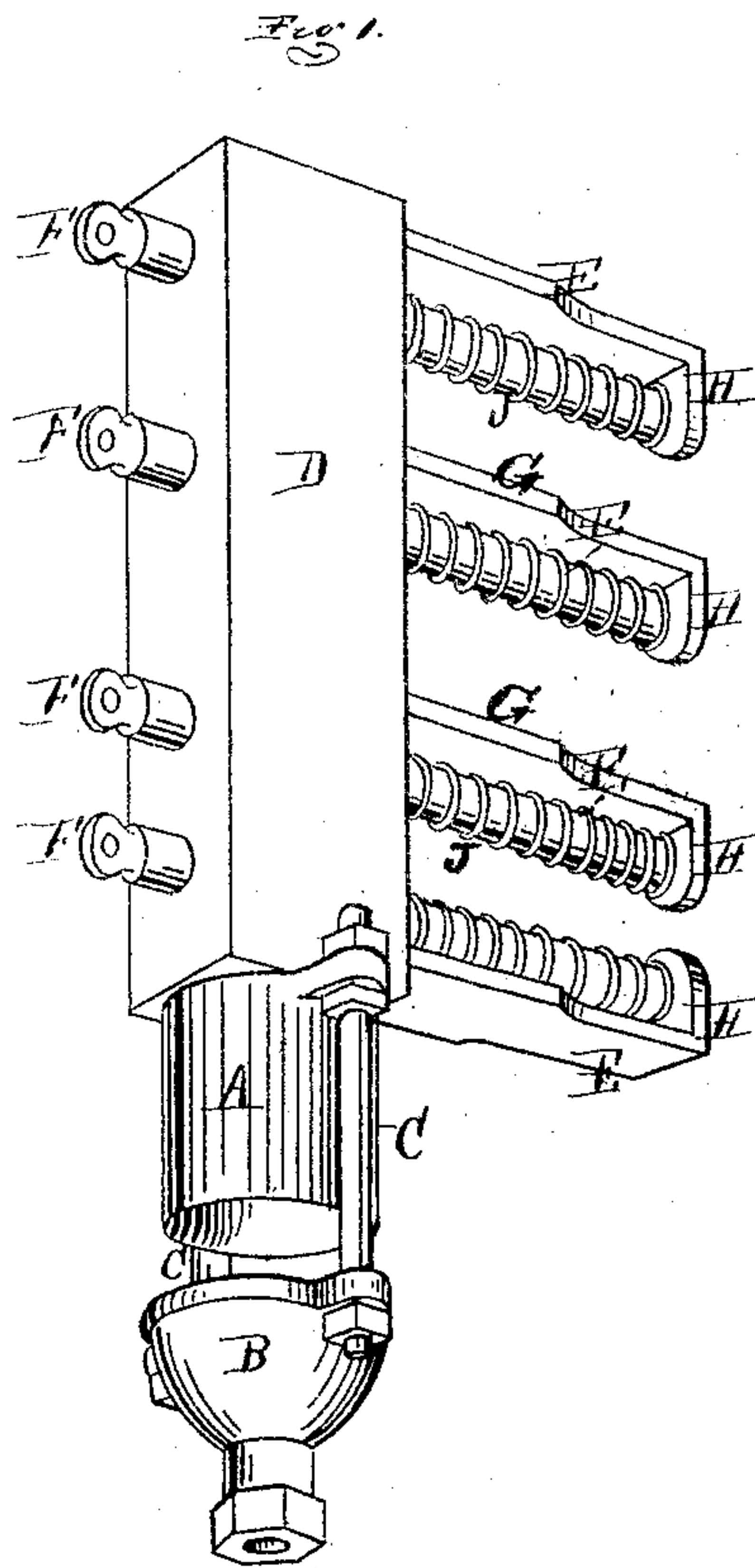
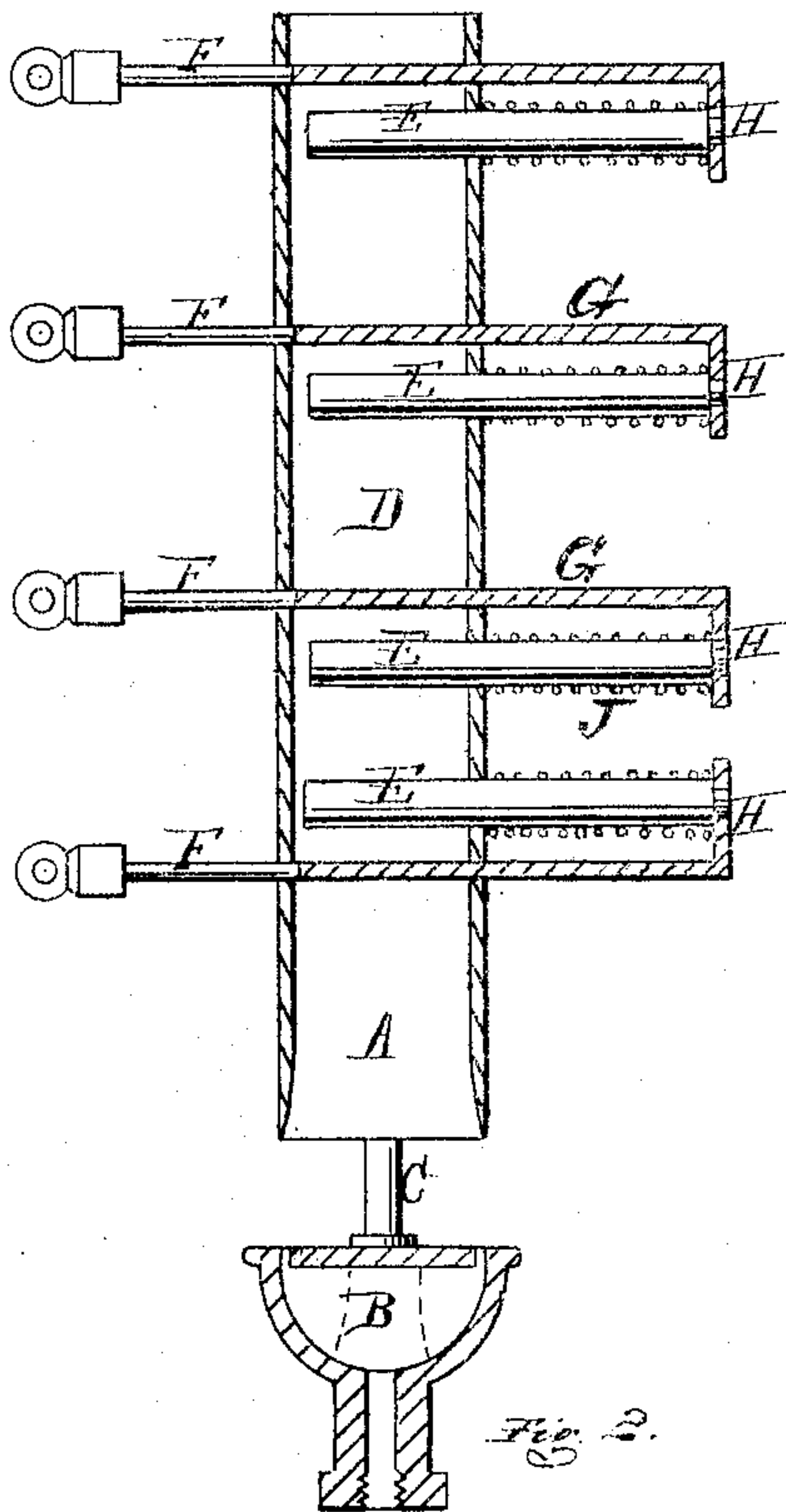


O. KROMER.
Steam-Whistles.

No. 141,280.

Patented July 29, 1873.



ATTEST:
H. Sprague
Theo. S. Day

INVENTOR:
Otto Kromer
By *Attorney*
Theo. S. Sprague

UNITED STATES PATENT OFFICE.

OTTO KROMER, OF SANDUSKY, OHIO.

IMPROVEMENT IN STEAM-WHISTLES.

Specification forming part of Letters Patent No. **141,280**, dated July 29, 1873; application filed April 8, 1873.

To all whom it may concern:

Be it known that I, OTTO KROMER, of Sandusky, in the county of Erie and State of Ohio, have invented a new and useful Improvement in Whistles; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my improved whistle with the valves open. Fig. 2 is a vertical section of the same with the valves closed.

Like letters refer to like parts in each figure.

The nature of this invention relates to the construction of a whistle, more especially designed to be operated by steam, from which a variety of tones may be produced at will. The invention consists in the construction and arrangement of the various parts, as more fully set forth.

In the accompanying drawings, A represents the steam or wind pipe, and B the bowl of a whistle of ordinary construction. Secured to this bowl, by suitable connections C, is an elongated open bell, D. This bell is divided into different lengths to produce different tones by means of the valves E, so constructed that any one of them may be made to close at will, and so that they will open instantly

on being released. These valves operate through suitable openings in the side of the bell, so constructed that when the valves are open there will be little or no leak or escape of steam or wind through said openings. F are the valve-stems, and the valves may be closed by means of a cord secured to the head of the stem, or in any other convenient manner. G are prolongations of the valves, and terminate in flanges H, between which and the side of the bell are placed the coil-springs J, the operation of which are to withdraw the valves when they are released.

Closing the lowest valve makes the operating part of the bell short, and it emits a high shrill tone. Closing, successively, the valves above lengthens the operating part of the bell, and it sends forth lower sounds.

These valves may, perhaps, be properly termed diapason-stops, and they may be arranged at distances apart to produce a regular musical scale.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the bell D the valves E, constructed and arranged to operate substantially as and for the purpose set forth.

OTTO KROMER.

Witnesses:

J. P. MERRIAM,
AUGUST KLOTZ.