

A. WEBER, JR.

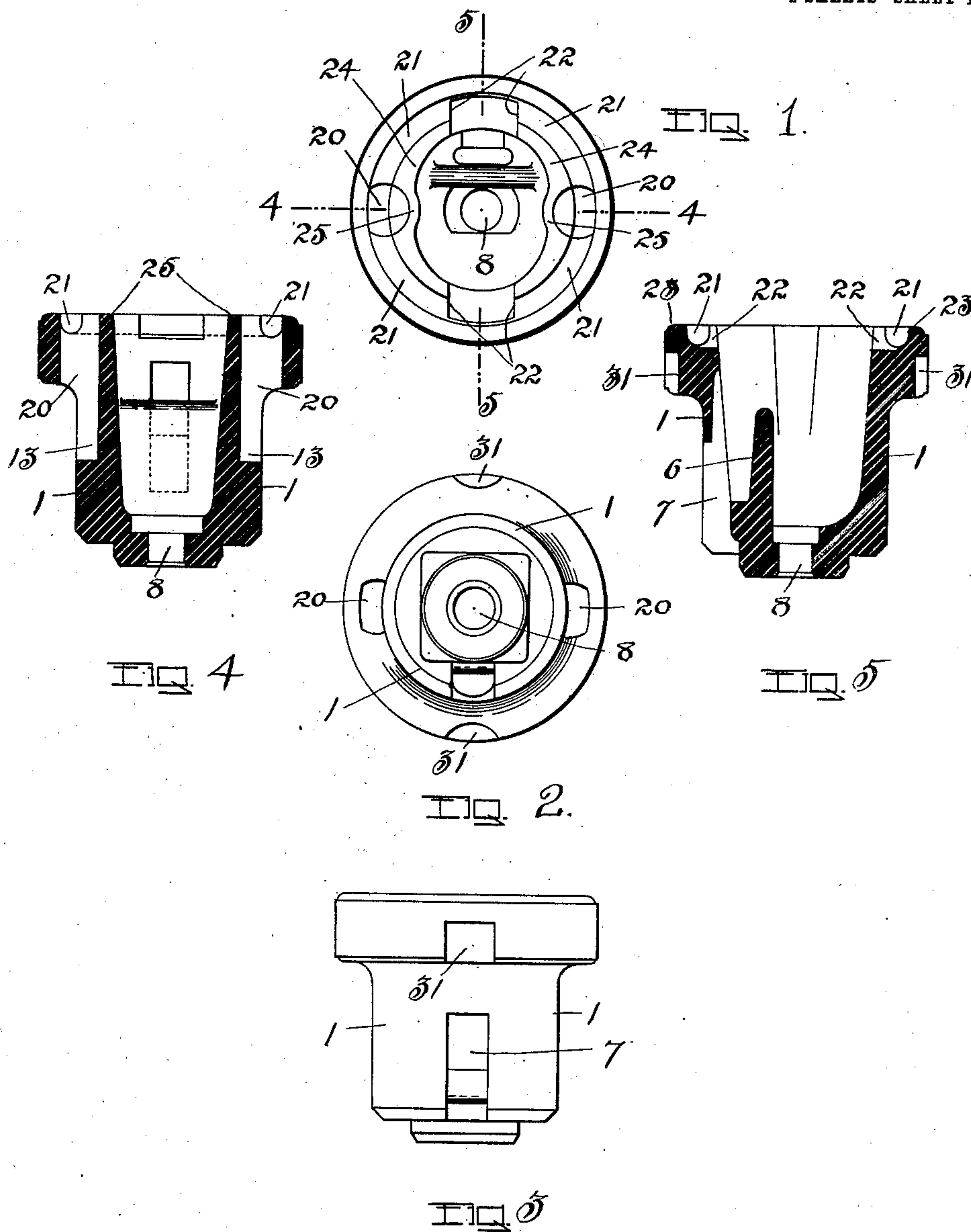
FUSE PLUG.

APPLICATION FILED JAN. 16, 1909.

925,539.

Patented June 22, 1909.

2 SHEETS—SHEET 1.



WITNESSES

J. Donsbach.

L. O. Kennedy.

INVENTOR

August Weber, Jr.

By Mosher & Curtis
attys.

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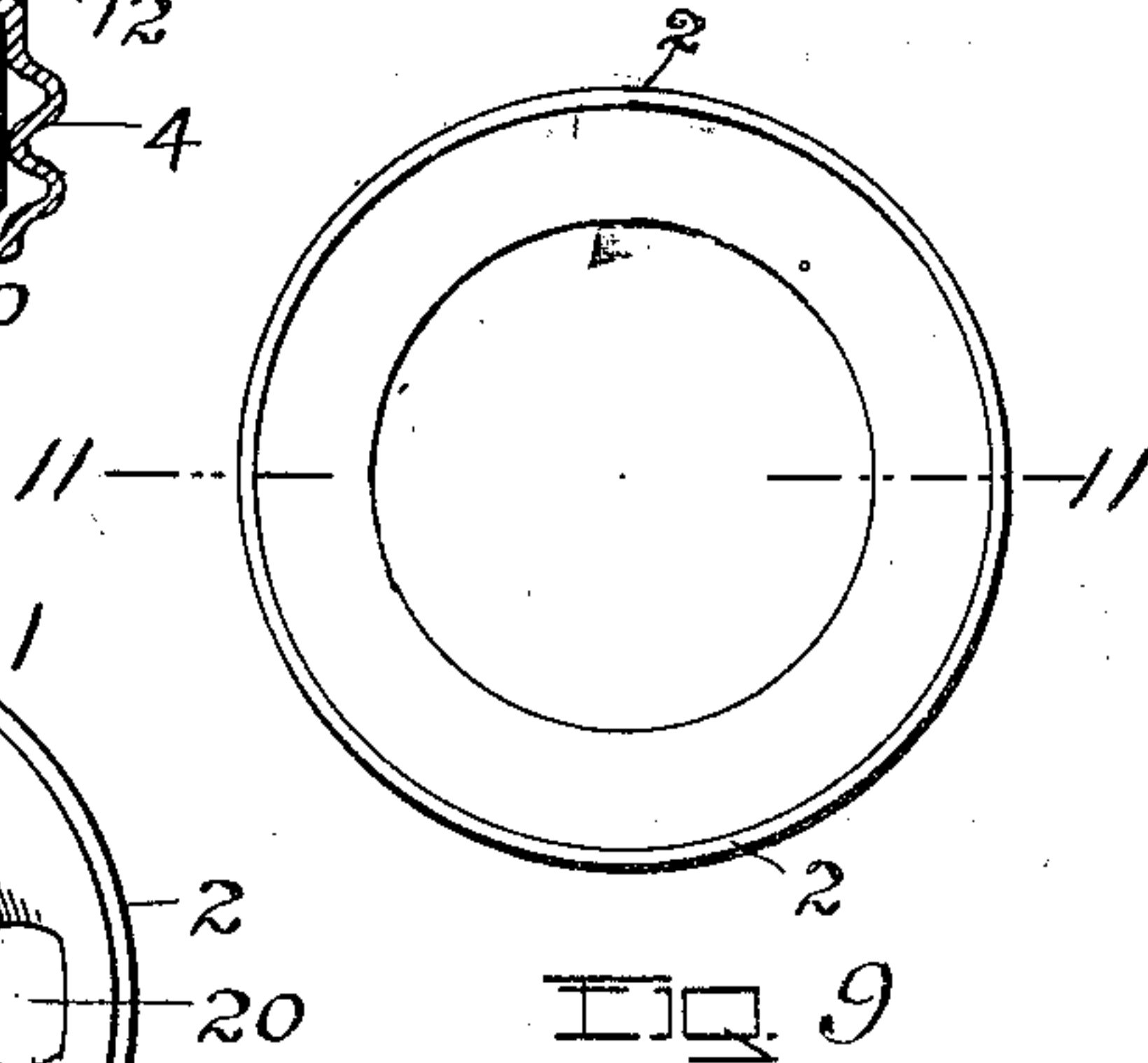
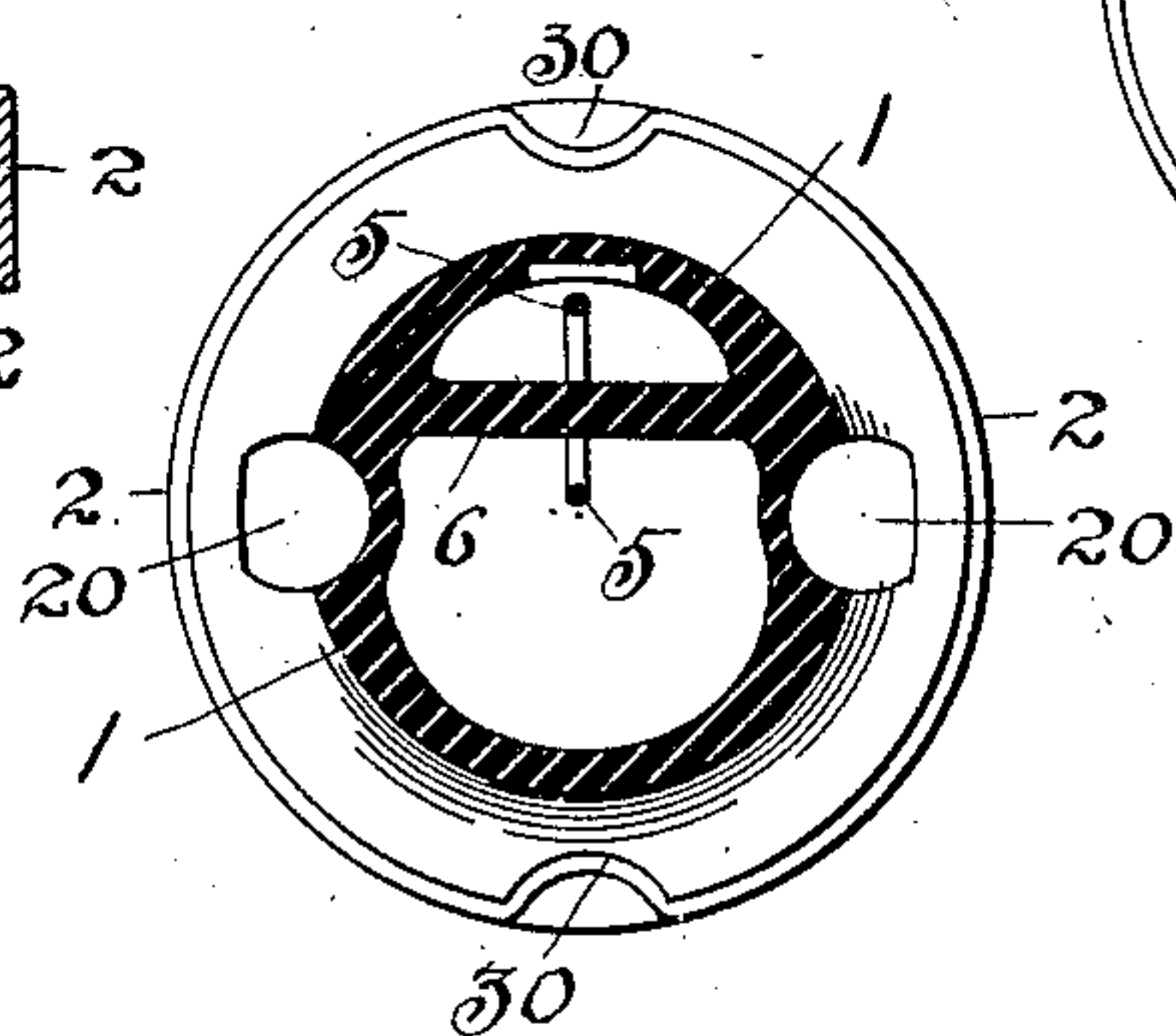
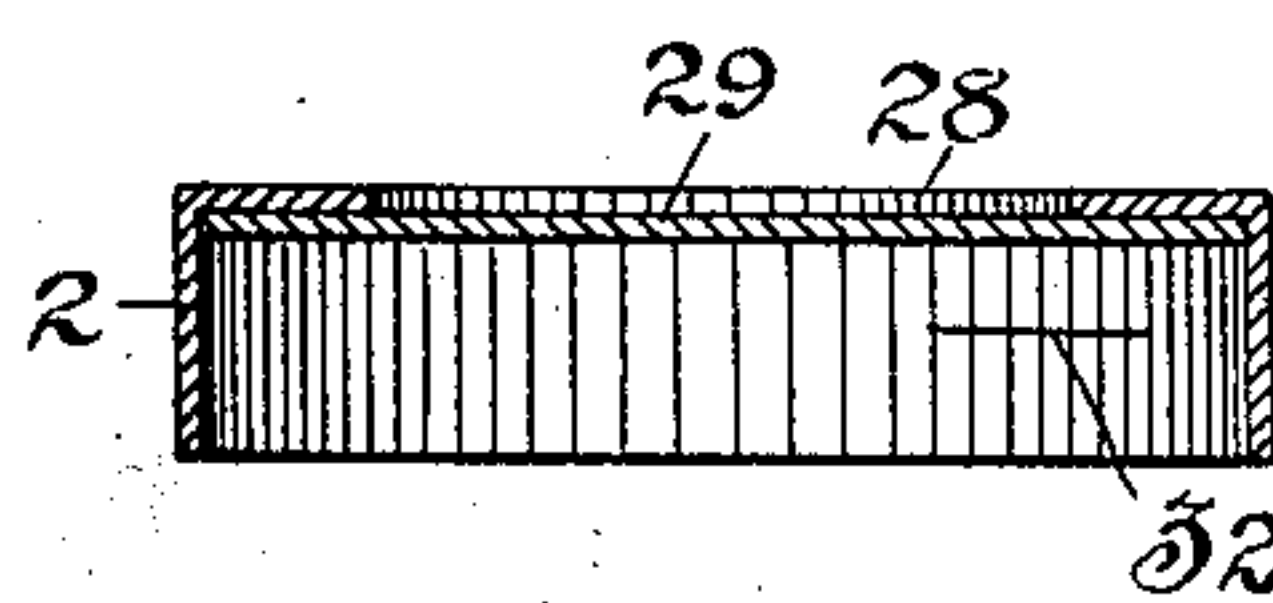
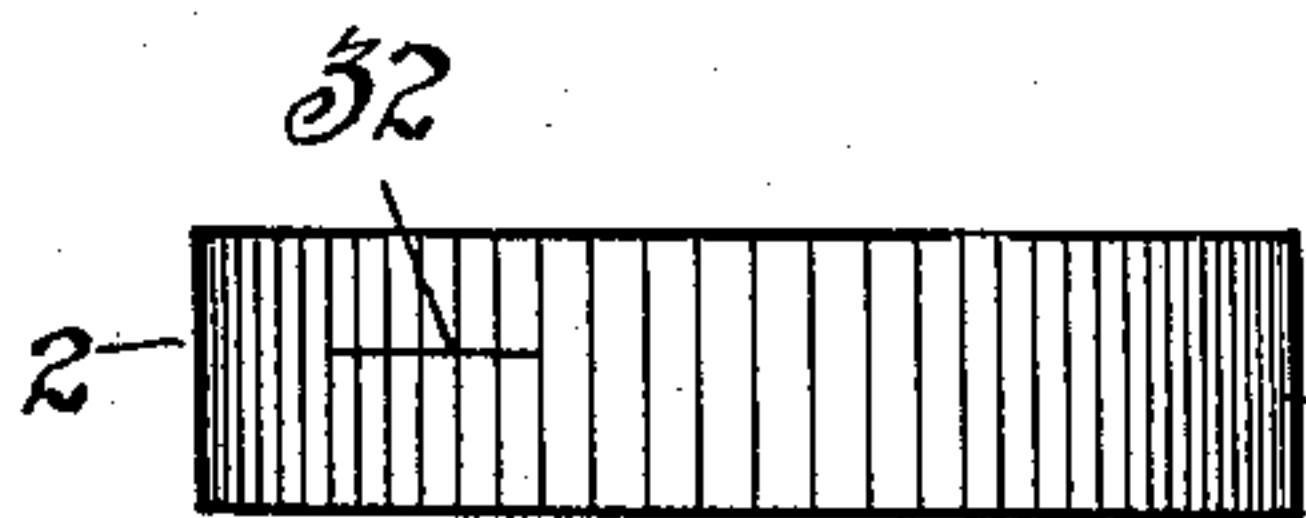
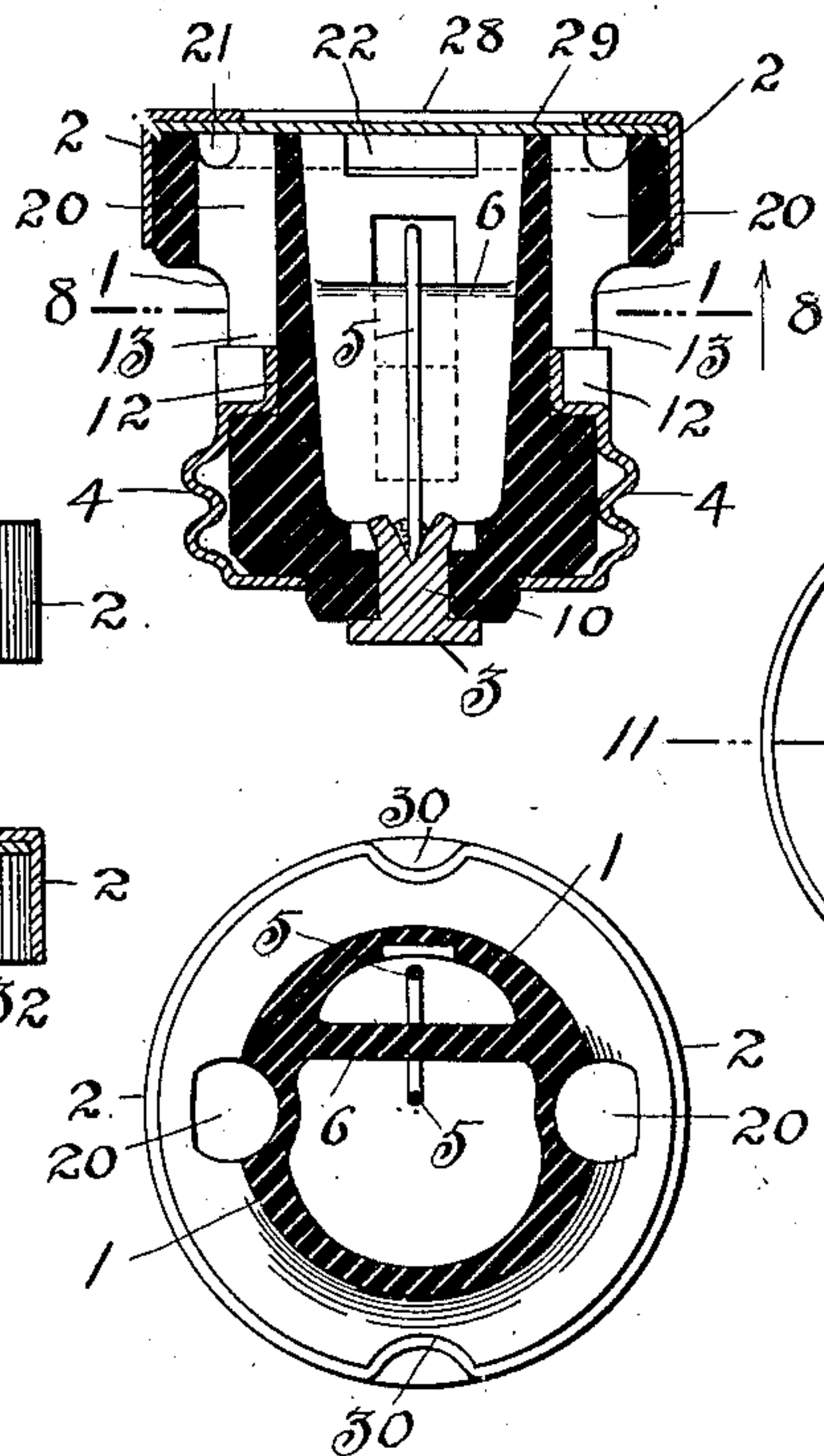
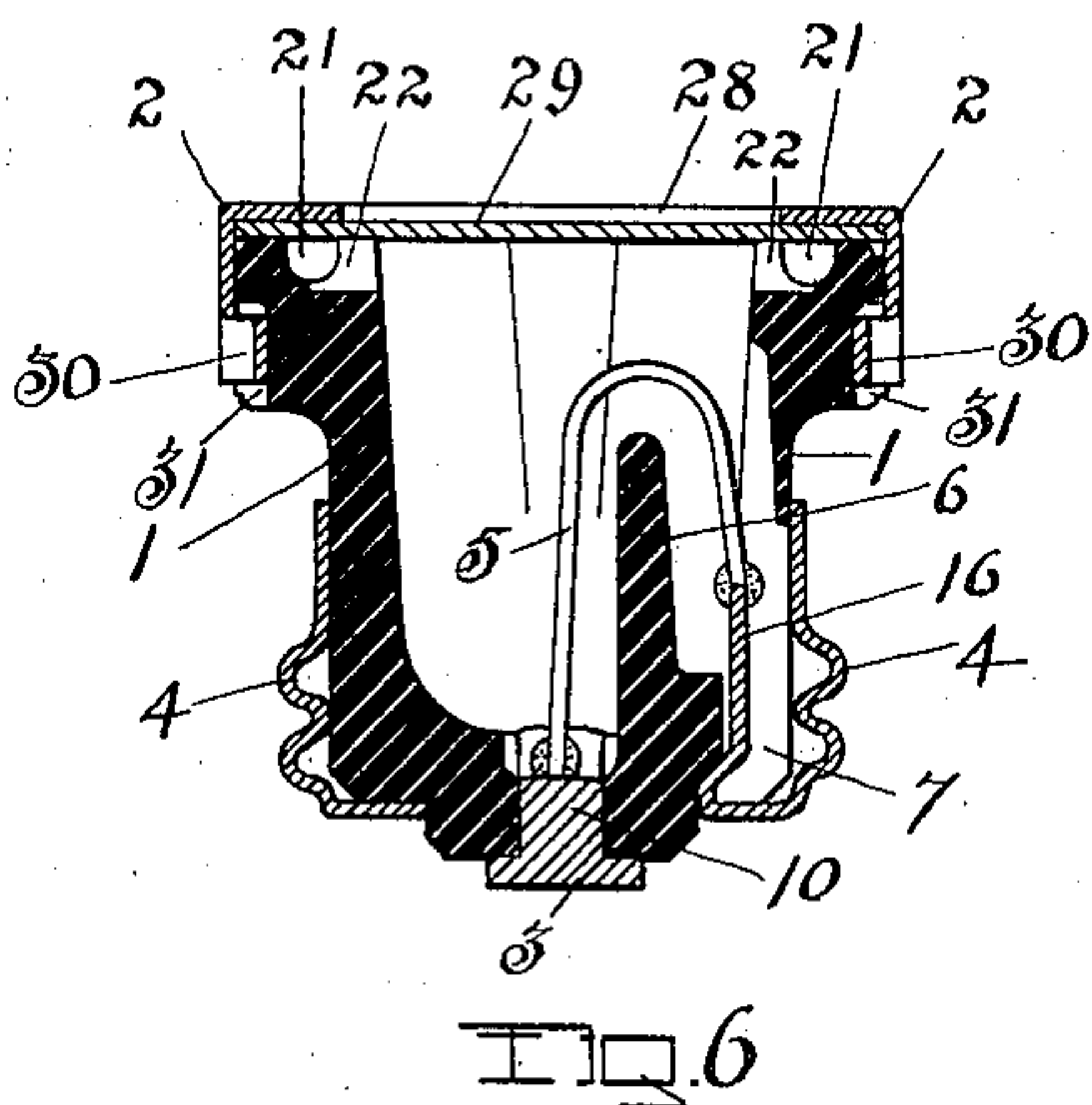
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2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

AUGUST WEBER, JR., OF SCHENECTADY, NEW YORK.

FUSE-PLUG.

No. 925,539.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed January 16, 1909. Serial No. 472,636.

To all whom it may concern:

Be it known that I, AUGUST WEBER, JR., a citizen of the United States, residing at Schenectady, county of Schenectady, and State of New York, have invented certain new and useful Improvements in Fuse-Plugs, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a top plan view of the base of my improved fuse-plug. Fig. 2 is a bottom plan view of the same. Fig. 3 is a view in side elevation of the same. Fig. 4 is a central, vertical section of the same taken on the broken line 4—4 in Fig. 1. Fig. 5 is a central, vertical section of the same taken on the broken line 5—5 in Fig. 1. Fig. 6 is a sectional view similar to Fig. 5, showing the fuse-plug complete. Fig. 7 is a sectional view similar to Fig. 4, showing the fuse-plug complete. Fig. 8 is a horizontal section of the plug taken on the broken line 8—8 in Fig. 7, viewed in the direction of the arrow. Fig. 9 is a bottom plan view of the cap detached. Fig. 10 is a view in side elevation of the same. Fig. 11 is a central, vertical section of the same taken on the broken line 11—11 in Fig. 9.

The invention relates to cap-covered fuse-plugs having provision for the escape of gases under pressure, due to the destruction of the fuse by an excessive current.

The principal object of the present invention is to cause the escaping gases to traverse a more direct or devious route in escaping from the interior of the plug.

Other objects of the invention will appear in connection with the following description.

Referring to the drawings, wherein the invention is shown in its preferred form, the fuse-plug comprises a hollow base, 1, of insulating material, having its outer open end closed by a cap, 2, an exterior contact-member, 3, on its inner end, an inclosing screw-shell, 4, adapted to connect with a suitable socket, and to form the other contact-member, and an inclosed fuse, 5, connecting said contact-members. The hollow base is pref-

erably made of die-molded porcelain of general cylindrical form, and has extending transversely of its interior a partition, 6, extending from the inner end of the plug part-way to the outer open end thereof, whereby the inner end of the plug is divided into two chambers or pockets. The fuse, 5, extends over the partition, 6, and is soldered or otherwise secured at one end to the split end of a post, 10, which projects from the exterior contact-member, 3, through an aperture, 8, interiorly of the plug, and at its other end to the tongue, 16, which is an integral part of the screw-shell, 4, projecting through an aperture, 7, in the wall of the base of the plug. The shell, 4, is adapted to receive the inner end of the base, upon which it is secured by introverting side portions, 12, of the shell into side recesses, 13, formed in the exterior of the base.

The base is provided with a pair of ventilating apertures, 20, which extend longitudinally through the wall of the base, and open exteriorly thereof adjacent to the respective recesses, 13. These ventilating apertures also form openings in the outer end-face of the base, where they communicate with the respective grooves, 21, also formed in the outer end-face of the base, and extending in opposite directions from the respective openings, 20, to a considerable distance from said ventilating apertures, the ends of said grooves remote from the respective ventilating apertures communicating with the interior of the base at, 22. The grooves, 21, are formed between a peripheral annular flange, 23, on the outer end of the base, and segmental flanges, 24, also formed on the outer end of the base, which segmental flanges or continuations thereof form barriers, 25, between the interior of the base and the respective ventilating apertures, 20, where the same form openings in the outer end of the base. The cap, 2, is adapted to cover the grooves, 21, and to cooperate with the respective barriers, 25, to close said grooves to the interior of the base at points opposite the respective ventilating apertures 20. The cap, 2, comprises in part a disk of mica, 29, which extends across a central aperture, 28, in the end wall of the cap. The body of the cap is preferably formed of sheet-metal, and is adapted to be secured upon the outer end of the base by introverting side portions, 30, of the cap-flange into side recesses, 31, formed in the exterior of the base near its outer end.

To facilitate the introversion of the side portions, 30, of the cap-flange, slits, 32, are formed in said flange extending circumferentially thereof at points opposite the respective recesses, 31, and portions of said flange extending from the edge thereof to said slits are forced into the respective recesses, 31, causing the cut-metal edges formed by the slits, 32, to abut upon overhanging portions of the base wall, as shown in Fig. 6, and thereby securely locking the cap upon the base.

With a fuse-plug constructed as above described, it is practically impossible for any portion of the molten metal caused by the melting of the fuse to blow out through the ventilating apertures, while free escape is provided for the heated gases produced by the melting of the fuse.

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

1. A base of insulating material for fuse-plugs provided in its outer end-surface with a ventilating groove communicating with the interior of the base, and with a ventilating aperture extending from said groove longitudinally through the wall of the base, and opening exteriorly thereof, and having a barrier formed by a continuation of the inner wall of said groove, separating said ventilating aperture from the interior of the base.

2. A base of insulating material for fuse-plugs having on its outer end an exteriorly located annular flange, and an interiorly located segmental flange separated from said annular flange by a ventilating groove in the outer end-surface of the base, and communicating at the ends of said segmental flange with the interior of the base, said base being provided with a ventilating aperture extending from said groove at a point approximately at the middle of said segmental flange, longitudinally through the wall of the base, and opening exteriorly thereof.

3. A base of insulating material for fuse-plugs having on its outer end an exteriorly located annular flange and a plurality of interiorly located segmental flanges separated, respectively, from said annular flange by grooves in the outer end-surface of the base

communicating at the ends of said segmental flanges with the interior of the base, said base being provided with ventilating apertures extending from intermediate points in the respective grooves, longitudinally through the wall of the base, and opening exteriorly thereof.

4. In a device of the class described, the combination with a base of insulating material provided in its outer end-surface with a ventilating groove communicating with the interior of the base, and with a ventilating aperture extending from said groove longitudinally through the wall of the base, and opening exteriorly thereof, and having a barrier formed by a continuation of the inner wall of said groove, separating said ventilating aperture from the interior of the base; of a cap attached to the outer end of said base, and coöperating with said barrier to close said groove to the interior of the base, at a point opposite said ventilating aperture.

5. In a fuse-plug, the combination with a base of insulating material having an interiorly located partition, and provided in its outer end-surface with a ventilating groove communicating with the interior of the base, and with a ventilating aperture extending from said groove longitudinally through the wall of the base, and opening exteriorly thereof, and having a barrier formed by a continuation of the inner wall of said groove, separating said ventilating aperture from the interior of the base; of a pair of exterior contact members attached to said base, and having terminals extending through suitable apertures in said base, interiorly thereof, on opposite sides of said partition; a fuse extending over said partition and connected at its ends to said respective terminals; and a cap attached to the outer end of said base, and coöperating with said barrier to close said groove to the interior of the base, at a point opposite said ventilating aperture.

In testimony whereof, I have hereunto set my hand this 11th day of January, 1909.

AUGUST WEBER, JR.

Witnesses:

MAY C. LAWSON,

MABEL L. MALLORY.