

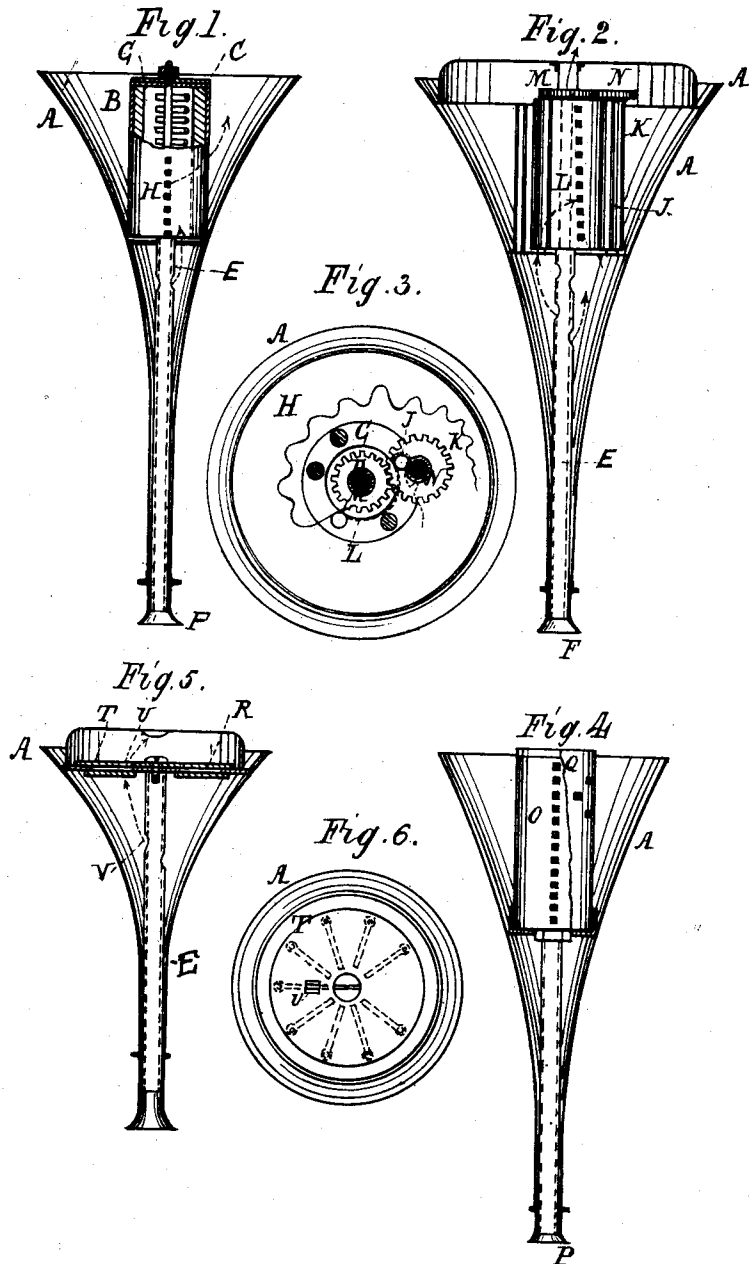
(No Model.)

M. A. WIER.

MECHANICAL MUSICAL INSTRUMENT.

No. 329,420.

Patented Oct. 27, 1885.



Witnesses
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MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 329,420, dated October 27, 1885.

Application filed November 15, 1884. Serial No. 148,045. (No model.) Patented in England June 4, 1884, No. 8,564.

To all whom it may concern:

Be it known that I, MARSHALL ARTHUR WIER, of Upper Norwood, in the county of Surrey, Kingdom of Great Britain, have invented a new and useful Improvement in Automatic Musical Instruments; and I do hereby declare that the following is a full, clear, and exact description of the same.

I obtained a British patent, No. 8,564, on the 4th day of June, 1884, for the instrument which is the subject of my present application.

This invention relates to musical instruments where tunes or harmonies are produced by blowing with the mouth.

It has for its object to enable persons unlearned in music to play tunes, harmonies, &c., with wind produced by their respiratory organs.

It consists of a trumpet or similar shaped instrument adapted to be blown into through the mouth, and provided with reeds or other sound-producing devices arranged in the form of a scale and a music sheet or tablet controlling the playing.

The accompanying drawings illustrate my invention,

Figure 1 is a longitudinal section of one of my improved musical instruments. Fig. 2 is a longitudinal section of another of my musical instruments. Fig. 3 is an end view of the instrument shown in Fig. 2. Fig. 4 is a longitudinal section of another instrument. Fig. 5 is a longitudinal section of still another instrument. Fig. 6 shows an end view of the instrument illustrated in Fig. 5.

I will first describe the instrument shown in Fig. 1. A designates a trumpet-shaped shell. At the bell end is fixed a hollow cylindrical-shaped piece of wood, B, or other material having inside it a scale-plate, C, provided with reeds. The reeds are arranged in cells, whereby they are separated from each other. The cell of each has a hole communicating with the external air. Through the center of the cylindrical-shaped piece B passes a rod, D, to which a tube, E, leading to the mouth-piece F is attached. This tube projects at the mouth-piece beyond the trumpet-shaped shell, and is free to be revolved by the thumb and finger.

That part of the tube E which is inside of the trumpet-shaped shell may be constructed of a piece of perforated wood, metal, or gauze. The rod at the bell end of the trumpet passing through the cylinder or scale-piece turns with the tube E, and has attached to it a circular plate, G, of about the same size as the cylinder in circumference. The music or tune tablet consists of a drum, H, made of a cylindrical piece of paper, one end of which is open and the other closed by a piece of cardboard. Through the periphery of the drum holes are punched in planes corresponding with the planes in which the reeds or notes of the scale-plate B are arranged. The tune-drum is made of the proper size, so as to pass easily over the scale-plate, and is then fixed to the plate G by a screw and nut or other suitable device. The wind caused by the respiratory organs to flow from the mouth through the tube E escapes from the latter into the trumpet-shaped shell A, and, as the open end of the scale-plate B fits snugly in said shell, passes into the scale-plate and out through the holes of the scale-plate and the holes of the drum. Instead of the paper drum, a music-sheet consisting of a perforated endless band of paper may be used, as illustrated in Figs. 2 and 3. In this example of my invention two small rollers, J K, are arranged alongside of a scale-plate or cylinder, L. These rollers J K are turned by a tube, E, and rod D, such as I have described, through the agency of a suitable pair of geared wheels, M N. The endless band of paper is drawn across the scale-holes by means of the two rollers, which draw and pass the paper between them. The wind in this case, instead of passing from the tube E into the interior of the scale-plate and then out at the holes thereof, is made to pass through the holes of the music-sheet, thence through the coincident holes of the scale-plate, and out of the top of the scale-plate. The wind is caused to thus circulate by means of a diaphragm extending across the inner end of the scale-plate, and another diaphragm extending between the outer end of the scale-plate and the trumpet-shaped shell A. If desirable, the mouth-piece, tube E, and a scale-

plate, O, may be connected to turn together, as shown in Fig. 4, so that by turning the said tube the scale-plate O will also be turned. The tube E will then open into the scale-plate.

5 A paper drum, Q, having the tune perforated in it, will then be fixed in the trumpet-shaped shell A. A circular disk-shaped scale-plate, R, (see Fig. 5,) may be employed. It will then be placed across the bell end of the

10 trumpet-shaped shell A, with the notes or reeds toward the mouth-piece. The holes of this scale-plate are at different distances from the center. A perforated tube, E, of wood, metal, or other material, passes through the center of

15 the instrument and scale-plate R. A music-tablet consisting of a disk, T, of card-board or other material, is attached to the end of the tube E, which extends to the bell end of the trumpet-shaped shell A, and is perforated, as

20 at U, corresponding to the reed-slots in the tune-plate. This end of the tube E is closed, and holes V are made laterally in the side of the tube, through which the wind passes from the mouth-piece when blown by the performer.

25 The air then impinges against the reeds of the scale-plate, and whichever note or notes happen to be open or opposite a slot or slots in the music-tablet, the air passes through and

sounds them. The mouth-piece and tube, together with the perforated disk-shaped tablet, are turned by the thumb and finger by means of a boss conveniently placed on the tube. 30

Having now described the nature of the said invention and the manner in which it is to or may be performed, I would have it understood 35 that what I claim as my invention is—

In a musical instrument, the combination of a trumpet-like shell, an air-tube adapted to be blown into through the mouth of a person and extending into the said shell, a connection between said shell and air-tube which admits of one being rotated or turned relatively 40 to the other, a series of sound-producing devices connected to one of said parts, and a music sheet or tablet connected to the other of said parts, substantially as specified. 45

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 6th day of September, 1884.

MARSHALL ARTHUR WIER.

Witnesses:

J. WATT,

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Both of 17 Gracechurch St., London.