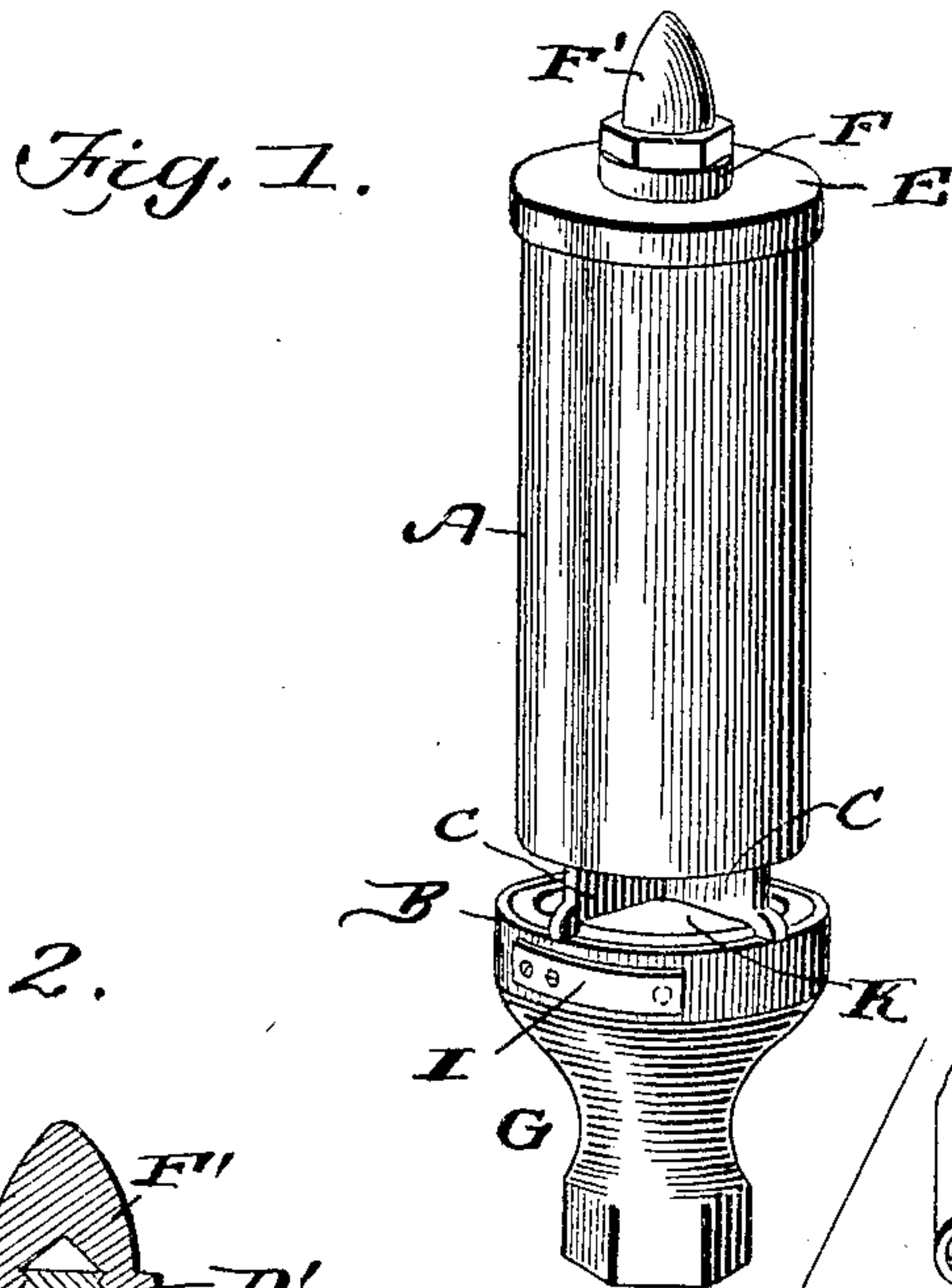


No. 803,482.

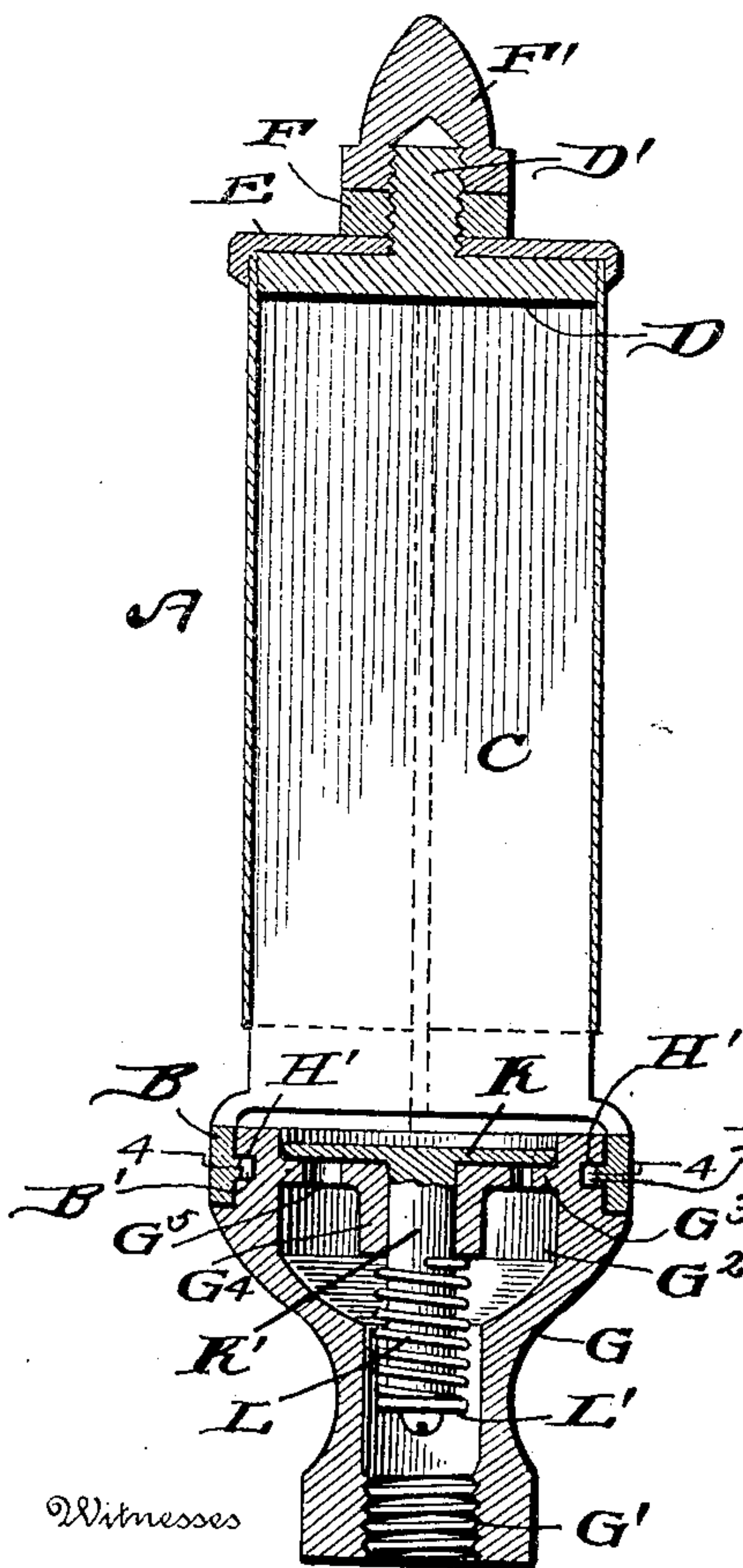
PATENTED OCT. 31, 1905.

F. HECKLER.  
COMPRESSED AIR WHISTLE.

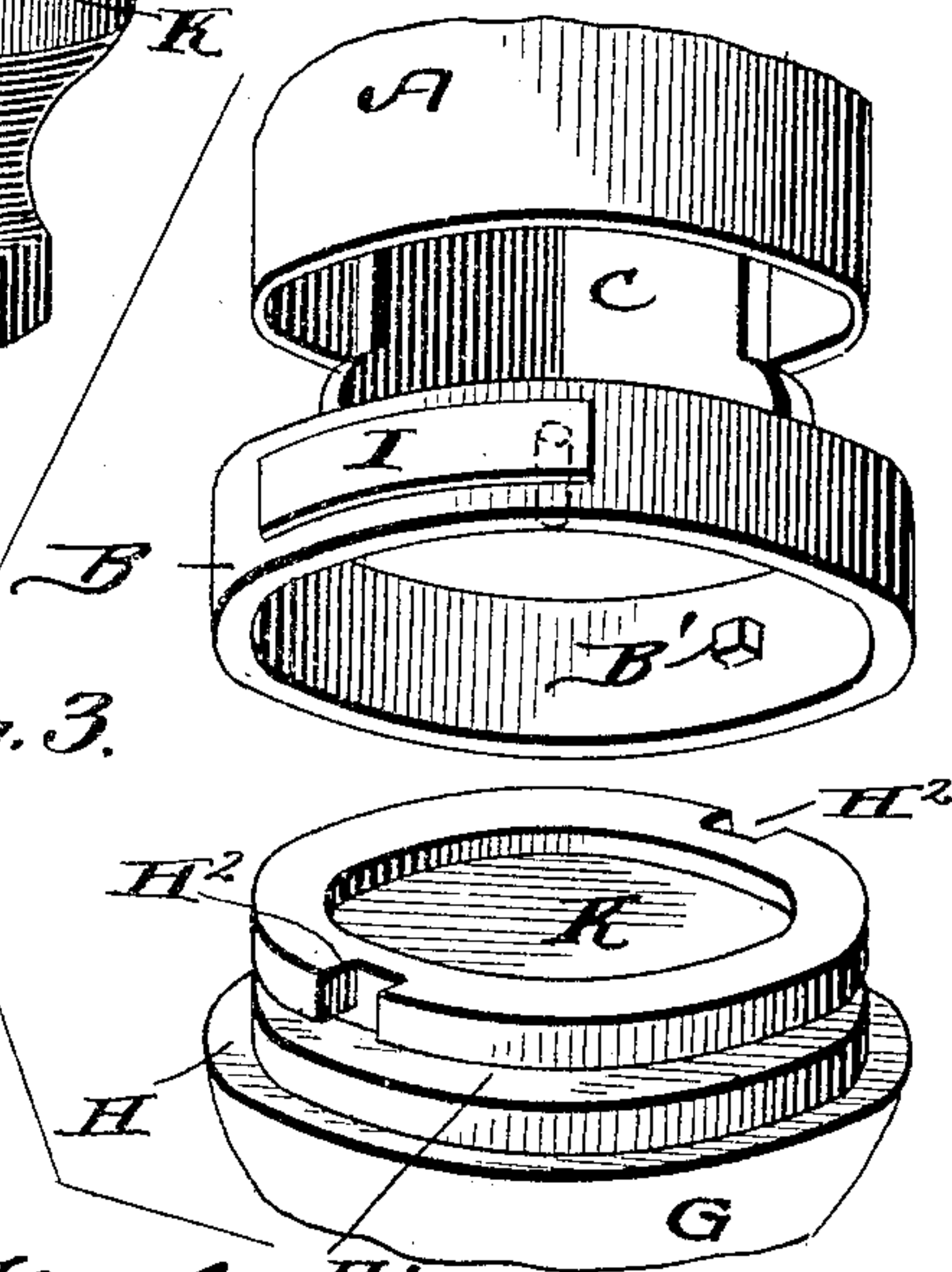
APPLICATION FILED FEB. 6, 1904.



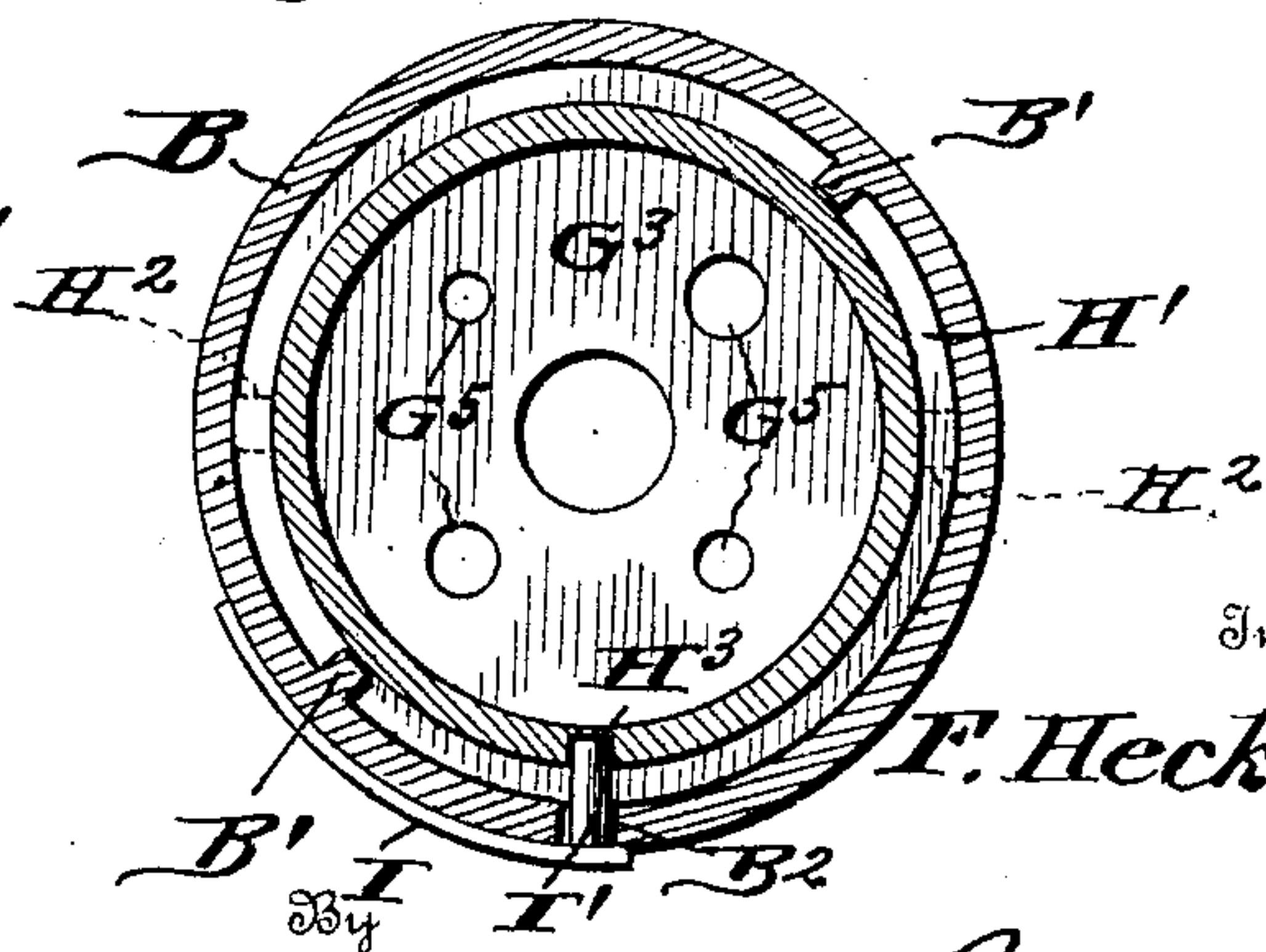
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

FREDERICK HECKLER, OF FREMONT, OHIO.

## COMPRESSED-AIR WHISTLE.

No. 803,482.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed February 6, 1904. Serial No. 192,398.

*To all whom it may concern:*

Be it known that I, FREDERICK HECKLER, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented a new and useful Compressed-Air Whistle, of which the following is a specification.

This invention relates generally to whistles, and more particularly to one belonging to that class known as "chime-whistles," wherein a duplex sound is produced.

This invention is particularly adapted for use by compressed air; but it is obvious that it may be operated by steam; if so desired.

The invention is intended to be used in connection with electric-railway cars; but it may be used for other purposes, if so desired.

The invention consists in the novel features of construction and arrangement hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a whistle constructed in accordance with my invention. Fig. 2 is a vertical view of the same. Fig. 3 is a view showing the top portion of the base and the bottom portion of the bell and frame detached from the base, and Fig. 4 is a sectional view on the line 4 4 of Fig. 2.

In constructing a whistle in accordance with my invention I employ a cylinder or bell A, which rests upon a frame or support comprising a circular ring B and the vertical partitions C, intersecting each other at right angles and providing four separate quadrant-shaped chambers. The bell or cylinder A is closed at the upper end by means of a circular top D, having a threaded spindle D', which projects upwardly through the cap-piece E, arranged upon the top of the bell or cylinder, the said parts being secured by means of a nut F and jam-nut F'. The frame which carries the bell is supported upon a base G, which terminates in a threaded neck G', to which the air-supply pipe is connected. The upper portion of the base is formed with an air-chamber G<sup>2</sup>, which is covered by means of a diaphragm G<sup>3</sup>, said diaphragm having a central aperture and a depending collar G<sup>4</sup> and the apertures G<sup>5</sup>, which are preferably arranged in alinement with the chambers of the whistle. These openings G<sup>5</sup> may be made of various sizes, and by having the said apertures of different sizes it is obvious that there will be varying pressures of air-blasts upon the edges of the bell, and as the said bell is sub-

divided into chime-chambers it is obvious that a duplex or chime sound will be produced.

The ring B rests upon a horizontal shoulder H, turned upon the exterior of the base, and the said base is also formed with a horizontal annular groove H', in which fit the lugs B', formed upon the interior of the ring B, the upper end of the base being notched, as shown at H<sup>2</sup>, in order to permit the lugs B' to enter the groove H'. In placing the frame upon the base the lugs B' are brought into alinement with the notches H<sup>2</sup> and passed there-through, and the frame is then turned so as to bring the lugs B' into the groove H', thereby connecting the base and frame. In order to lock said parts against further movements, I employ a spring locking-plate I, which is attached to the ring B upon the outer side of the same and carries a pin I' at its free end, which pin passes through an opening B<sup>2</sup>, produced in the ring, and engages a socket H<sup>3</sup>, produced in the base portion in the groove H'.

The openings G<sup>5</sup> in the diaphragm G<sup>3</sup> are normally closed by means of a valve K, which rests upon the top of the diaphragm and has its stem K' passing downwardly through the central opening, said stem extending a considerable distance into the neck portion of the base and is surrounded by means of a coiled spring L, the upper end of which bears against the depending collar G<sup>4</sup> of the diaphragm, and the lower end bears against a disk or shoulder L', arranged upon the lower end of the valve-stem. This spring keeps the valve firmly seated until the air-pressure is sufficient to unseat the same and sound the whistle. By means of this construction there is no waste of air in case the valve of the air-supply pipe should be defective and leak.

In case the whistle should become clogged with dirt or any other substance it can be quickly and easily taken apart, cleaned, and reassembled.

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

1. A whistle comprising a bell arranged upon a frame comprising a ring and the intersecting partitions, a base to which the frame is detachably connected, said base having an air-chamber, a diaphragm arranged in the air-chamber having a plurality of apertures, varying in diameter, and a spring-actuated valve adapted to simultaneously close all of the said apertures, as set forth.

2. A whistle comprising a bell, a ring hav-

ing the partitions connected thereto, and means for closing the top of the bell, a base having an air-chamber, covered by an apertured partition, a spring-actuated valve normally closing said apertures, the upper portion of the base having an annular groove, the ring having inwardly-extending lugs adapted to engage said groove, and the spring-plate carrying a locking-pin, substantially as described.

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