

F. BISHOP.
 REED FOR AUTOMOBILE HORNS.
 APPLICATION FILED JULY 30, 1910.

994,498.

Patented June 6, 1911.

Fig. I.

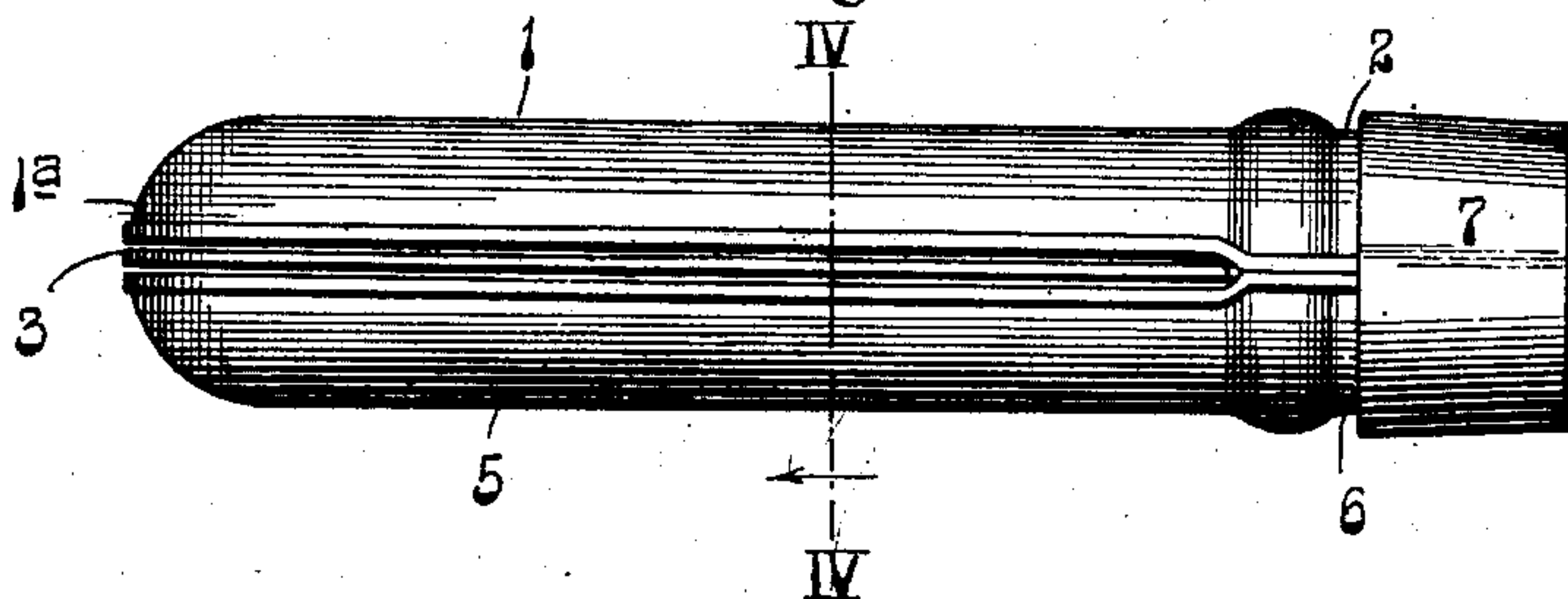


Fig. II.

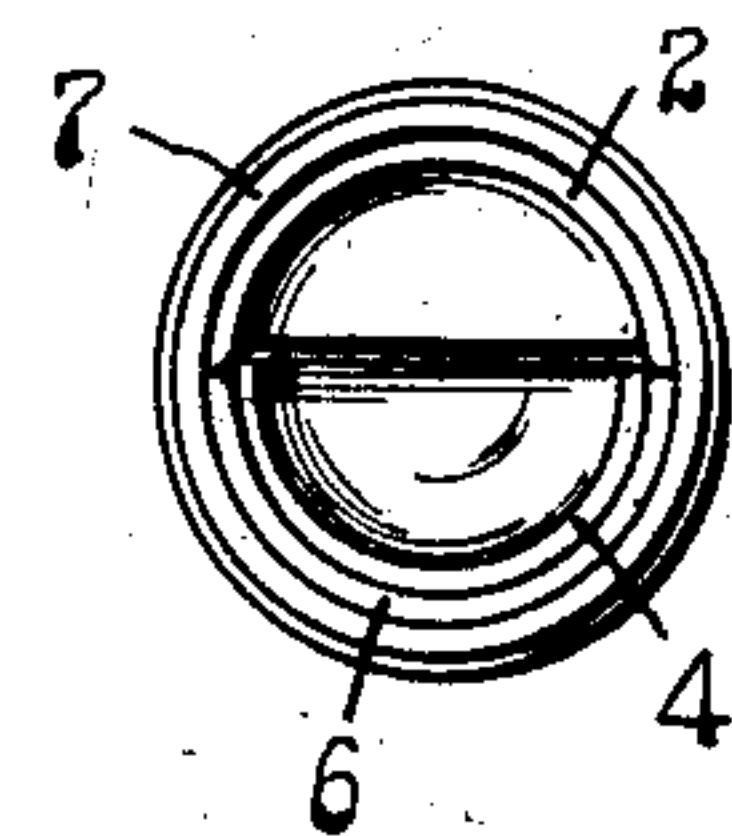


Fig. III.

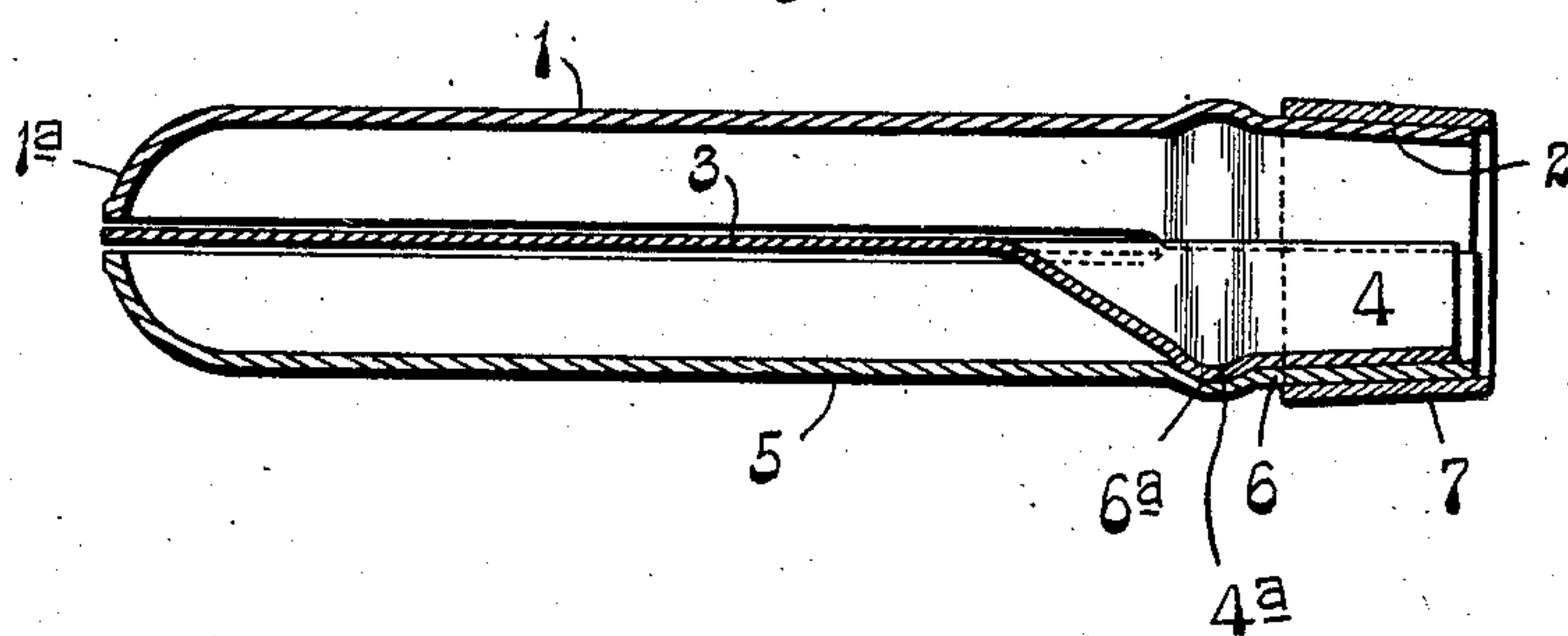


Fig. IV.

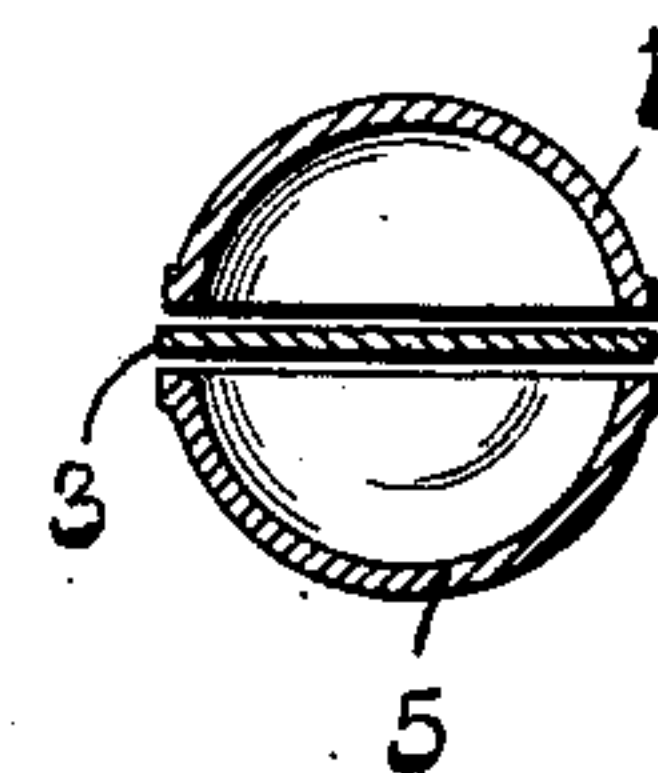
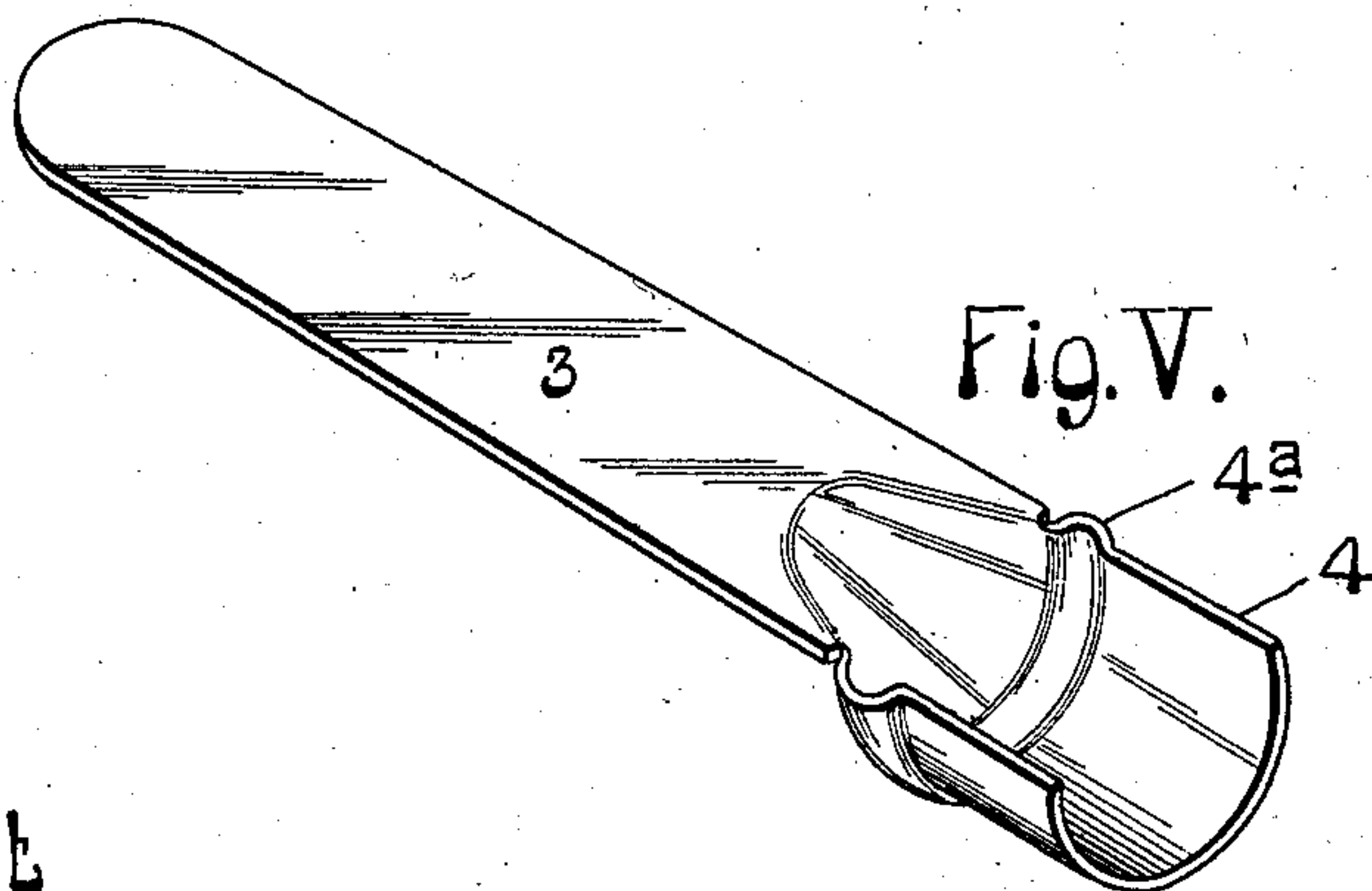


Fig. V.



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UNITED STATES PATENT OFFICE.

FRANK BISHOP, OF ST. LOUIS, MISSOURI.

REED FOR AUTOMOBILE-HORNS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK BISHOP, a citizen of the United States of America, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Reeds for Automobile-Horns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a reed for an automobile horn, and it has for its object the production of a reed of this description so constructed as to eliminate liability of impairment of the reed by handling it, and further, to produce a reed in the use of which a more prolonged sound may be obtained than is possible in the use of reeds now commonly in use.

The horn reed now most commonly in use comprises a reed body and a vibratory tongue at one side of the reed body adapted to vibrate to and from said side. This tongue is exposed, and therefore, when the reed is handled, the tongue is liable to become bent or distorted so that it will not perform its proper function, such bending or distortion being the most commonly due to the application of pliers to the reed for the purpose of removing it from its usual seat in the horn when it is necessary to clean the reed. By my improvement, I so protect the vibratory tongue that pliers may be used upon the reed without liability of the tongue being injured or displaced. The protecting means also serves to limit the degree of vibration of the vibratory tongue with the result of preventing undue rapid escape of air from the bulb used with the horn to which the reed is applied.

Figure I is a side elevation of my reed. Fig. II is an elevation of the rear end of the reed. Fig. III is a longitudinal section taken through the reed. Fig. IV is a cross section taken on line IV—IV, Fig. I. Fig. V is a perspective view of the vibratory tongue and its shank.

In the accompanying drawings: 1 designates the body of my reed having a shank 2. This body is of segment shape in cross section, and is closed at its front end by a curved end wall 1^a.

3 designates a vibratory tongue opposing the open side of the reed body, and adapted to vibrate to and from said body. This tongue is flat in shape where it opposes the

open side of the reed body, and it is carried by a shank 4, of segment shape in cross section. The arch of the tongue shank extends in a direction away from the open side of the shank of the reed body, as seen most clearly in Figs. II and III, thereby providing for the free passage of air through the rear end of the reed after it has entered the reed body between the vibratory tongue and the open side of said body.

5 designates a guard, of segment shape in cross section. This guard corresponds in shape substantially to the shape of the reed body 1, and it is located parallel with said reed body so that its open side faces the side of the vibratory tongue 3, opposite that that is faced by the reed body. The guard 5 is provided with a shank 6 which opposes the shank 4 of the vibratory tongue. The shanks of the reed body and the guard 5 are held assembled by a clamping ring 7, which encircles them, and which, by holding the reed body and the guard in assemblage, also serves to hold the shank of the vibratory tongue between the shanks of the first mentioned parts. It is well to here note that as an additional means of securing said parts to each other, solder is preferably applied to the joints of the shanks and the clamping ring after the parts have been assembled.

It will be noted now on referring to Figs. III and V, that the shank of the vibratory tongue 3 is provided with an outwardly jutting transverse bead 4^a, and also on referring to Fig. III, that the shank of the guard 5 is provided with an internal transverse groove 6^a in which the bead 4^a is seated. This construction provides for the vibratory tongue 3 being firmly held against longitudinal displacement in the reed, so that it will always be in proper position to perform its office.

It will be plainly apparent that the guard 5 of my reed serves in conjunction with the reed body 1 to so house the sides of the vibratory tongue of the reed as to permit handling of the reed in any usual manner, including the application of implements to the reed for the purpose of removing it from the horn, and without any liability of said tongue being injured by such handling. It will be further apparent that, due to the presence of the guard 5, the vibrations of the vibratory tongue are limited in degree, and consequently, there is only sufficient vi-

bratory action to provide for the production of a sound desired to be produced by the use of the reed without waste of air forced through the reed from the air chamber, such as that in any ordinary bulb used with an automobile horn. By eliminating this waste of air, I make it possible to produce a much longer sound than would be produced in the use of reeds that permit the unnecessary passage of air therethrough.

I claim:

1. A reed comprising a body of segment shape in cross section, a vibratory tongue facing the open side of said body, and a guard facing said tongue.

2. A reed comprising a body of segment shape in cross section, a guard facing the open side of said body, and a vibratory tongue between said body and guard, the body and guard having shanks held in assemblage with each other.

3. A reed comprising a body of segment shape in cross section, a guard facing the open side of said body, a vibratory tongue between said body and guard, the body and guard having shanks held in assemblage with each other, and said tongue having a shank confined between the shanks of the body and guard.

4. A reed comprising a body, a guard fac-

ing said body, and a vibratory tongue between said body and guard, the body and guard having segment shaped shanks facing each other, and said tongue having a segment shaped shank fitting in the shank of the guard.

5. A reed comprising a body, a guard facing said body, and a vibratory tongue between said body and guard, the body and guard having segment shaped shanks facing each other, and said tongue having a segment shaped shank fitting in the shank of the guard, said last named shanks being provided with means for preventing longitudinal movement of said tongue relative to said guard.

6. A reed comprising a body, a guard facing said body, and a vibratory tongue between said body and guard, the body and guard having segment shaped shanks facing each other, and said tongue having a segment shaped shank fitting in the shank of the guard, said last named shanks having transverse bead and groove engagement with each other, substantially as and for the purpose specified.

FRANK BISHOP.

In the presence of—

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