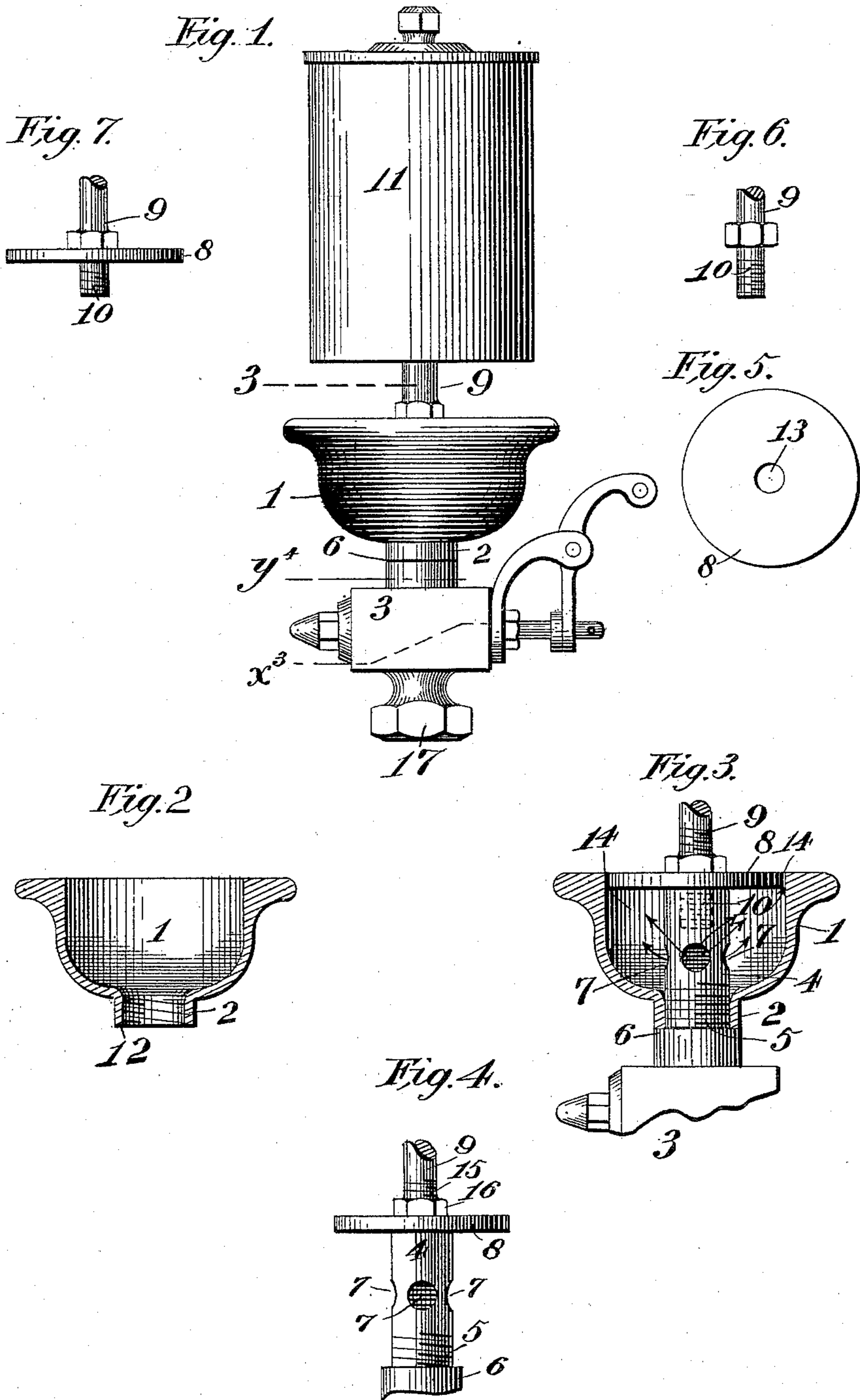


(No Model.)

H. R. FRISBIE.  
STEAM WHISTLE.

No. 493,920.

Patented Mar. 21, 1893.



Witnesses:  
Geo. A. Phillips.  
A. J. Tanner.

Inventor:  
Henry R. Frisbie  
By his Atty.  
Geo. A. Phillips

# UNITED STATES PATENT OFFICE.

HENRY R. FRISBIE, OF BRIDGEPORT, CONNECTICUT.

## STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 493,920, dated March 21, 1893.

Application filed April 15, 1892. Serial No. 429,277. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY R. FRISBIE, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Whistles, of which the following is a specification.

My invention relates to an improved method of constructing steam whistles, which consists in making the body portion of the whistle in sections, instead of casting it in one piece, as heretofore.

A full and clear description of my improvement will appear in the following specification, and such features as I believe to be new and novel, more particularly set forth in the claim to follow.

To enable others skilled in the art to which my invention belongs to make and use the same, reference is had to the accompanying drawings and to the numerals of reference marked thereon; which drawings form part of this specification.

Figure 1, represents a side elevation of a completed whistle showing the bowl a detachable part thereof. Fig. 2 is a sectional elevation of the steam bowl, showing the threaded neck by means of which it is attached to the valve body of the whistle. Fig. 3, is a central sectional view of the whistle bowl mounted upon a threaded portion of the valve body, a broken view of such body. Fig. 4, is a side elevation of the steam column with the steam-bowl plate in position, also broken view of the bell supporting stud; this view shows a slight modification in the manner of attaching the bowl plate to the steam column. Figs. 5 and 6 detail views, being a plan view of the bowl plate, and a lower broken portion of the bell supporting stud through line 3 of Fig. 1. Fig. 7, is a side elevation of a modified construction of the bowl plate which is integrally formed with the bell supporting stud, which stud is shown broken in this view.

Its construction is as follows: 1 represents the steam bowl; 2 its lower threaded neck; 3 valve body; 4 steam column whose threaded portion 5 and shoulder 6, support the threaded neck 2 of the steam bowl; 7 steam outlets of the column 4; 8 steam bowl plate also secured to column 4; 9 central bell supporting stud

whose lower threaded end 10 enters a threaded hole of column 4; 11 whistle bell.

Heretofore in the construction of steam whistles, the bowl and valve body, and in fact, all parts below the bell have been made of one piece or casting; this requires expensive preparation in the matter of patterns, cores and core boxes for the interior of the steam bowl, thus adding greatly to the cost, especially in large whistles. In my improved construction I am able to dispense with the necessity of coring out the bowl or rather of making a special core for the same, as making the bowl separate, it will form its own core. Besides, in making the bowl a separate part of the whistle, it can—in a cheap class of whistles—be made of cast iron, or other baser and cheaper metals.

In Fig. 2 the interior of the bowl 1 is so shaped that it can be readily drawn from the sand, and thus form its own core. The lower neck portion 2 is interiorly threaded, and the lower end 12 faced off true therewith. The steam column 4 is integrally formed with the valve body 3; the interior passages and valve seats of such body,—not shown—are cored out in the usual manner, which operation is quite simple and inexpensive when the valve body is separated from the steam bowl. The bowl is screwed firmly on to the shouldered portion 6 of column 4. The plate 8 is provided with the central hole 13,—see Fig. 5—which hole, fits the end 10 of the bell supporting stud 9. The threaded end of such stud enters a threaded hole in the upper end of column 4,—as before mentioned—the plate 8 being turned off smaller than the interior of bowl 1, so as to form the annular steam orifice 14.—See Fig. 3.

It will be observed from the above method of construction that all the parts are readily brought into operative relation with each other, and the cost of so doing greatly reduced, as compared with the old method.

I do not wish to be strictly confined to the exact manner in which I attach the bowl plate 8 to the column 4. But it is necessary however, that the bowl, its plate, and the valve body, should form separate parts, as by so doing I secure the best results.

In Fig. 7 the plate 8 is integrally formed

with the bell supporting stud 9; while in Fig. 4, the stud 9 is cast into the upper end of column 4, and such stud provided with thread 15 and nut 16 to hold the plate in position.

5 I hold myself at liberty to adapt either of the above or similar methods for securing the bowl plate to the column 4. Neither do I wish to be confined to the exact form of the column 4. The gist of my invention lies in

10 making the bowl separate and attaching it to the valve body, that by so doing, I am able—as before stated—to greatly reduce the cost of whistles, not only in avoiding the expense of patterns and cores but also where it is desirable to still further reduce the cost by making the bowl and even the bell of cast or malleable iron. The valve body with its lower threaded connection 17,—see Fig. 1—should,

15 at all times, be made of composition to prevent oxidation, while the remainder can be made of cheaper and baser metal.

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

The herein described improvement in steam whistles comprising in combination with the bell, a valve body having a hollow steam column projecting therefrom and integrally formed therewith, said column having outlet ports, also a lower threaded base and a shouldered portion as shown, a detachable steam bowl whose interior is so shaped that it will readily form its own core, a threaded hole through the neck or lower part thereof to engage with the threaded base of said steam column, while the face of said neck portion is arranged to engage with the said shouldered portion before mentioned, a detachable bowl plate arranged to be secured to the said steam column in the manner substantially as shown and for the purpose set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 13th day of April, A. D. 1892.

HENRY R. FRISBIE.

Witnesses:

EDWIN F. HALL,  
ALFRED A. WARNER.