is adapted to be embedded in a tip section. In this instance the rod 17 is of the same diameter throughout also the sleeve 8 and the bricks 16, while in Fig. 7 a rod 20 has the end thereof reduced as at 21 and the reduced end thereof provided with a screw bolt 22.

While in the drawing there are illustrated the preferred embodiments of the invention, it is to be understood that the structural ele-

ments are susceptible to such variations and modifications as fall within the scope of the appended claim.

What I claim is:—

- 5 A stopper of the type described, comprising a tip section, a rod having a stem screwed into said section, a sleeve surrounding said rod against said section, means within said sleeve and engaging said rod to lock said

sleeve in engagement with said tip section, 10 and sleeve bricks surrounding said rod.

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

HENRY TEETER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
