

(No Model.)

2 Sheets—Sheet 1

W. F. HEATH.
STEAM WHISTLE BLANK.

No. 253,701.

Patented Feb. 14, 1882.

Fig. 1

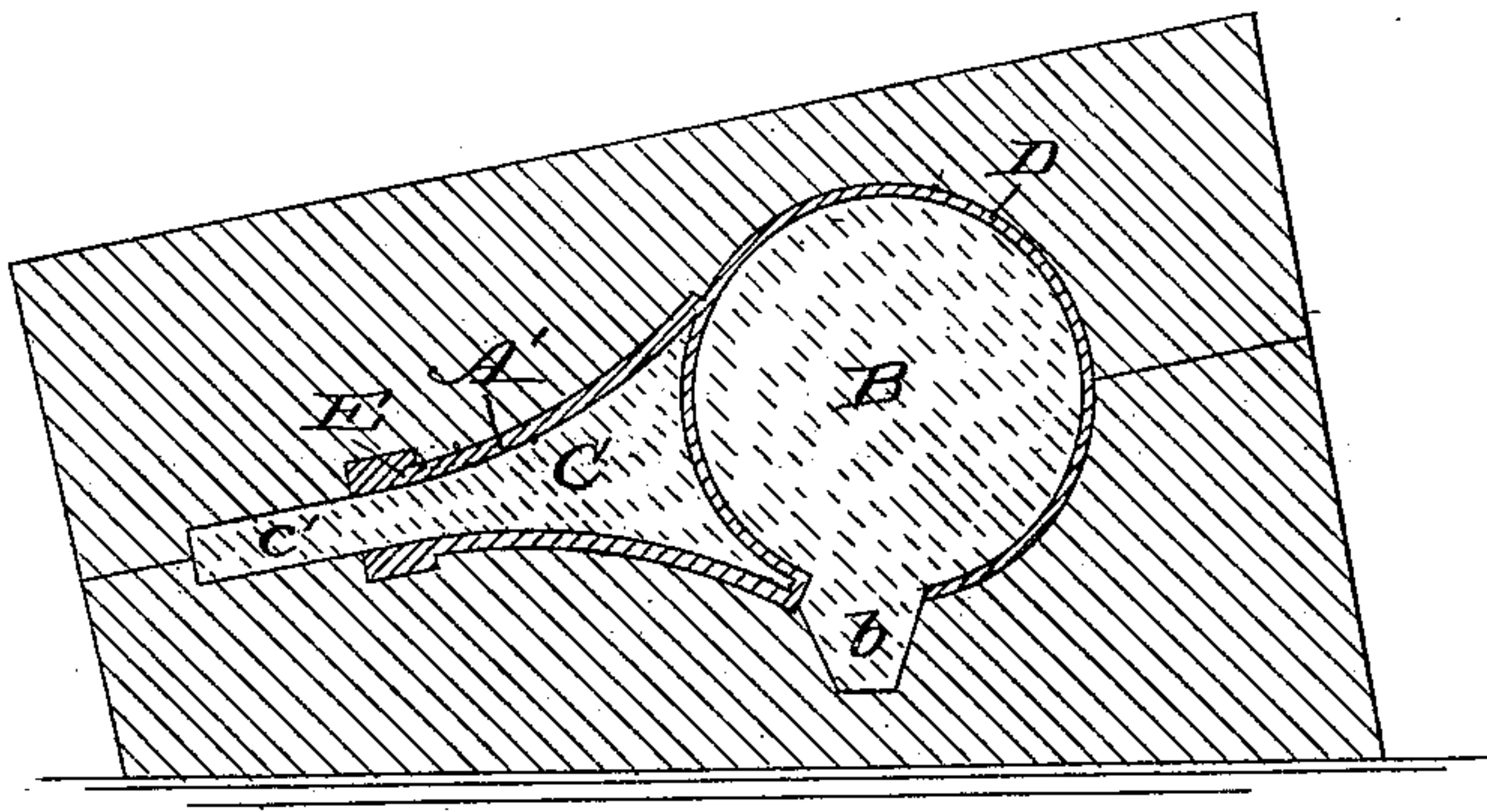
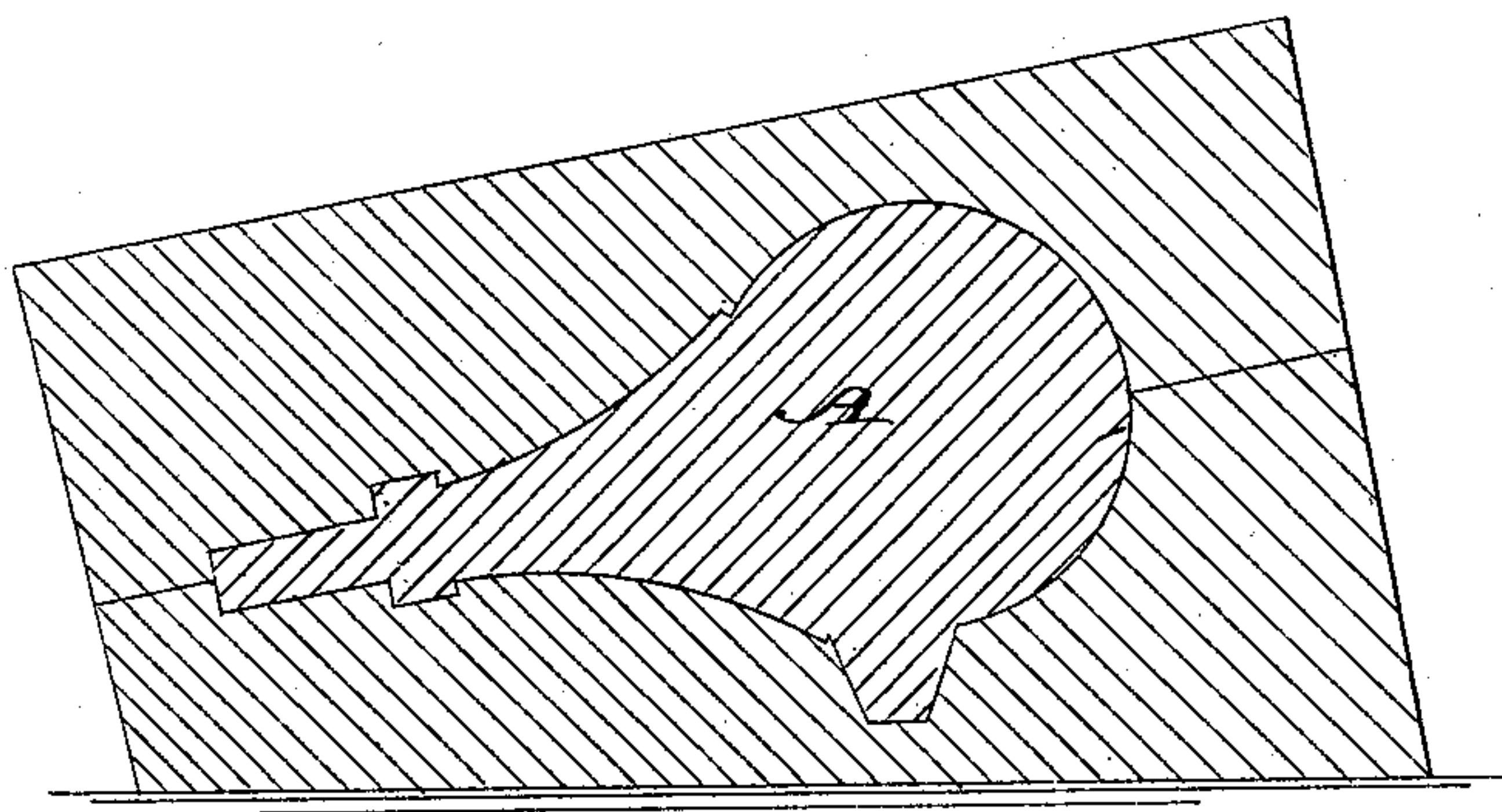


Fig. 2



Witnesses:

H. N. Low
J. S. Barker

Inventor:

Wilbur F. Heath
by Doubleday & Bliss
attys.

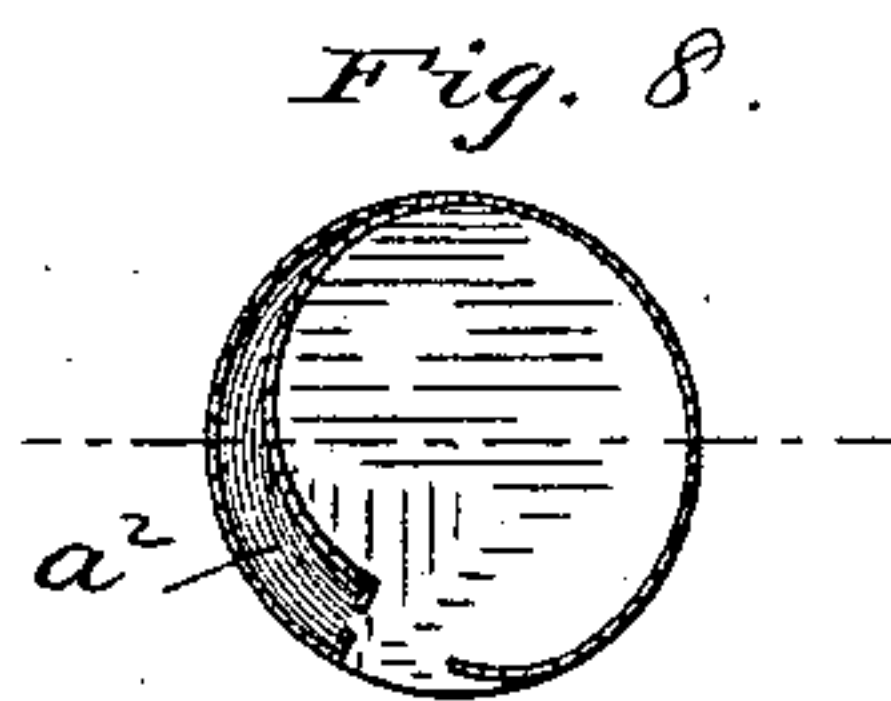
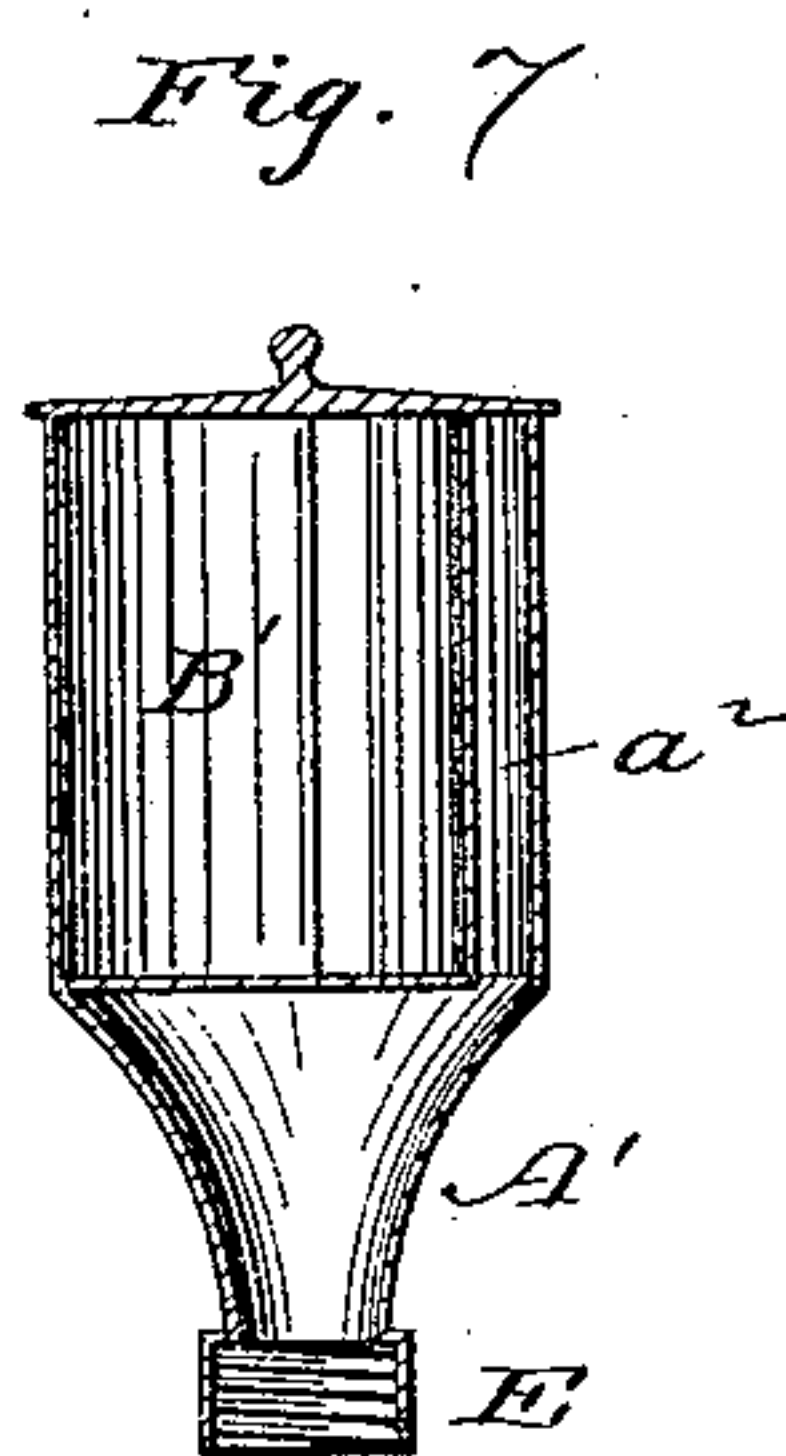
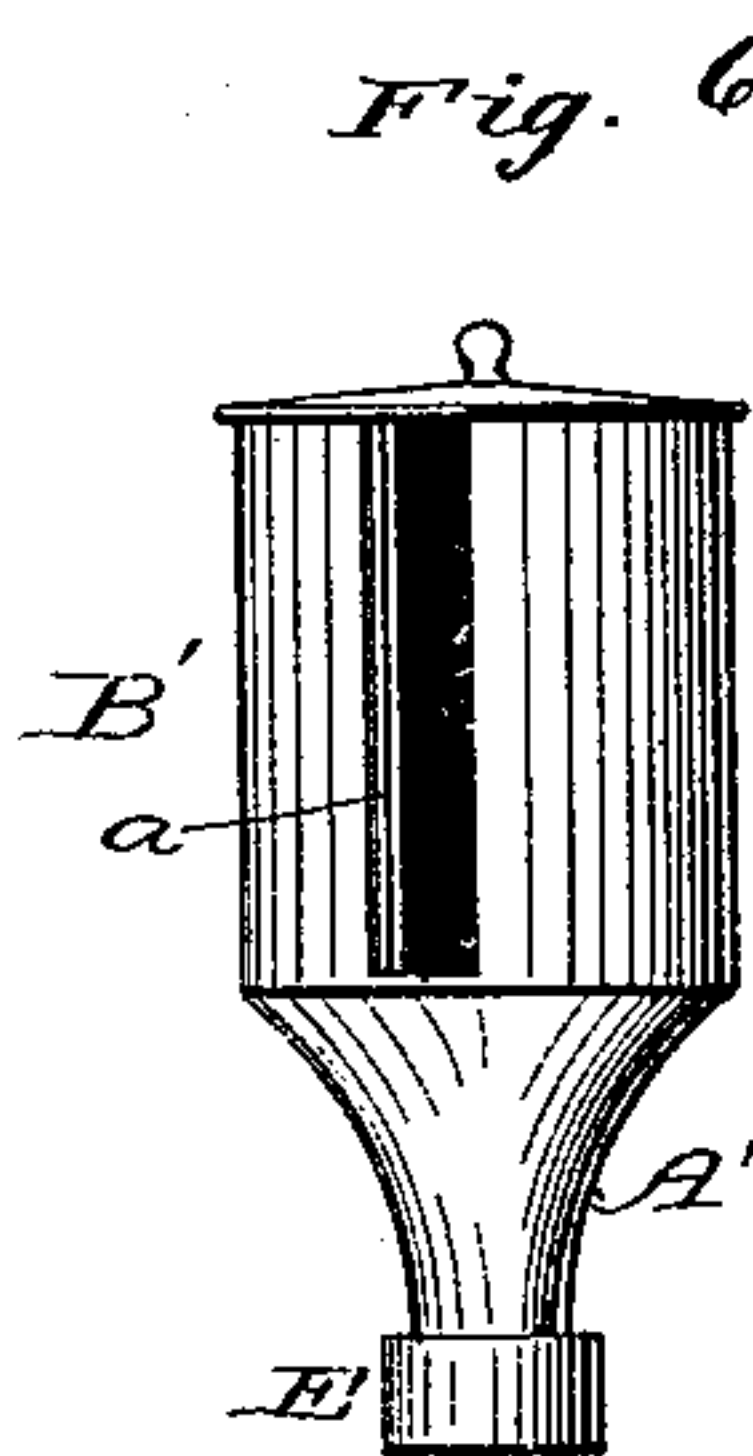
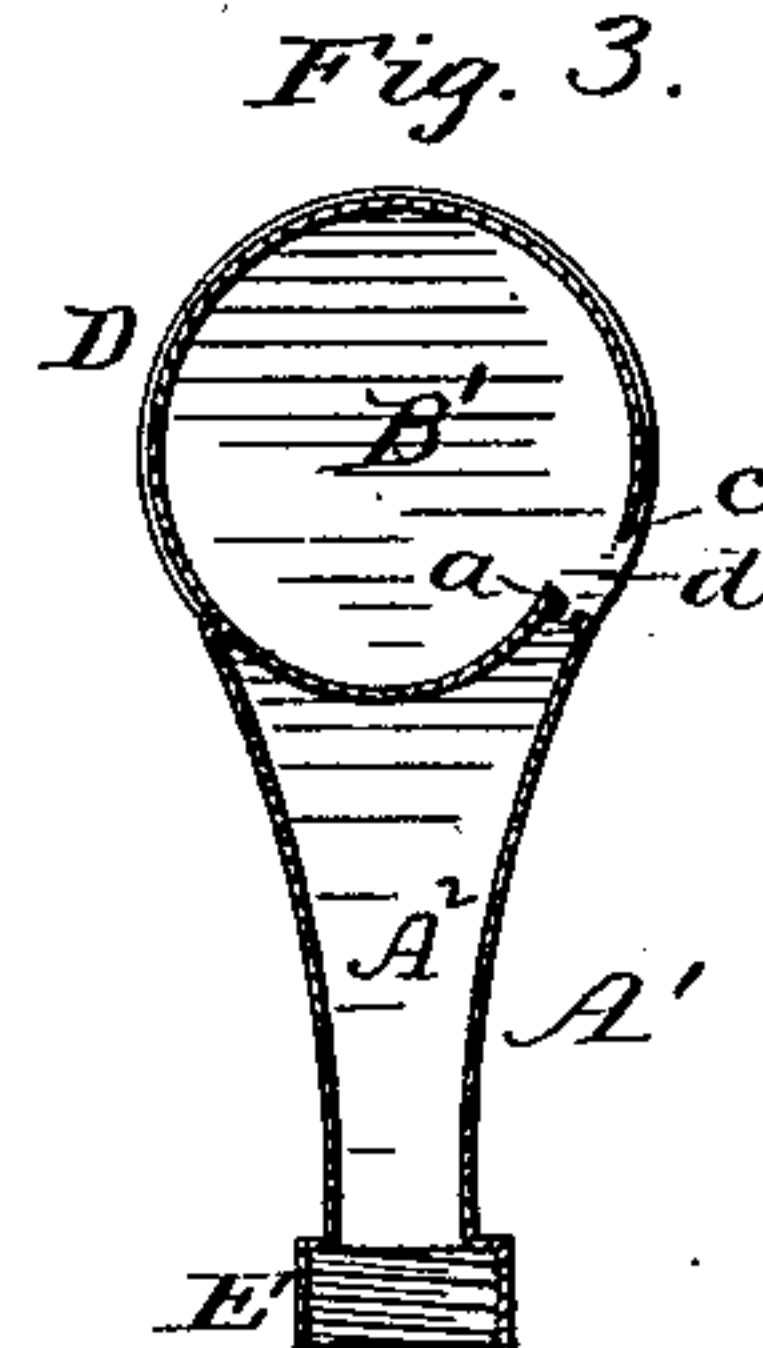
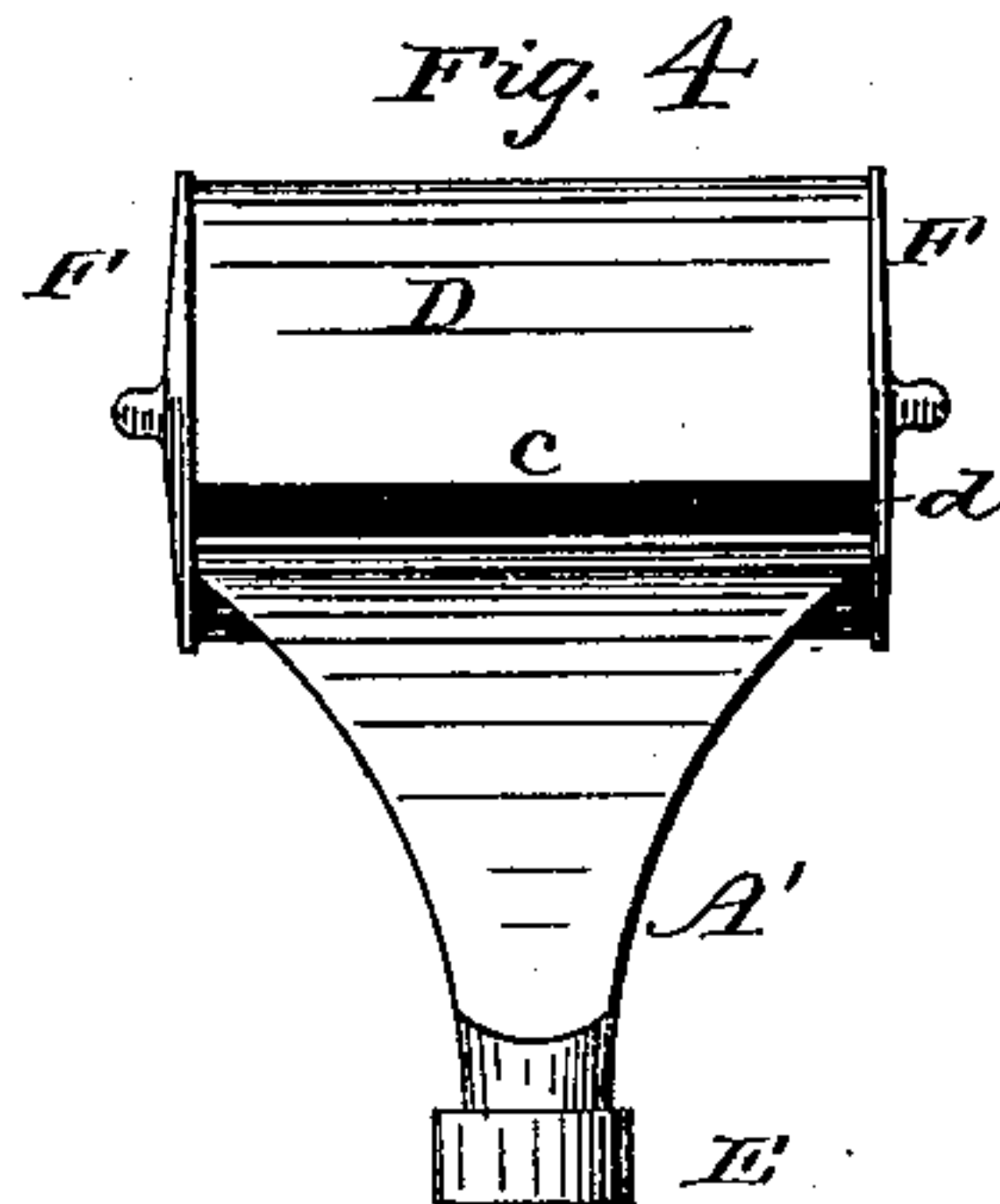
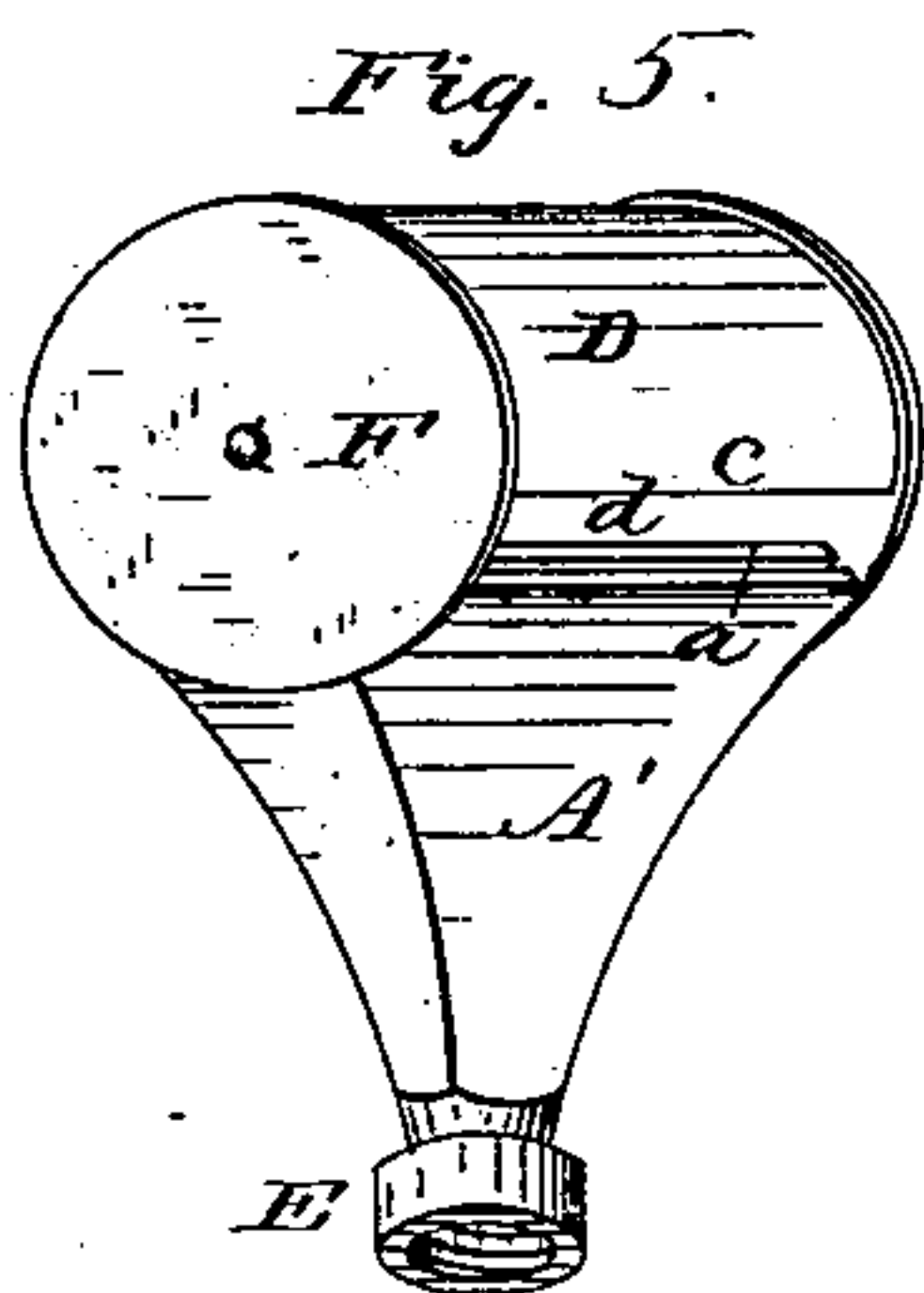
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UNITED STATES PATENT OFFICE.

WILBUR F. HEATH, OF FORT WAYNE, INDIANA.

STEAM-WHISTLE BLANK.

SPECIFICATION forming part of Letters Patent No. 253,701, dated February 14, 1882.

Application filed December 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILBUR F. HEATH, a citizen of the United States of America, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Steam-Whistle Blanks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a transverse section of my improved blank for the manufacture of whistles and of the mold. Fig. 2 is a side elevation of the pattern which I have devised for making the mold. Fig. 3 is a sectional view of the whistle completed. Fig. 4 is a front elevation. Fig. 5 is a perspective. Fig. 6 is a front view of a modified form of the whistle. Fig. 7 is a vertical section of the last said form. Fig. 8 is a cross-section of the same.

The object of the invention is to provide a practicable method for casting cheap blanks for the manufacture of steam-whistles. After the blanks are formed the whistle to be completed requires only the simple operation of cutting a throat or embouchure.

In the drawings I have shown the mold which I have devised for casting my improved blank, the pattern, and the core. After the pattern A has been removed from the sand the cylinder-core B and the throat-core C are secured in position, the cores being provided with prints *b* and *c'*. The mold is inclined, preferably by inclining one of its sides relatively to the other, so that the cylinder-core B shall be supported centrally. The casting which is obtained is in cross-section, of the shape shown in Fig. 1, this being the blank from which the whistle is made. It has a stem or pipe-piece, A', provided with a thimble or collar, E, by which it can be attached to any ordinary steam-pipe. This stem A' flares or widens in all directions away from the end having the collar E until it reaches the cylinder portion B', forming a chamber, A². The cylinder B' is hollow, but is bounded by the cylindrical wall D on all sides, except at the throat *d*.

In the blank the wall D, the end pieces, F F, and the stem or shank A' are all in one piece of metal. The core C provides a passage-way or chamber in the shank A' for the passage of the steam, the stem being left as hollow as possible in order to allow resonance. After the blank has been formed in the manner described the next step is to cut the slit or throat *a* opposite to the lip *c* at the edge of the wall D, this lip being made as thin as possible to allow sufficient vibration to produce a good tone. The steam, after it escapes through the throat *a*, impinges upon the lip or edge *c*, some of it passing outwardly from said lip and some passing inwardly and around the interior of the cylinder.

By following the mode described for making the blank and the whistle I am enabled to reduce the cost of the manufacture much lower than that of the whistles as now made. The whistle, when completed, produces a more perfect radiation of sound-waves, and therefore a louder and smoother tone, than can be produced by the devices now ordinarily employed.

Under some circumstances it may be found desirable to have the cylindrical part of the whistle arranged vertically, as shown in Figs. 6, 7, and 8. In this case the steam passes upward through the passage-way in the shank A' then through the vertically-situated narrow passage *a*², and out through the slit or throat *a*. Blanks for whistles of the last said character can be made with two cores, in the manner described for whistles of the other shape.

I do not herein claim the method of manufacturing steam-whistles which I have described, as I prefer to make that the subject-matter of another application which I intend to file.

What I claim is—

The herein-described blank for steam-whistles, having the hollow stem A', the cylindrical part B, the ends F F, all cast in one piece, and the throat *d*, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILBUR F. HEATH.

Witnesses:

GEO. H. SIBLEY,

JOHN W. STUTZENBERGER.