

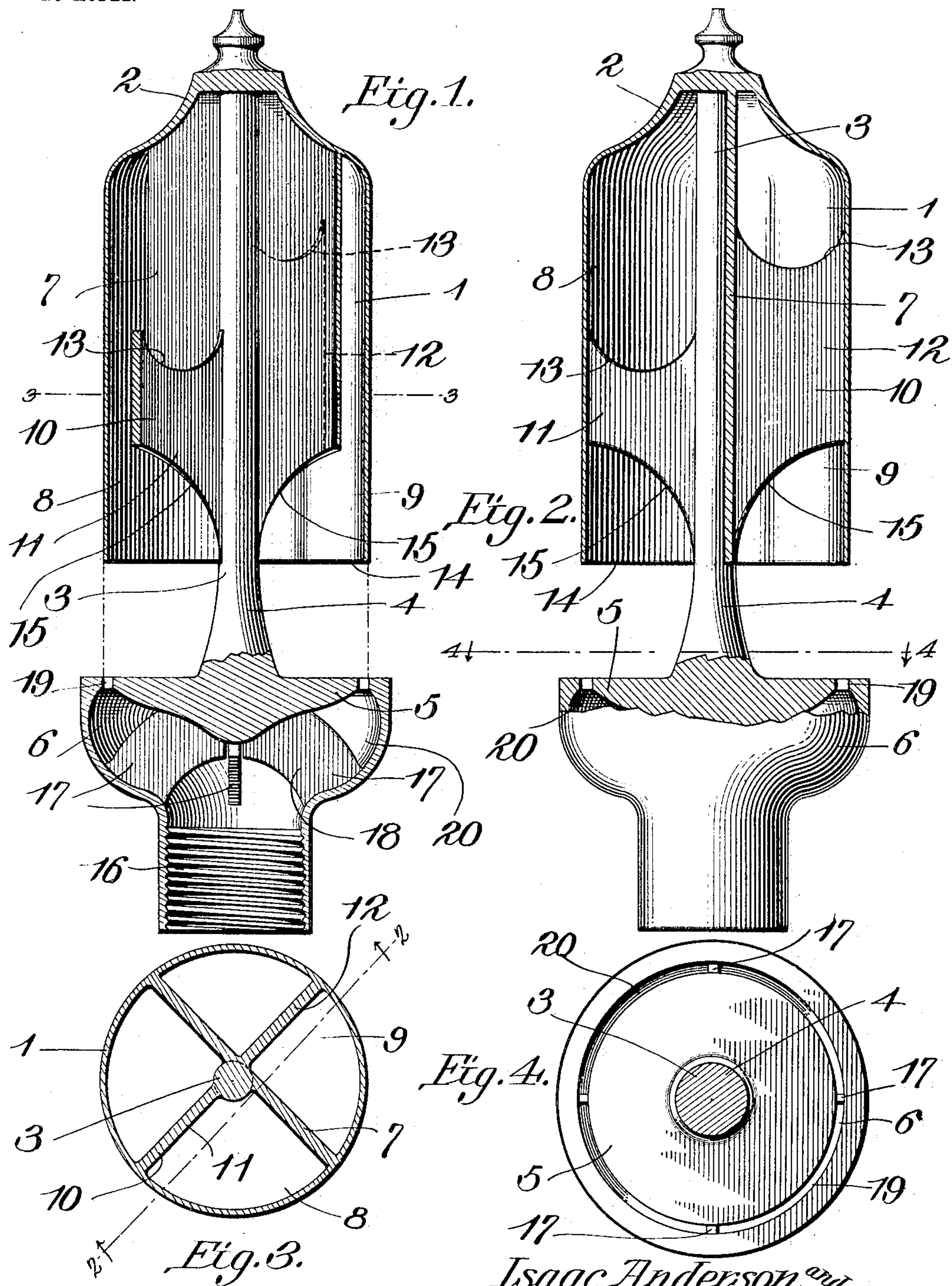
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PATENTED JULY 26, 1904.

I. ANDERSON & R. AYRES.
STEAM WHISTLE.

APPLICATION FILED SEPT. 26, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC ANDERSON AND RAYMOND AYRES, OF SAGINAW, WEST SIDE,
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STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 766,129, dated July 26, 1904.

Application filed September 26, 1903. Serial No. 174,812. (No model.)

To all whom it may concern:

Be it known that we, ISAAC ANDERSON and RAYMOND AYRES, citizens of the United States, residing at Saginaw, West Side, in the county of Saginaw and State of Michigan, have invented a new and useful Whistle, of which the following is a specification.

This invention relates to certain improvements in whistles, and more particularly to that class commonly known as "chime-whistles."

The object of the invention is to provide a simple, inexpensive, and efficient whistle of this character, the construction and relative disposition of the several parts being such that the cost of manufacture is reduced to a minimum, while the volume and intensity of the sound produced is materially increased.

A further object of the invention is to provide a whistle capable of producing two or more notes of a different pitch simultaneously, thereby producing a harmonious sound of great carrying power, and, further, to provide means whereby the steam or other operating fluid may be delivered in equal quantities and under equal pressure to the several sounding-chambers.

A still further object is to provide a chime-whistle in which the several parts are integral and made from one solid casting, thereby dispensing with the use of separate vibrating reeds and the like and obviating the danger of loss of any of the parts when in use.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the accompanying drawings, Figure 1 is a sectional elevation of a chime-whistle constructed in accordance with my invention. Fig. 2 is a similar view taken on the line 2 2 of Fig. 3. Fig. 3 is a transverse section taken on the line 3 3 of Fig. 1, and Fig. 4 is a similar view taken on the line 4 4 of Fig. 2.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the shell or bell of the whistle, substantially cylindrical in contour, as shown, and having its upper portion curved inwardly and upwardly to form a dome 2. Formed integral with the bell is a vertically-disposed post or core 3, the lower portion of which is flared or curved outwardly, as shown at 4, and terminates in a horizontally-disposed circular plate 5, which forms the base-plate of the steam-bowl 6. Cast integral with the core or post is a tangentially-disposed imperforate partition 7, extending entirely across the bell and dividing the same into two main sounding-chambers 8 and 9, the area of the chamber 8 being greater than that of the chamber 9, so as to produce tones or notes of different pitch. Arranged at right angles to the partition 7 and also formed integral with the core 3, is a tangential partition 10, the wings 11 and 12 of which extend in opposite directions across the chambers 8 and 9 and terminate at unequal distances from the dome of the bell, each wing being cut away in a semicircle, as shown at 13, so as to cause the chimes to produce relatively deep and shrill tones. The lower edge or sounding-lip 14 of the bell extends a short distance above the base-plate 5 of the steam-bowl, and the lower portions of the partitions 7 and 10 are preferably curved inwardly, as shown at 15, and terminate at a point in alignment with said lip. The steam-bowl 6 is interiorly threaded, as at 16, for connection with a steam or other pipe for supplying fluid under pressure, said bowl being formed with a plurality of inwardly-extending spaced ribs 17, preferably cast integral with the base-plate 5, and defining openings 18 for the passage of the operating fluid to the sounding-chambers. The base-plate 5 is provided with an annular blowing-orifice 19, which communicates with an annular steam pocket or chamber 20 in the bowl 6, said pocket or chamber permitting the free circulation of steam in said bowl before being discharged through the orifice 19 to the several sounding-chambers. By having the chamber 20 formed in the bowl 6 the

steam is discharged in equal quantities and under equal pressure at all points within the bell, thereby insuring uniformity of sound.

In practice the steam or other fluid flows through the passages 18 into the chamber 20, and thence through the blowing-orifice to the sounding-chambers, the steam in its upward passage striking the inclined walls of the dome, being deflected downwardly and escaping at the lower edge of the bell, thereby producing the sound. The depth of the tone, and thus its penetrating and carrying power, may be varied at will by increasing or diminishing the size of the openings in the wings 11 and 12 of the partition 10, and, if desired, the main sounding-chambers may be provided with two or more partitions having semicircular openings formed therein of varying depth, so as to produce a mixed or mongrel sound in each chamber.

Having thus described the invention, what is claimed is—

1. A chime-whistle having a plurality of independent partitioned sounding-chambers, the partitions terminating short of the top of said chambers.

2. A chime-whistle having a plurality of independent sounding-chambers each provided with a partition having an orifice at its top.

3. A chime-whistle having a plurality of independent partitioned sounding-chambers, the partitions terminating at varying distances from the top of said chambers.

4. A chime-whistle having a plurality of sounding-chambers each provided with a partition having an orifice at its top, the orifices in the several partitions being of varying depth.

5. A chime-whistle having a plurality of independent sounding-chambers of different volume, each provided with a partition having an unobstructed orifice at its top.

6. A chime-whistle having a plurality of independent sounding-chambers of different volume, and longitudinal partitions disposed within the chambers and provided with orifices of a depth in proportion to the volume of said chambers.

7. A chime-whistle having a plurality of sounding-chambers of different volume, and partitions having semicircular orifices formed therein disposed within said chambers.

8. A chime-whistle provided with a non-radial imperforate partition defining a plurality of sounding-chambers of unequal volume, and a second partition arranged at right angles thereto and terminating short of the top of said chambers.

9. A chime-whistle having a bell provided with a centrally-disposed core and an imperforate partition arranged tangentially to said core extending entirely across the bell and di-

viding the same into a plurality of independent sounding-chambers, and a second partition arranged at right angles thereto and provided with orifices of varying depths.

10. A chime-whistle, comprising a bell provided with a plurality of independent sounding-chambers, each provided with a partition having an orifice at its top, and a steam-bowl provided with an annular blowing-orifice disposed beneath the bell.

11. A chime-whistle comprising a bell provided with an inwardly and upwardly extending dome, an imperforate partition extending the entire length of the bell and dividing the same into a plurality of independent sounding-chambers, a second partition arranged at right angles thereto and terminating short of the top of said chambers, and a steam-bowl provided with a blowing-orifice disposed beneath the bell.

12. A chime-whistle comprising a bell provided with a plurality of independent sounding-chambers, each provided with a partition having an orifice at its top, a steam-bowl provided with a base-plate and having an annular steam-chamber formed therein disposed beneath the bell, said bowl being provided with inwardly-extending spaced ribs formed integral with the base-plate, and an annular blowing-orifice communicating with the steam-chamber.

13. In a chime-whistle, a bell having a plurality of independent partitioned sounding-chambers the upper end of each partition terminating short of the top of the bell and the lower end thereof being curved inwardly and terminating at a point adjacent the mouth of the bell.

14. In a chime-whistle, a bell having a plurality of independent partitioned sounding-chambers the top of each partition being provided with an orifice and the bottoms of said partitions each having one edge thereof spaced from the mouth of the bell and the opposite edge arranged in alinement therewith.

15. A chime-whistle, comprising a bell having a plurality of independent sounding-chambers each provided with a partition having an orifice at its top, and a steam-bowl spaced from the bell and provided with a base-plate having an annular blowing-orifice formed therein, the bottom of said base-plate being provided with converging walls intersecting at the center of the steam-bowl.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ISAAC ANDERSON.
RAYMOND AYRES.

Witnesses:

OGDEN D. PACKER,
E. P. WHALEY.