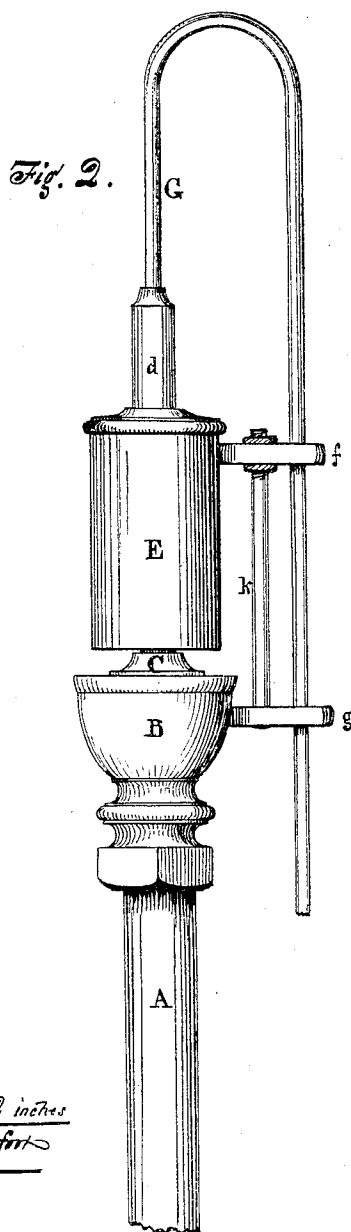
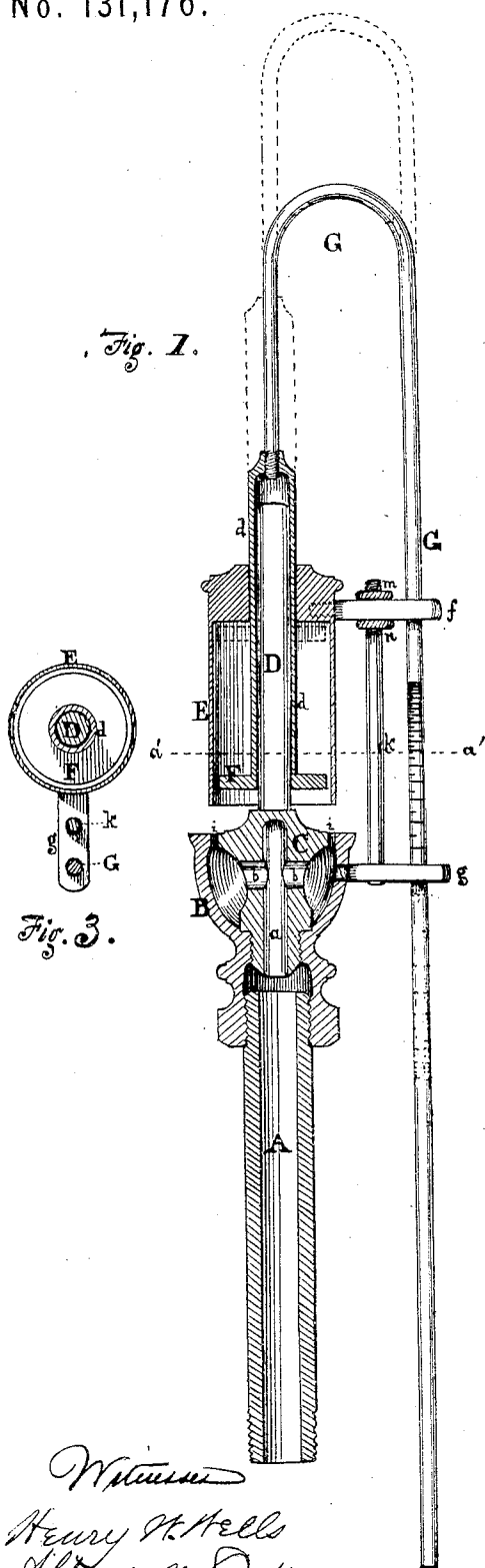


G. S. NEVIUS.

Improvement in Steam-Whistles.

No. 131,176.

Patented Sep. 10, 1872.



*Scale - 2 inches
to 1 foot*

Witness
Henry H. Wells
Albert M. Scott,

Garrett S. Nevius
by *Edmund Hunter*
his attorney

UNITED STATES PATENT OFFICE.

GARRETT S. NEVIUS, OF BUSHNELL, ASSIGNOR OF ONE-HALF HIS RIGHT TO
HENRY T. BALDWIN, OF PEORIA, ILLINOIS.

IMPROVEMENT IN STEAM-WHISTLES.

Specification forming part of Letters Patent No. 131,176, dated September 10, 1872.

To all whom it may concern:

Be it known that I, GARRETT S. NEVIUS, of Bushnell, in the county of McDonough and in the State of Illinois, have invented an Improvement in Steam-Whistles; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a vertical section; Fig. 2, an elevation; Fig. 3, a horizontal section through dotted line *a' a'*, Fig. 1.

This invention consists in so constructing a steam-whistle that a movable piston within the cup or cylinder above the steam-orifice modulates the sound of the whistle to a scale of tones, or higher or lower notes. The piston is managed from any distance below by means of a rod at the pleasure of the operator, and where a scale of notes may be placed, by which, and by moving the rod, a tune may be played.

A represents the steam-pipe; B, the lower part of the whistle, having the usual terminal cup, which is nearly closed by the end of the steam-duct C, leaving the usual annular opening *i i*; D, a vertical standard, which serves as a guide for, and is inclosed in, the hollow stem *d* of the piston F, and both pass upward through the top of the cylinder or upper cup E. This standard D projects from the top of the steam-duct C; but the piston may be so constructed as to perform its office without this standard D by making the stem *d* slide in the upper part of the cylinder E, and giving it a more lengthened bearing at that place. E, the upper cup or cylinder of the whistle, being of the usual shape, having its mouth placed at a short distance above the annular steam-opening *i* of the lower cup C. This is supported by an arm, *f*, attached to the upper end of it, and which rests on a vertical standard, *k*, erected on the arm *g*, which projects from the lower cup B. F, the piston, which is an annular disk or flange, surrounds the end of the stem *d* of the same, and forming a part thereof. The stem *d* is hollow, and slides upon the vertical stem or standard D, and is connected at its upper extremity to a rod, G, which, at a short distance above, is bent, and passes vertically

downward through sockets in the arms *f g* of the whistle to the engine-room or other convenient place, where the rod may terminate at a short hand-lever, by which the motion of the piston F may be more readily adjusted to produce the required note or series of notes when desired to sound a tune, &c. The nuts *m n* on the standard *k* are for regulating the height of the upper cup E above the whistle B.

The operation of this whistle is as follows: The piston F, on being raised by the upward pressure of the rod G, increases the space between the lower face of the piston F and the steam-orifice *i*, and enlarges the space within the cup E, thereby producing a lower note, according to the distance of the piston F from the mouth of the cup E and the steam-orifice *i*.

By means of a musical scale at the foot of the rod G the whistle may be so gaged and operated as to play a distinct tune.

The proper distance of the cup E from the lower cup or whistle B may be regulated by means of the nuts *m n* on either side of the arm *f*, which supports the cup E upon the standard *k*.

What I claim as my invention is—

1. A movable piston, or its equivalent, within the upper cup of the steam-whistle, the raising or lowering of which within the cup alters the sound, substantially as described.
2. In combination with the cup E of a steam-whistle, the piston F, operated substantially as described.
3. The combination of the steam-whistle B C D E, piston F, rod G, and a graduated scale of notes, substantially as described.
4. The combination, with the steam-whistle A B C E D, of the piston F, stem *d*, rod G, and arms *f g*, substantially as described.
5. In combination with the cup B, the arm *g*, and standard *k*, the latter supporting the arm *f* and the cup E, substantially as described.

In testimony that I claim the foregoing steam-whistle I have hereunto set my hand this 27th day of April, 1872.

GARRETT S. NEVIUS.

Witnesses:

J. T. SANDERS,
G. S. DOUGHTY.