

Patented Dec. 24, 1918.

1,288,798.

Fig. 1

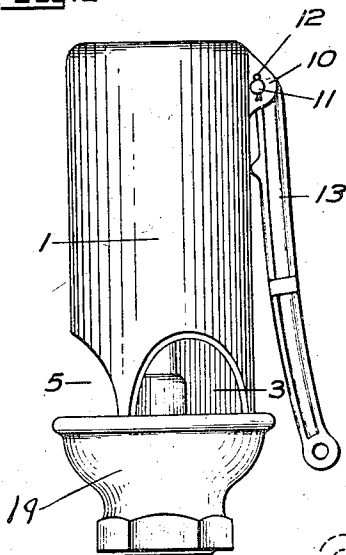


Fig. 3

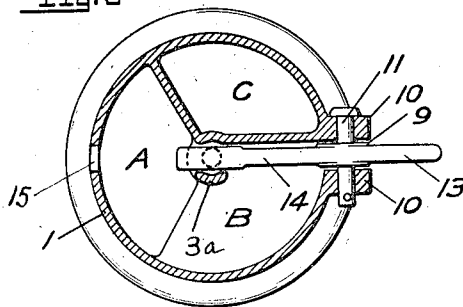


Fig. 2

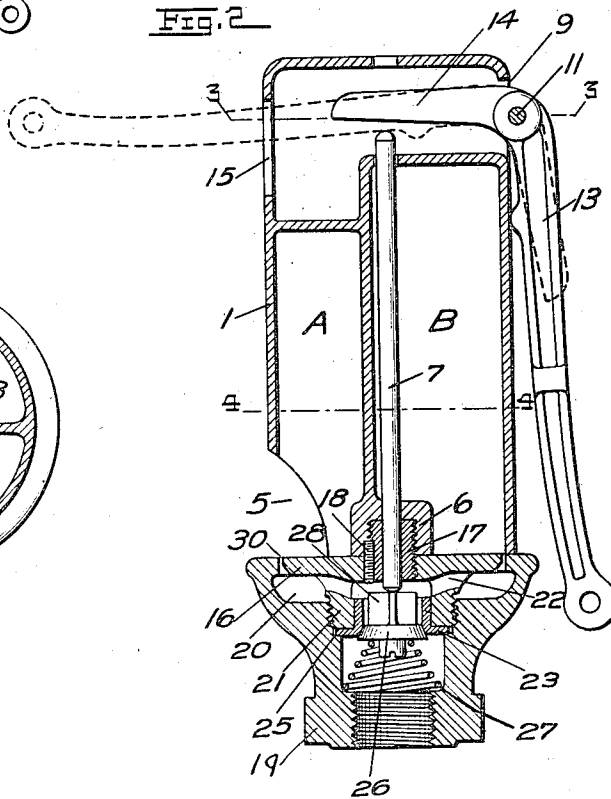
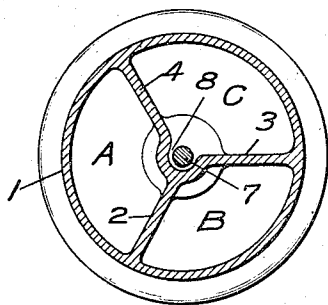


Fig. 4



WITNESSES:

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WHISTLE.

1,288,798.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JEROME J. AULL, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Whistles, 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 whistles, particularly of the type known as single bell chime whistles, wherein a bell with a plurality of compartments is provided into all of which the energizing power, such as steam, is admitted at the same time. The compartments in this type of whistle are of different depth, thereby giving a different pitch for the sound of each compartment, resulting in a harmonic sound of several notes.

In whistles of this type, the parts have been constructed in the past with bells of brass or bronze, and the valves without renewable seats. It is the object of my invention to provide in a whistle of this type for a structure of bell base and plate of such simplicity that they may be made of cast iron, and to provide a suitable valve therefor of inexpensive design. It is also my object to provide for the easy renewal of the valve seat for such valve, and for a reversible lever for the valve, so that a downward or a lateral pull can be employed with the valve, as may be desired.

These objects I accomplish by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed, wherein a structure is provided having openings used in the bell structure which permit of the casting of the bell in one piece.

In the drawings,

Figure 1, is a side elevation of the whistle.

Fig. 2 is a central, longitudinal section thereof.

Fig. 3 is a cross section on the line 3, 3, of Fig. 2.

Fig. 4 is a like section on the line 4, 4, of Fig. 2.

The whistle has a bell with an outer casing 1, within which are chambers A, B and C, the shortest chamber being A, and the longest C. In forming these chambers, the webs 2, 3 and 4 are cast together with the

bell and the bell is cast so as to leave the required semi-oval mouths or sound openings 5, at the base of each chamber. A top is also cast for the chambers A and B, the largest chamber extending clear to the top of the bell, and the web 2 between the two smaller chambers extends up only to the top of the chamber B.

At the juncture of the three webs at the bottom of the bell is formed an interiorly screwthreaded socket 6, in which is secured a thimble 17 for mounting the bell as will be described. The valve stem 7 also extends down through this socket and is depressed as follows: A hole for the stem is bored through the top of the second chamber B, and through the top of the socket. The webs are cast so that down the center of the bell within the second chamber B a space 8 is left for the passage of the stem, and the socket is also formed at the center line of the bell. The webs 3 and 4 for the long chamber extend clear to the top of the bell, and extending up from the other web is a curved portion 3^a, which forms an open guideway for the stem. A short slot 9 is cut in the bell over the chamber B, and lugs 10, 10, are cast at the sides of this slot. A pintle 11 mounted in the lugs and held by a cotter pin 12, serves to pivot the lever 13. This lever has an end 14 which extends into the bell and when the lever is pulled away from the bell this end 14 will depress the stem 7, which as mentioned is adapted to be inserted at the center line of the bell. The slots 9 and 13 are utilized to get at the interior of the bell upon casting the same.

When it is desired to have a pull down lever, the lever may be inserted in the long slot 15 formed in the bell over the chamber A. The long arm of the lever is then to be used to depress the stem and the end 14 will lie outside of the bell on the other side, as shown in dotted lines in Fig. 2.

The plate 16 of the whistle is of a diameter slightly smaller than the inside of the bell, and has a central screwthreaded aperture to receive the screw thimble or stud 17. This stud is screwed into the aperture in the plate and into the socket 6, and the plate and the bell tightly brought together. A set screw 18 screwed in from the under side of the plate locks this connection.

The base 19 of the whistle is formed with

a screw fitting at its lower end for the steam or air pipe, and with a chamber 20 at the upper end having an opening slightly larger than the plate, so as to leave a narrow slot 5 30 between the plate and the base for the passage of the steam. The depending portion 21 of the plate is screwthreaded to screw into the base below the chamber 20, and is connected by webs 22 to the plate, 10 the whole being cast in this shape. This construction enables me to provide a renewable seat ring 23 made of brass by preference, which is fitted into and over the end of portion 21, and a shoulder 25 in the base 15 holds the ring firmly in place by clamping the flange thereof between the shoulder and the end of the fitting 21.

The valve 26 is held normally against the seat by a helical spring 27 inclosed in the 20 base.

The valve stem contacts with the center of a three-winged guide portion 28 extending up from the valve disk, and depresses the valve to unseat it. This three-winged 25 guide portion holds the valve in alinement with the interior of the valve seat ring.

When it is desired to renew the valve seat, the base is merely unscrewed from the plate,

the bell being locked to the plate by the set screw 18, and the seat may be renewed without any trouble whatever. 30

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

1. In a device of the character described, 35 the combination of a whistle bell cast in a single piece, comprising a cylindrical casting and top, with a plurality of longitudinal compartments of different heights, the cylinder being provided with apertures 40 above the shorter compartments, and a valve actuating lever mechanism mounted through said apertures.

2. In a device of the character described, the combination of a whistle bell cast in a 45 single piece, comprising a cylindrical casting and top, with a plurality of longitudinal compartments of different heights, the cylinder being provided with apertures above the 50 shorter compartments, and of a reversible valve actuating lever mechanism mounted through said apertures.

JEROME J. AULL.

Attest:

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