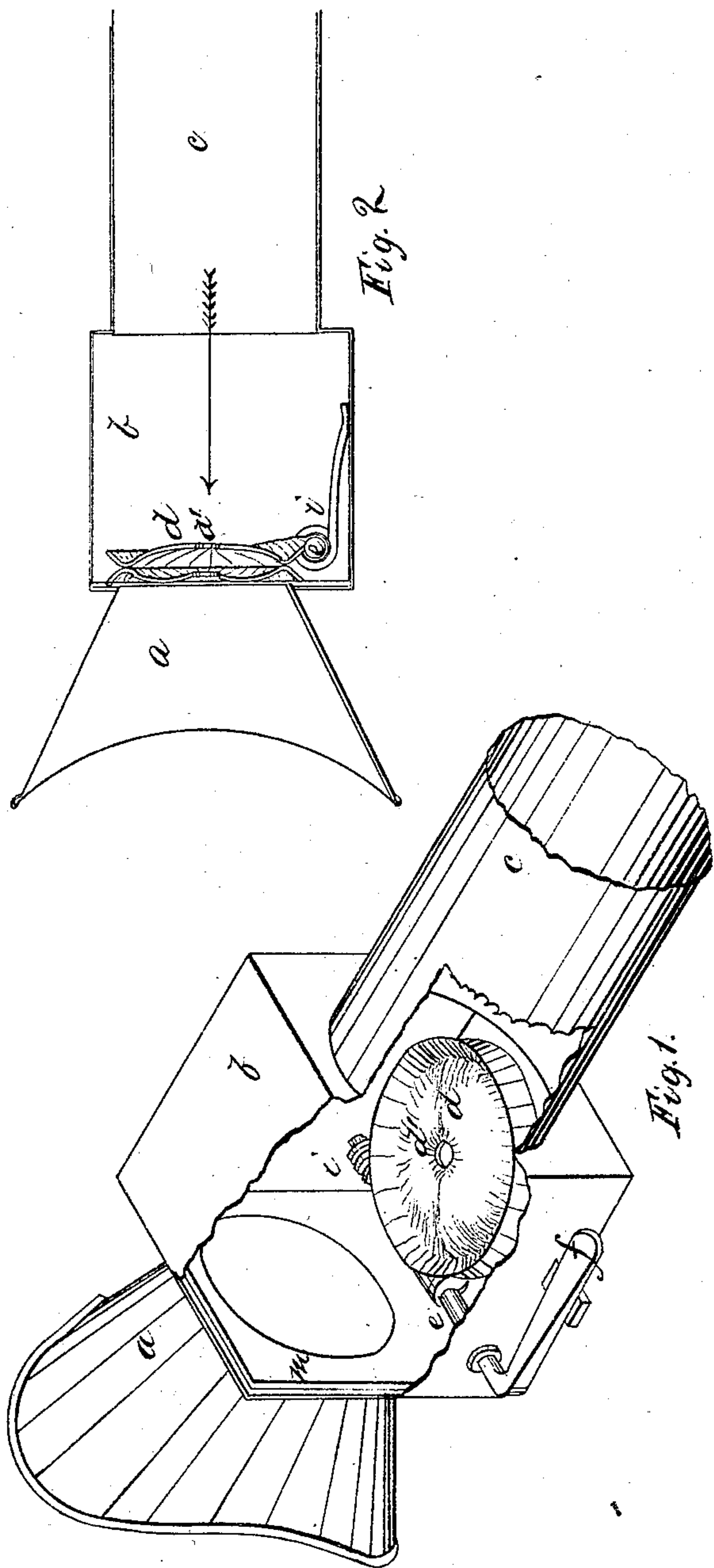


Woolcock & Ostrander.

Speaking Tube.

N^o 8,932.

Patented May 4, 1852.



UNITED STATES PATENT OFFICE.

T. I. WOOLCOCKS AND WM. OSTRANDER, OF NEW YORK, N. Y.

SPEAKING-TUBE.

Specification of Letters Patent No. 8,932, dated May 4, 1852.

To all whom it may concern:

Be it known that we, THOMAS I. WOOLCOCKS and WM. OSTRANDER, of the city, county, and State of New York, have invented certain new and useful Improvements in Speaking Tubes or Pipes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawing, making a part of this specification, in which—

Figure I is an isometrical view exhibiting the arrangement of parts. Fig. II is a sectional view, and similar letters refer to similar parts throughout.

The improvement made by us in speaking tubes consists in the introduction within each mouth of the tube, of an alarm valve, which performs two offices, viz: one to close the mouth when not in use so that currents of air are prevented from passing through, and the other to afford a signal by which attention may be called to the tube from a distance from its mouth.

It is a serious objection to the old mode of constructing speaking tubes that in dwelling houses, where they lead to the kitchen the fumes of the cookery, &c., are by them conveyed throughout the house, and secondly unless they are also accompanied by bells to call attention to the mouth of the tube the tubes are of but little use, as it is well known that the voice of a person speaking through such instruments cannot be heard unless the ear of the party to be addressed is very near the aperture at the opposite end.

The construction and operation is as follows: The tubes are made and conducted from place to place as usual, and terminate at each end in a mouth piece similar to that of a speaking trumpet as seen at (a). Immediately behind this mouth piece there is a chamber fitted to receive the alarm valve as seen at (b); from this the speaking tube (c) extends as usual. The alarm valve is at (d) and consists of a hollow disk formed so as to produce a shrill sound or whistling noise by means of the embouchure (d') whenever a strong current of wind is propelled through it. The valve is attached to a spindle (e) and handle worked from the outside, as (f); a spring is also attached at (i) which serves to close the valve against the mouth piece. It is evident that various other contrivances for making a sound by

the force of a current of wind may be combined with the valve, such as reeds, or harmonicons, &c. Against the plate or seat of the valve at (m) some soft packing is used, as leather or cloth, to keep the joint air tight. The operation then is as follows: Suppose a party at one end of the speaking tube desires to speak to another party at the other end, which is usually at a remote position or distant room. The alarm valves are by reason of the spring (i) upon the spindle kept closed over the mouth of each end as seen in Fig. II. The party desiring to speak goes to the tube and by turning the handle (f) removes the valve and opens a passage from the mouth piece to the tube as seen in Fig. I. Then by putting his mouth close to the mouth piece (a) and urging a current of air by his breath through the pipe (as shown in Fig. II, by the course of the arrow) he causes the whistle to be sounded at the other end and thus gives an alarm by the production of a shrill sound, at the end of the pipe in the same manner as if the party making the signal were at that spot instead of being at a distant station. To respond to this alarm the party whose business it is to attend comes to the mouth piece and opens the valve in the manner already described, when the necessary conversation can be carried on in the usual manner. From this it will be seen that when the tube is not in use, both ends are kept closed so that neither smoke, dust, nor effluvia of any sort may pass through except to the extent of the aperture or embouchure (d') which is ordinarily too small to notice. But if it is desirable that even this should be closed also, it will be only necessary to substitute upon the valve a reed, common to various instruments which will close the aperture to its least dimensions.

What is claimed as of our own invention and desire to secure by Letters Patent is—

The combination of an alarm valve with a speaking tube or pipe in the manner and for the purpose substantially as herein set forth.

THOS. I. WOOLCOCKS.
WILLIAM OSTRANDER.

Witnesses:

H. S. MANSFIELD,
H. P. L. SMITH.