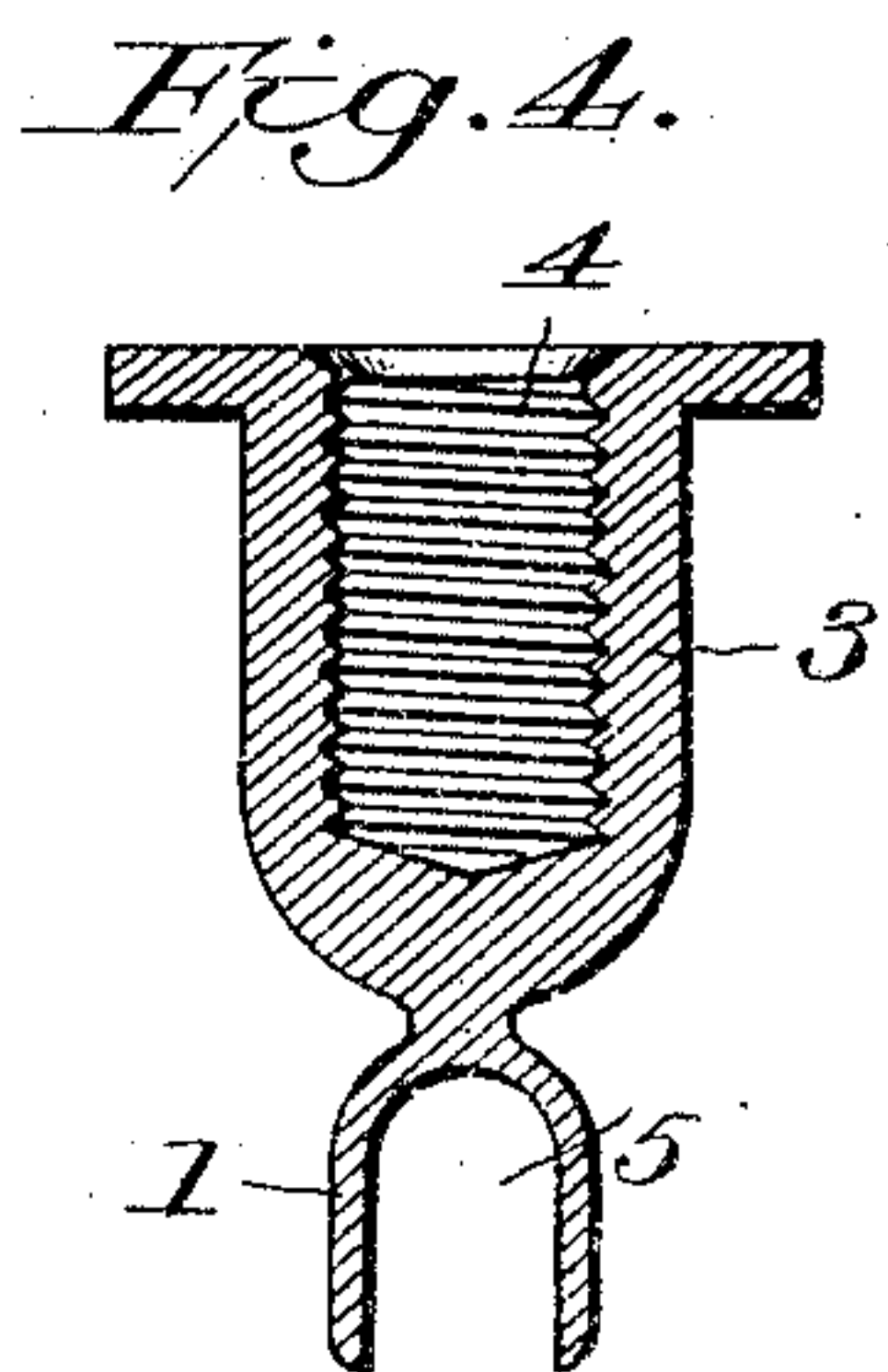
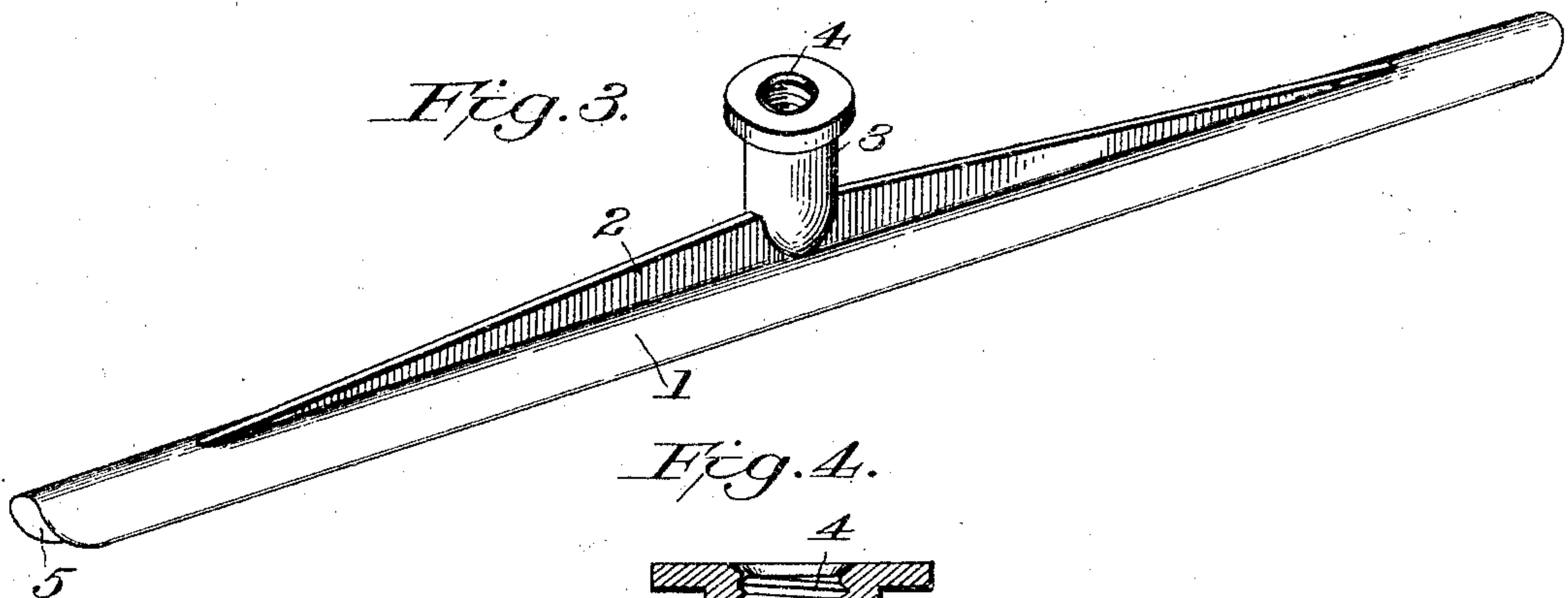
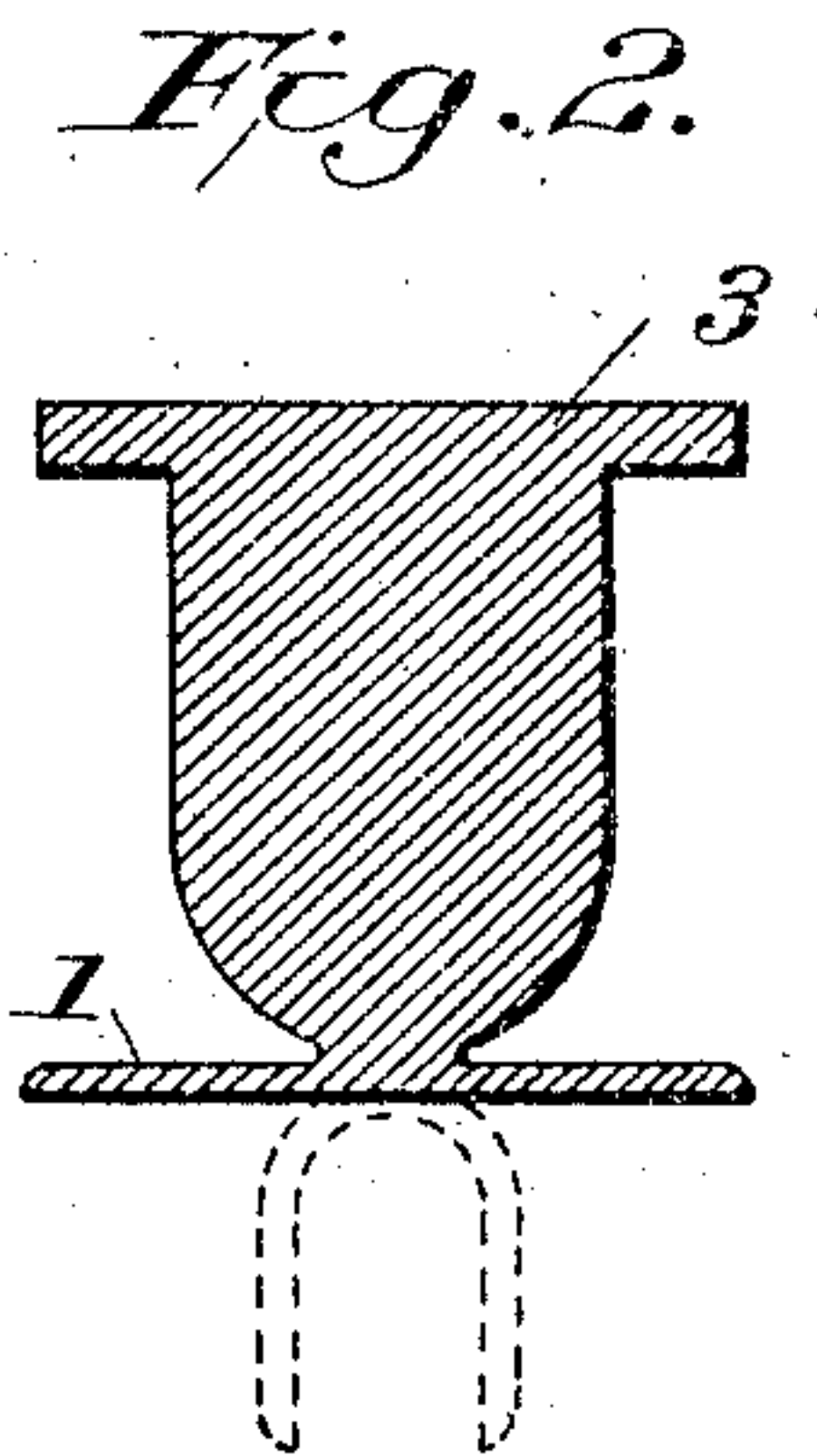
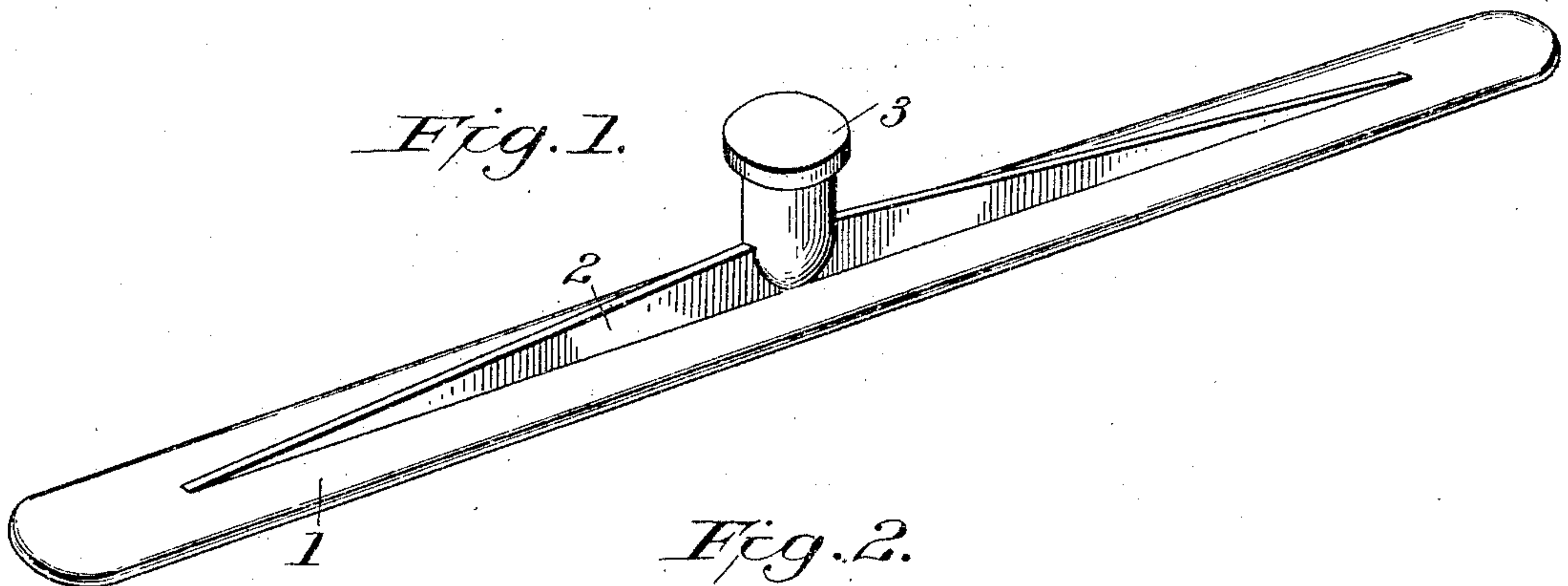


J. H. CALLENDER.
 EAR FOR TROLLEY WIRES.

APPLICATION FILED JUNE 14, 1907. RENEWED MAR. 25, 1910.

958,906.

Patented May 24, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

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EAR FOR TROLLEY-WIRES.

958,906.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed June 14, 1907, Serial No. 378,949. Renewed March 25, 1910. Serial No. 551,585.

To all whom it may concern:

Be it known that I, JAMES H. CALLENDER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Ears for Trolley-Wires, of which the following is a full, clear, and exact description.

The object of this invention is to manufacture ears for suspending overhead trolley wires or conductors in an economical manner, and without the labor and waste incident to the common practice. As is known, these ears are of brass, and in making them, a solid brass casting is produced, of the rudimentary shape of the finished ear, and this is then milled or machined to produce the groove in which the trolley wire is secured. This mode of cutting the groove is laborious, results in a relatively small output, and consequently is expensive, and it involves the cutting away of a considerable quantity of metal, and unless the blank is set and cut with the utmost care, the walls of the groove are apt to be of uneven thickness and more or less irregular. These ears are also cast cored and milled out afterward, but this mode of production is hardly less objectionable than that first described, in point of cost and irregularity in the thickness of the walls.

By the present invention, the rudimentary ear is a cast blank, made with a flat flange, which is, if necessary, filed smooth on one side, and then it is bent to shape to form the groove, thus saving the cutting of the groove and the waste of metal incident to such cutting, and resulting in a greatly increased output.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the blank. Fig. 2 is a cross-section through the center, on a larger scale, and indicating by dotted lines the formation of the groove for the wire. Fig. 3 is a perspective view of the finished ear. Fig. 4 is a cross-section through the center of the finished ear, on a larger scale.

In the ordinary practice, a blank or rudimentary ear is cast, the portion in which the groove is made being solid and requiring to be machined or milled out to form the groove. As already stated, this is a labori-

ous operation, requiring skilled labor, and resulting in waste of metal and frequently occasioning imperfect work. This grooving out in a milling machine, as stated, involves loss by scrap to a very material extent, and in addition the product of any one machine is comparatively small. The blank has to be chucked, the tools set and differently adjusted for each ear, owing to the inevitable variations in the several castings, and the finished ear is likely to have the walls of its groove vary in thickness.

In the present invention, a blank is cast, as shown in Figs. 1 and 2, having a flat flange 1 with rounded ends, a central spine 2 and a boss 3, all of which constitute the essential parts of the ear in an integral structure and practically in their finished shape. To complete the ear for use, the boss is screwthreaded, as shown at 4 in Figs. 3 and 4, to receive the screw of a suitable insulator or support, and the flange 1 projecting substantially equidistant upon opposite sides of the spine is then bent downwardly upon opposite sides of the spine, as indicated by the dotted lines in Fig. 2, to form the groove 5 as shown in Figs. 3 and 4. This bending is effected by means of a die and a suitable framing-up press, and the results are that the ears may be produced very cheaply and quickly in large quantities, at considerable economy of labor and material and with a perfectly accurate groove, whose sides are uniformly even and of the same thickness.

The groove formed by the bending down of the flange is of a width about equal to the diameter of the wire to be applied thereto, but the depth of the groove thus formed is greater than the diameter of the wire, and when the wire is placed in the groove, the edges of the flange are curled or rolled about the wire and completely envelop the wire throughout the length of the ear.

The trolley wire or conductor, not shown, may be applied in any approved way, and without soldering, if desired. The ear and the trolley wire are connected by bending down the sides of the flange upon opposite sides of the spine so that they are curled or rolled over the wire toward each other by any suitable means, and the wire is thus securely held without soldering, if desired, and the rounded ends of the flange constitute beveled edges embracing the wire

at the ends of the ear, thereby forming a practically continuous run or contact surface at the juncture between the ear and wire, and thus avoiding any jumping and consequent sparking when the trolley wheel passes over the ear. If necessary, the beveled edges of the ends of the ear after the ear is put in place may be filed to effect a smoothness and continuity of contact surface where the wire enters the ear.

What I claim is:—

1. A trolley ear, constructed of a single casting having a spine, a flange projecting substantially equi-distant throughout its length upon opposite sides of said spine, and a boss projecting from said flange and spine, the said flange bent downwardly upon opposite sides of said spine to form a groove of a depth greater than the diameter of the wire to be held therein, whereby the said flange may be bent about the wire to completely envelop the same throughout the length of the ear.

2. A trolley ear, constructed of a cast blank having a central spine, a flange projecting substantially equi-distant throughout its length upon opposite sides of said spine and having rounded ends, and a boss projecting from said flange and spine, the said flange bent downwardly upon opposite sides of the spine to form a groove of a depth of greater diameter than the diameter of the wire to be applied thereto, the edges of said flange adapted to be bent about the wire to completely envelop the same throughout the length of the ear, and the rounded ends of said flange constituting beveled portions extending toward the contact surface, and the said boss screwthreaded to receive a support.

In testimony whereof I have hereunto set my hand this 13th day of June A. D. 1907.

JAMES H. CALLENDER.

Witnesses:

MABEL T. DECKER,
THOMAS R. MARTIN.