(No Model.)

F. M. ASHLEY.

WHISTLE.

No. 550,240. Patented Nov. 26, 1895.

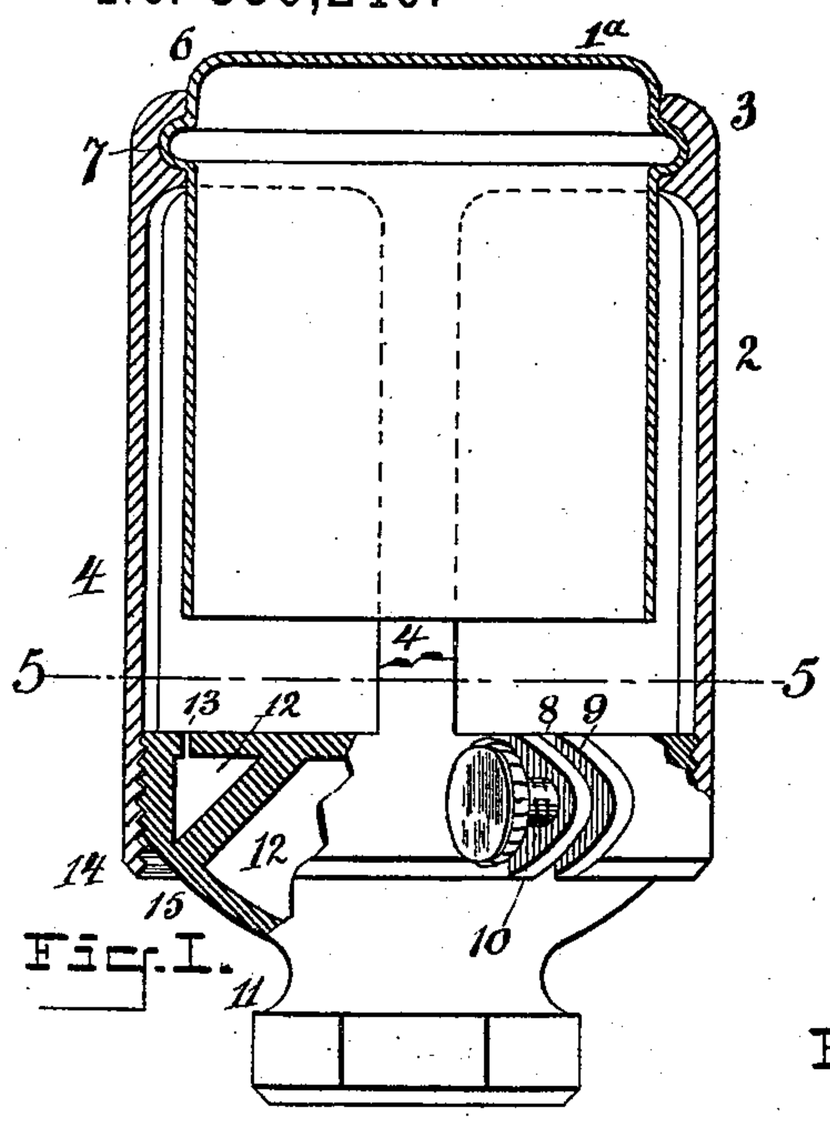

Fig. I.

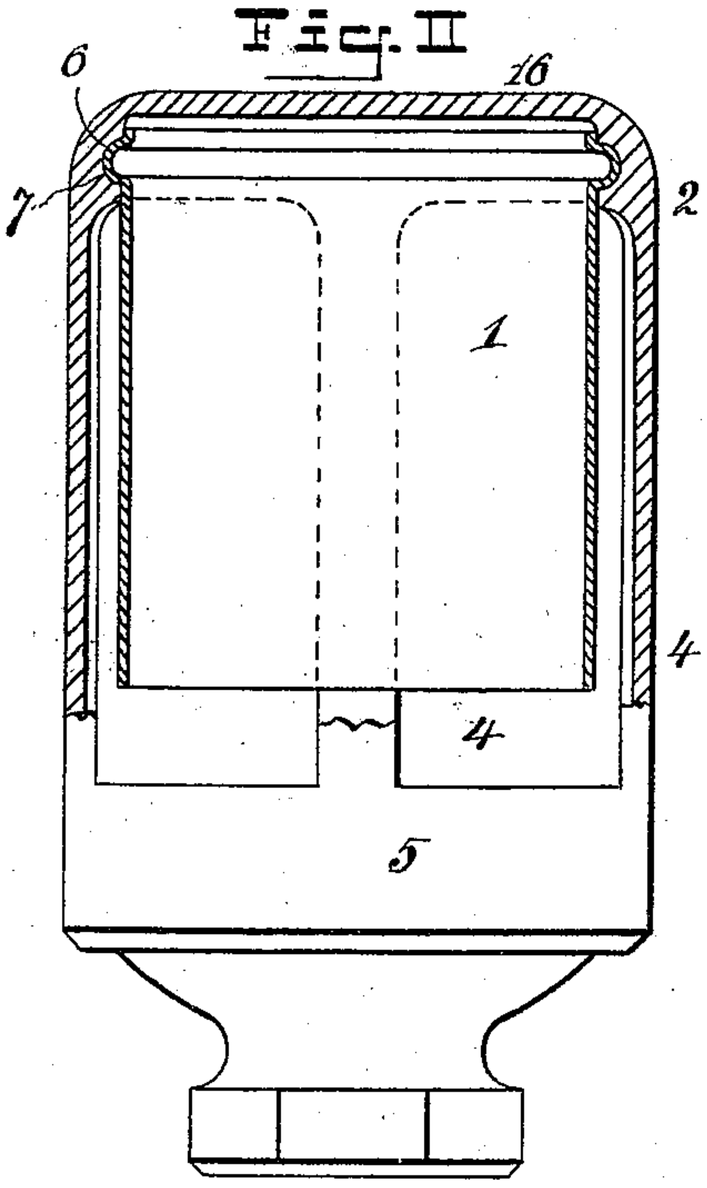

Fig. II.

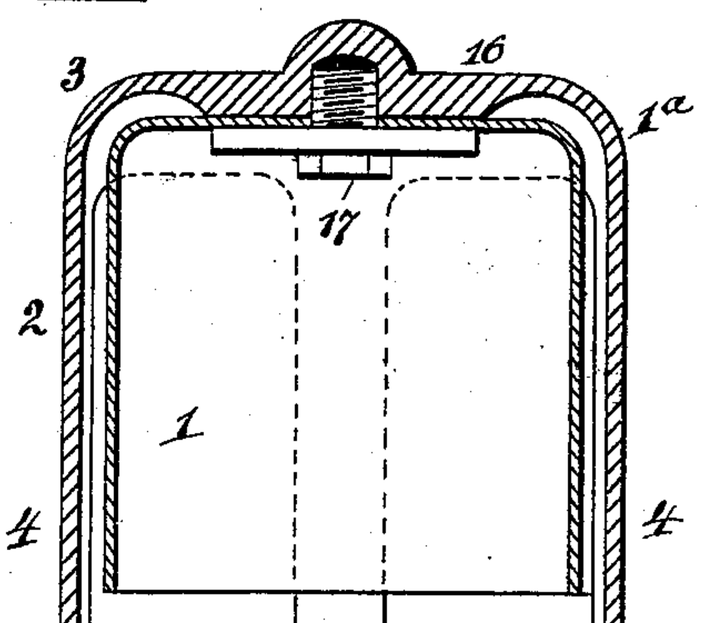

Fig. III.

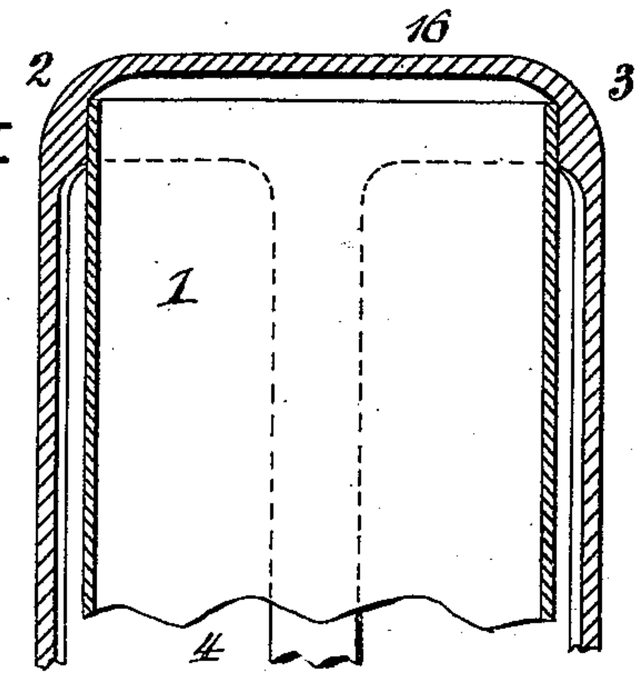

Fig. IV.

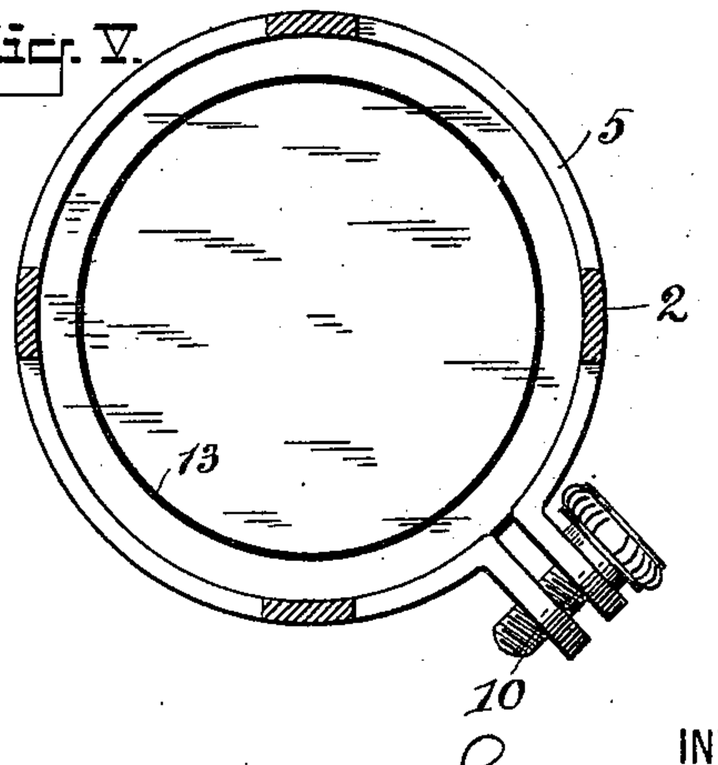

Fig. V.

WITNESSES:

S. D. Mosk

M. V. Bridgwood

INVENTOR

Frank M. Ashley

BY Wright Bros

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK M. ASHLEY, OF HAWTHORNE, NEW JERSEY.

WHISTLE.

SPECIFICATION forming part of Letters Patent No. 550,240, dated November 26, 1895.

Application filed June 21, 1894. Serial No. 515,247. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. ASHLEY, a citizen of the United States, residing at Hawthorne, county of Passaic, State of New Jersey, have invented certain new and useful Improvements in Whistles, of which the following is a specification.

The object of my invention is to provide an improved steam-whistle wherein the bell proper is held at the top and the supports extend to the base outside of the bell.

The object of my invention is also to overcome the objection of the cracking of the bell, which so often occurs when the bell is made of cast metal, especially in the winter time. The metal as commonly cast gets very cold, and when steam of high temperature is suddenly admitted the belt is liable to and in fact often does crack, usually starting at its lower end. In order to overcome this, the bell is cast very heavy, thereby rendering it very hard to blow and increasing its cost, or rings are fastened around its circumference just above its lower edge. This method is objectionable, as it is costly, makes it too heavy, and requires more steam to sound it properly. To overcome all of these objections, I select a tough metal, rolled or made into sheets, such as sheet copper or brass or steel, and, after forming said sheet into the form of a whistle-bell, support it above a cast-metal base by the arms, as shown. In this form they are very hard to crack, on account of the malleability of the metal, and are light in weight and can be sounded by a minimum amount of steam, and after making them for a period of eighteen months and subjecting them to the roughest usage I have not had a single bell cracked.

The invention also consists in the novel details of improvement that will be more fully hereinafter set forth, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part hereof, wherein—

Figure 1 is a partly sectional side elevation of my whistle complete. Fig. 2 is a corresponding view of a slightly-modified form. Fig. 3 is a similar view, showing different means for sustaining the bell, and Fig. 4 is a sectional view of a modification. Fig. 5 is a sectional plan on the line 5 5, Fig. 1.

In the accompanying drawings, the numeral 1 indicates the bell proper, which is tube-like, having its open end extending downwardly.

2 indicates the support or framework for the bell, which is composed of a circular upper portion 3 and depending arms 4, that are connected at the bottom by a ring or band 5.

In Fig. 1 the bell 1 has a top portion 1^a, that projects through the ring 3, the bell being supported wholly at its upper portion. For this purpose I have shown the bell 1 provided with an annular enlargement 6, that fits into a corresponding groove 7 in the ring 3 of the frame 2. The frame 2 is made of cast metal and the bell of sheet metal. The connection of the bell with said ring is made by passing the bell into the framework 2 so that its upper part will project beyond the ring 3, and the metal of the bell is then spun to cause it to flow outwardly into the recess 7 and thus form the annular projection 6. The ring or band 5 is preferably severed at one part, as at 8, and provided with outwardly-extending lugs 9, in which a thumb-screw 10 works, so as to expand or contract said ring or band.

11 is the base of the whistle, which may be arranged in any desired manner to connect with the steam-supply, said base having a hollow inner portion 12 and outlets 13 to direct the steam against the bell 1. The upper outer portion of the base 11 is provided with screw-threads 14, that engage corresponding threads 15 on the inner part of the ring or band 5, whereby the frame 2 and bell 1 may be adjusted toward and from the base 11. In connecting the frame 2 to the base 11 the thumb-screw 10 is loosened to allow the band 5 to expand, and when in position said screw is tightened, so as to firmly plant said band upon said base, whereby the frame 2 is securely held upon the base 11.

In Fig. 2 the upper end of the bell 1 is open and the top of the frame 2 is closed by a wall 16 to prevent the passage of steam, which acts similarly to the top 1^a of the bell, the annular flange 6 in this case also being spun outwardly to fit in the recess 7 of the frame 2, as before explained.

In Fig. 3 the bell 1 is also supported at its top by the frame 2; but in this case the bell is held to the top 16 of said frame by a screw

17, that passes through the top 1ª of the bell 1 and into the top 16 of the frame 2.

In Fig. 4 the bell 1 is open at both ends and the top of the frame 2 is closed, the bell being securely held to the frame 2 at its top by any suitable means, such as solder.

In all these cases it will be observed that the bell 1 is held at its top only, whereby its lower portion is free to vibrate, and said bell is protected by the arms 4 of the frame 2, the escaping steam being allowed to pass out from between said arms.. The steam is prevented from passing entirely through the bell either by its top 1ª or the top 16 of the frame 2. By the above-described arrangement I am enabled to make a bell of sheet metal and to support it from its top in a convenient manner. The device is simple in construction, cheap to manufacture, not liable to get out of order, and effective in use.

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

1. In a whistle, a bell, combined with a support therefor extending along the outer sides of said bell, from its top downward, the upper parts of said bell and support being joined together, substantially as described.

2. The combination of a bell made of sheet metal, with a metal base and supports for the bell extending from said base along the outer sides of said bell to the upper parts thereof, substantially as described.

3. The combination of a bell with a support therefor, extending along the outer sides of said bell and a base, said base being adjustable with relation to said support, substantially as described.

4. The combination of a whistle bell and a base therefor, with means connected with the base for supporting the bell from its exterior surface, substantially as described.

5. The combination of a bell with a support therefor, said bell having a circumferential projection integral therewith that enters a recess in said support, substantially as described.

6. The combination of a bell made of sheet metal with a support therefor, said support having an internal recess, the bell having an annular projection that enters said recess, substantially as described.

7. The combination of a bell with a support therefor, said support having a ring or band at its lower part, that is divided, and means for adjusting said band to hold it upon a base, substantially as described.

8. The combination of a bell with a support therefor said support having a divided band at its lower part, that is provided with lugs 9, a screw to act on said lugs and a base upon which said band can be clamped, substantially as described.

9. The combination of a bell with a supporting frame therefor having a closed top, and means for securing said bell to said supporting frame at its top, substantially as described.

10. In a whistle, a bell made of sheet metal having a circumferential projection made integral therewith, combined with a cast metal supporting frame therefor to which said bell is secured, substantially as described,

FRANK M. ASHLEY.

Witnesses:
C. M. OTT,
M. V. BIDGOOD.