

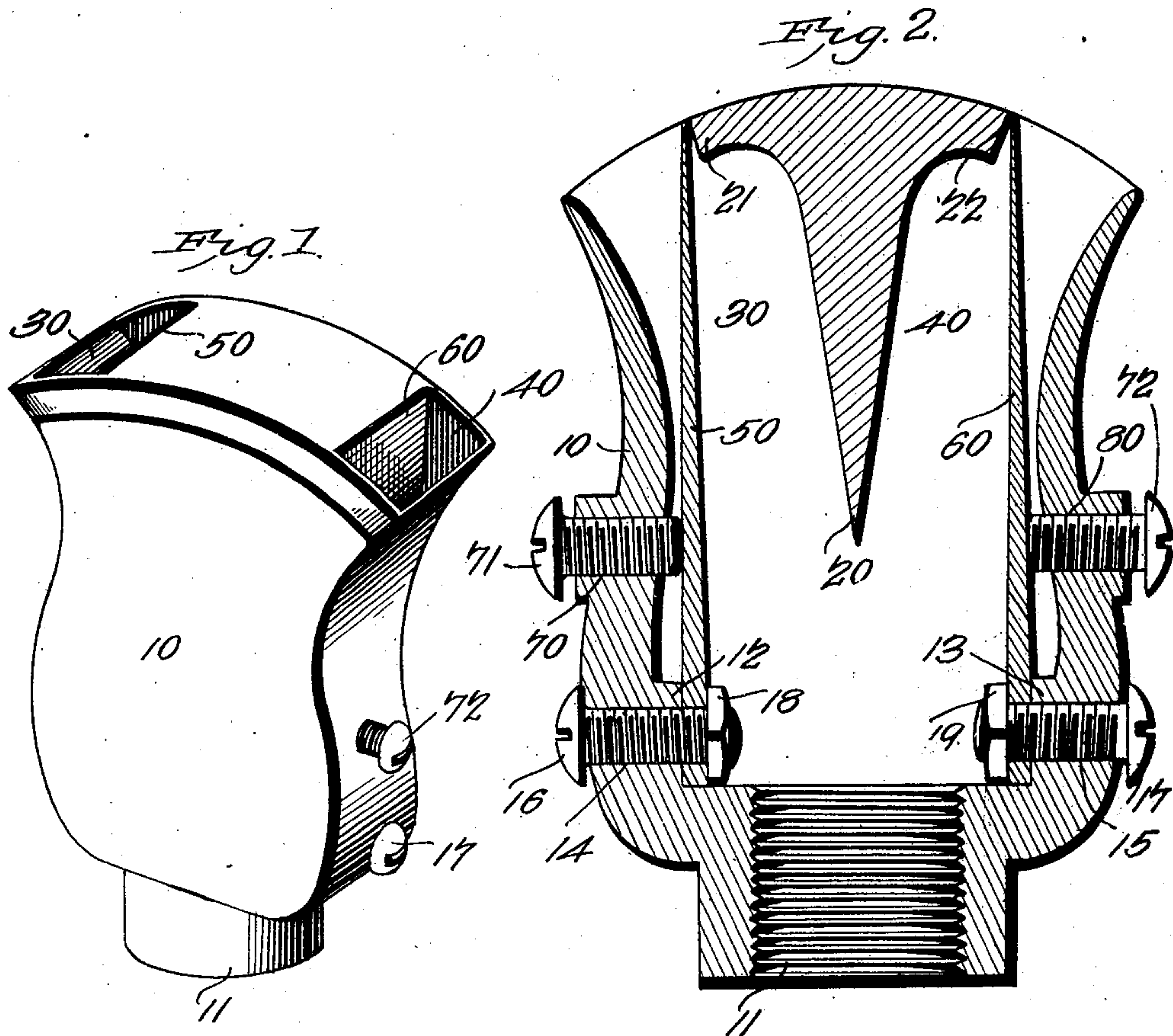
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Patented Oct. 28, 1902.

I. ANDERSON.
STEAM WHISTLE.

(Application filed Nov. 27, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC ANDERSON, OF SAGINAW, MICHIGAN.

STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 712,233, dated October 28, 1902.

Application filed November 27, 1901. Serial No. 83,903. (No model.)

To all whom it may concern:

Be it known that I, ISAAC ANDERSON, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented a new and useful Steam-Whistle, of which the following is a specification.

This invention relates generally to steam-whistles, and particularly to that class employing a plurality of reeds to give a musical effect to the sound produced.

The object of the invention is to provide a whistle of this character in which a single jet or current of steam or other operating fluid may be employed for operating a plurality of reeds without necessitating the dividing of the casing or steam-chamber into a plurality of separate compartments each containing a reed, by which arrangement the construction of the whistle as a whole is simplified and its cost of production proportionately diminished.

A further object is to provide a novel form of adjusting mechanism for the reeds whereby their tone may be changed at will or where it is desired that the reeds shall have a predetermined pitch that this may be retained at all times.

The salient feature of the present invention and that which differentiates it from whistles of this character as heretofore constructed is combining with the reeds a fluid dividing and deflecting device in the nature of a depending septum of less length than the casing and operating first to divide or split the entering current or jet of operating fluid and then to deflect it laterally against the reeds. The septum is arranged at the free ends of the reeds and forms in conjunction therewith a plurality of chambers—in this instance two—into which the operating fluid passes, and being thus confined in a small space it will escape with great violence, and thereby vibrate the reeds. The contour of the walls of the septum impinged by the steam is such as positively to direct the fluid against the reeds, thereby effecting its free escape and operating in an obvious manner to prevent condensation, which would occur if the steam were permitted to escape into a chamber having its top spaced some distance above the free ends of the reeds.

With the objects stated in view and others that will appear as the nature of the invention is better understood the same consists in the novel construction and combination of parts of a steam-whistle, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in these drawings—

Figure 1 is a view in perspective of a whistle embodying this invention. Fig. 2 is a view in sectional elevation thereof.

Referring to the drawings, 10 designates the casing or body of the whistle, which may be constructed of any suitable material and preferably in the form of an inverted bell having flattened parallel sides. The lower portion of the casing is provided with an internally-screw-threaded neck 11, adapted to be connected with a pipe leading from the source of supply of the operating fluid, the term "fluid" hereinafter employed being generic either to steam, air, or gas, as from a gasoline-exhaust.

Arranged within the casing a short distance above the openings in the neck are two oppositely-disposed shoulders 12 and 13, having screw-threaded apertures 14 and 15 therein which extend through the walls of the casing and are adapted to receive screw-threaded bolts 16 and 17, the inner ends of which project through openings formed in the reeds 50 and 60 and carry nuts 18 and 19 to clamp the reeds in place against the shoulders 12 and 13.

Depending from the top of the casing is a wedge-shaped septum or partition 20, which is by preference integral with the casing and terminates some distance above the bottom thereof, as clearly shown in Fig. 2. This septum divides the upper portion of the casing into two chambers 30 and 40, which merge into a common chamber at the lower portion thereof, the sharpened edge of the septum being disposed in diametric relation with the opening in the neck 11, and thereby divides

the entering operating fluid into two currents without retarding or interfering with the pressure thereof. The upper portion of the septum is provided with two laterally-projecting extensions 21 and 22, terminating in square shoulders, against which the free ends of the reeds normally bear, the under sides of the projections being curved to form deflecting-surfaces which operate to direct the fluid laterally into contact with the reeds.

The reeds 50 and 60 are preferably made thicker at their point of attachment to the casing than at their free ends, which latter are disposed within the chambers 20 and 30 and normally bear against the shoulders of the deflecting-surfaces 21 and 22, as clearly shown in Fig. 2.

As a means for adjusting the reeds whereby to regulate their pitch two adjusting-screws 71 and 81 are employed, which are seated in screw-threaded orifices 70 and 80 and bear at their inner ends against the reeds. By turning the screws the reeds are caused to impinge the shoulders of the deflecting-surfaces with the pressure requisite to cause either a shrill or a deep tone, and the screws being freely exposed to view renders it easy to adjust the reeds without removing the casing from the fluid-supply pipe. The reeds are wholly disposed within the casing, and are thus positively protected against injury.

In the operation of this whistle the fluid enters the casing and is split into two currents by the septum, which diverge and impinge the curved deflecting-surfaces, by which they are deflected laterally against the reeds, which latter are forced out of engagement with the shoulders of the deflecting-surfaces and are caused to vibrate, and thus produce the desired sound.

The casing and septum are by preference formed integral, and by this arrangement a simply-constructed and easily-cast article is presented. The reeds are so associated with the casing as to permit of their being readily

removed and replaced at will without necessitating detachment of the casing from the fluid-supply pipe, and the device as a whole is devoid of intricate parts that are likely to become deranged in use.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A whistle comprising a casing provided with escape-openings, reeds having their free ends disposed within the openings, and fluid-deflecting means arranged contiguous to the said ends of the reeds.

2. A whistle comprising a casing provided with escape-openings, reeds having their free ends disposed within the openings, and fluid dividing and deflecting means arranged contiguous to the said ends of the reeds.

3. A whistle comprising a casing, a plurality of reeds housed therein, and a depending wedge-shaped septum provided with curved deflecting-surfaces.

4. A whistle comprising a casing, a plurality of reeds housed therein, a depending wedge-shaped septum arranged within the casing and provided with curved deflecting-surfaces terminating in shoulders against which the free ends of the reeds bear, and means for adjusting the reeds with relation to the shoulders.

5. A whistle comprising a casing having its upper portion provided with a depending septum of less width than the casing and presenting thereby a pair of escape-openings, and adjustable reeds housed within the casing and having their free ends arranged within the said openings.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ISAAC ANDERSON.

Witnesses:

E. P. WHALEY,
JOHN A. DOLSON.