

C. F. BLOOM.
TRACE FASTENER.
APPLICATION FILED APR. 12, 1910.

979,369.

Patented Dec. 20, 1910.

Fig. 1

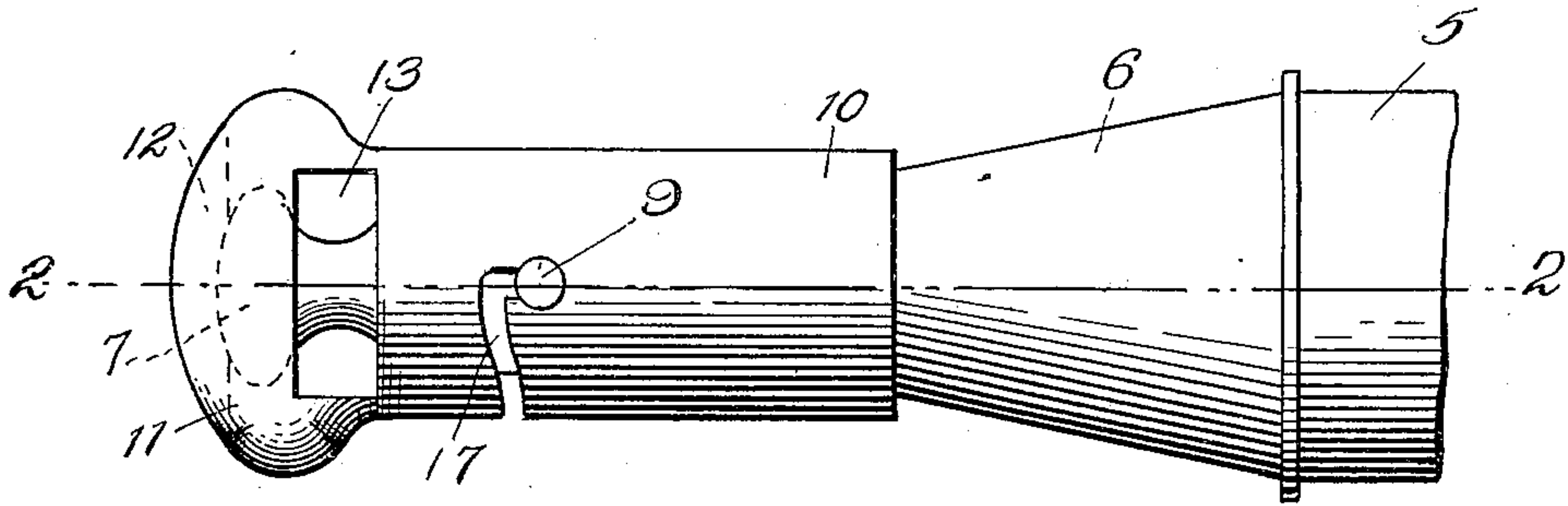


Fig. 2

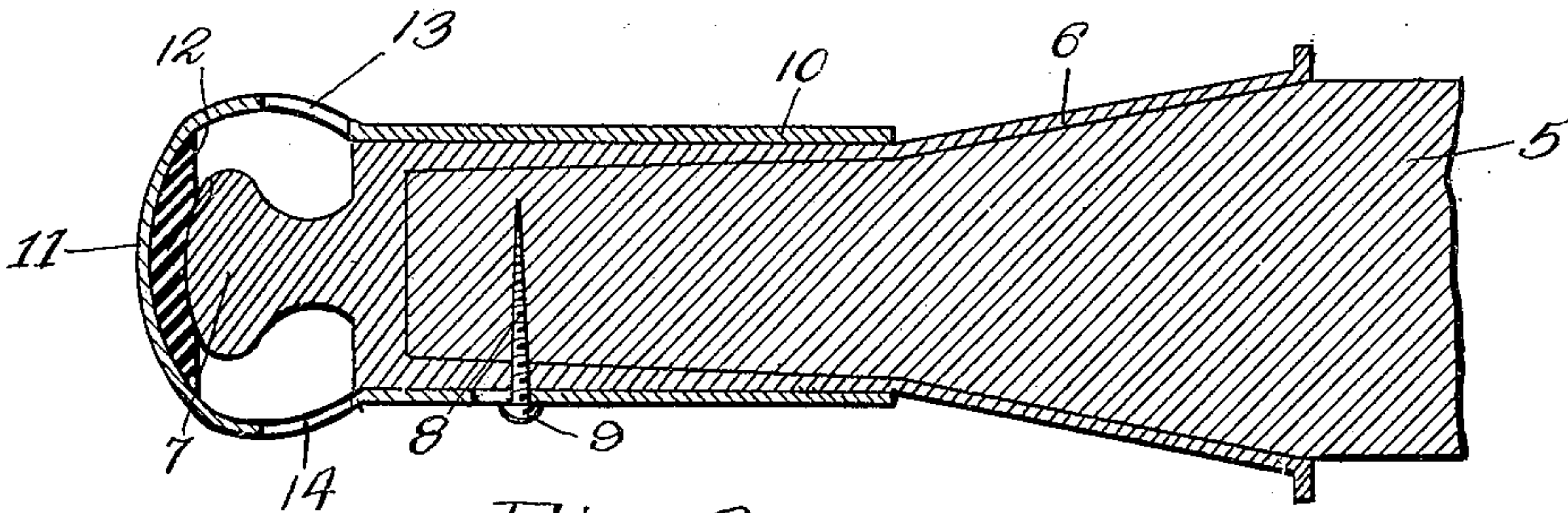
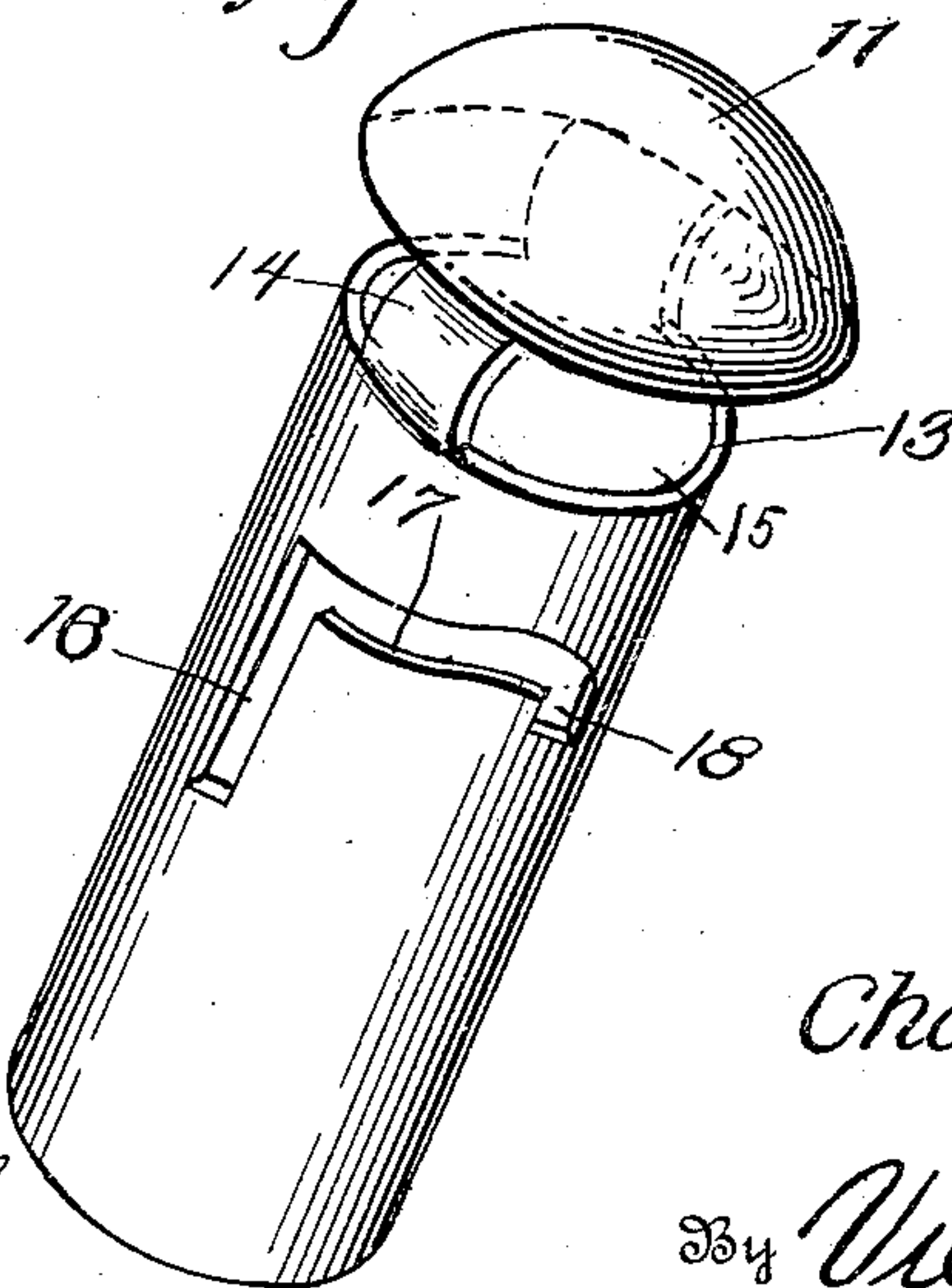


Fig. 3



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TRACE-FASTENER.

979,369.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed April 12, 1910. Serial No. 555,007.

To all whom it may concern:

Be it known that I, CHARLES F. BLOOM, a citizen of the United States, residing at Brady, in the county of Lincoln and State of Nebraska, have invented new and useful Improvements in Trace-Fasteners, of which the following is a specification.

This invention relates to improvements in trace fasteners and has for its object the provision of a device of that kind adapted to be applied to the ends of a whiffletree to engage with the rear ends of the traces and securely hold the same against accidental disengagement from the whiffletree.

One object of the device is the provision of a sliding sleeve arranged upon the ferrule at the end of a whiffletree, the said sleeve being provided with a bayonet slot one portion of which has a curved side to engage with a pin carried by the whiffletree or ferrule, and when so engaging to clamp the end of the sleeve over the end of the tug hook, whereby outward movement of the trace end in engagement with a tug hook will be positively prevented.

With these and other objects in view, which will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

In the accompanying drawings, forming a part of the specification;—Figure 1 is a side elevation of one end portion of a whiffletree provided with my improved device. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detail perspective of the sleeve.

Similar numerals of reference are employed to designate corresponding parts throughout.

The whiffletree is designated by the numeral 5 and is of well-known construction. The device about to be described is shown positioned on one end of the whiffletree. It will be understood, however, that the opposite end will be provided with a similar device. As shown in the drawings the end of the whiffletree is tapered, and fitted over the said tapered end is a ferrule 6, the outer end of which is provided with a trace tug 7. The ferrule is fixedly secured on the whiffletree by means of a screw 8 the threaded

shank of which extends through an opening in the upper side of the ferrule and into the whiffletree. A portion of the shank of the screw 8 extends upwardly from the ferrule, so that the head 9 of the said screw will be considerably spaced from the surface of the ferrule for a purpose to be presently described.

The locking sleeve comprises a tubular element designated in general by the numeral 10 and is somewhat less in length than the length of the ferrule and of a diameter to nicely receive the free end portion of the ferrule. The sleeve is closed at one end, as shown at 11, the said closed end being elliptical in contour and provided on its inner surface with a rubber or resilient cushion designated by the numeral 12.

Formed in the sleeve 10 and adjacent to the closed end thereof are a pair of oblong transverse spaced openings designated by the numerals 13 and 14. The position of these openings is such that when the closed end 11 of the sleeve bears on the end of the tug 7, the said openings will be in alinement with the shank of the tug. The openings are somewhat greater in length than the width of the ordinary trace and the metal between the said openings is bulged outwardly, as shown at 15.

Formed in the sleeve 10 and between one of said openings and the inner end of the sleeve is a bayonet slot. One portion of this slot extends longitudinally of the sleeve and is in alinement with the portion between two adjacent ends of the said oblong openings, as shown at 16, the end of the slot adjacent to the said oblong openings terminating in a lateral extension 17 extending to a point substantially in alinement with the medial portion of one of said oblong openings. The lateral extension 17 of the bayonet slot is so positioned that when the closed end of the sleeve bears on the tug 7 the stud 8 will be in alinement with the said lateral extension, whereby turning movement of the sleeve will lock the parts in such position that the cushion 12 on the inner face of the closed end 11 will bear on the end of the tug 7.

It will be observed now by reference to the drawings that the sides of the lateral extension 17 of the bayonet slot curve outwardly and inwardly, with respect to the outer and inner ends of the sleeve and when

it is remembered that the screw 8 is at the juncture of the slots 16 and 17 and the cushion bears on the extremity of the tug 7, it will be evident when the sleeve is turned 5 laterally that by virtue of the curved sides the cushion 11 will be depressed against the extremity of the tug until the screw is at the end of the extension 17. It will be 10 further observed now by reference to the drawings that the inner end of the extension 17, or that remote from the slot 16 is provided on its inner side with a socket 18 to receive the screw 8, after the screw is at the inner end of the extension 17, since it 15 will be obvious that the resilient cushion 12 will by its own resiliency move the sleeve outwardly when the screw is in alinement with the socket.

In the use of the device and when it is 20 desired to apply a trace to the tug the sleeve is moved outwardly until the shank of the bolt 8 is at the inner end of the portion 16 of the slot. When the parts are so positioned the openings 13 and 14 will be in vertical alinement and beyond the tug 7, thus 25 permitting the rear end of the trace to be inserted through the openings after which the sleeve is moved inwardly until the tug passes through the cockeye of the trace and 30 bears on the cushion 12, after which the sleeve is turned forwardly until the bolt 8 is at the inner end of the extension 17, whereupon the parts will be locked as before described.

35 From the foregoing, it is evident that I have provided a device which is comparatively simple in structure and inexpensive in manufacture, embodying few parts and these so arranged that the danger of de- 40 rangement will be reduced to a minimum.

I claim:—

1. In a trace fastener the combination with a whiffletree provided at one end with a tug hook and further provided with a 45 radial stud adjacent to the said hook, of a sleeve slidably fitted on one end portion of said whiffletree having trace openings adjacent to its outer end and further provided with a bayonet slot to receive said 50 stud, said bayonet slot cooperating with the stud to lock the sleeve in such position that

the trace openings will be in alinement with the tug hook.

2. A trace fastener comprising a ferrule provided at one end with a tug hook, and 55 further provided adjacent to the said tug hook with a radial stud, a sleeve slidably fitted on the ferrule and closed at its outer end and provided adjacent to said closed 60 outer end with trace openings, said sleeve being further provided with a bayonet slot to receive said stud, said slot and stud operating to lock the trace openings in alinement with the tug hook and the closed end of said sleeve bearing on said tug hook. 65

3. A trace fastener comprising a ferrule terminating at one end in a tug hook having an elongated shank provided with an oblong head, and further provided with a radial 70 stud adjacent to said tug hook, a sleeve slidably fitted on said ferrule having a closed end and further provided adjacent said closed end with trace receiving openings, said sleeve being further provided with a bayonet slot to receive said stud, one por- 75 tion of said slot extending longitudinally of the sleeve and permitting the closed end of the latter to be moved into and out of engagement with the head of said tug hook, the other portion of said bayonet slot ex- 80 tending transverse the sleeve and cooperating with the stud to clamp the closed end of the sleeve on the head of the hook.

4. In a trace fastener the combination with a ferrule provided at one end with a 85 tug hook, and further provided adjacent said tug hook with a radial stud; of a sleeve to receive said ferrule having one end closed and provided with a trace opening, a cushion on the inner face of the closed end 90 of the sleeve, said sleeve being further provided with a transverse slot to receive the stud, said slot having curved sides to engage with the stud and operating to move the said cushion into binding engagement 95 with the said tug hook.

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

CHARLES F. BLOOM.

Witnesses:

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