

W. H. CLARKE.  
Improvement in Musical Tone-Indexes.  
No. 128,591. Patented July 2, 1872.

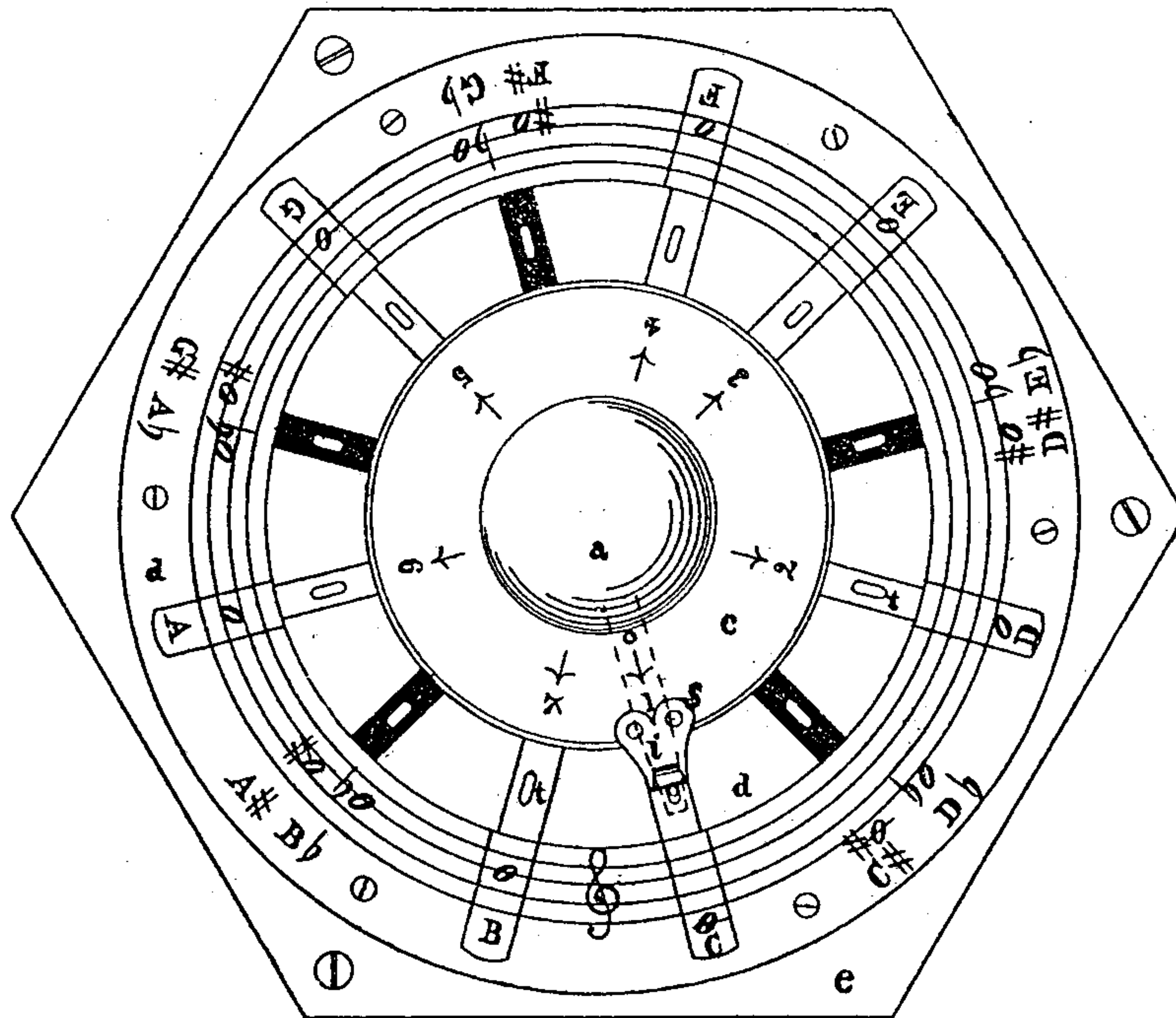


Fig 1

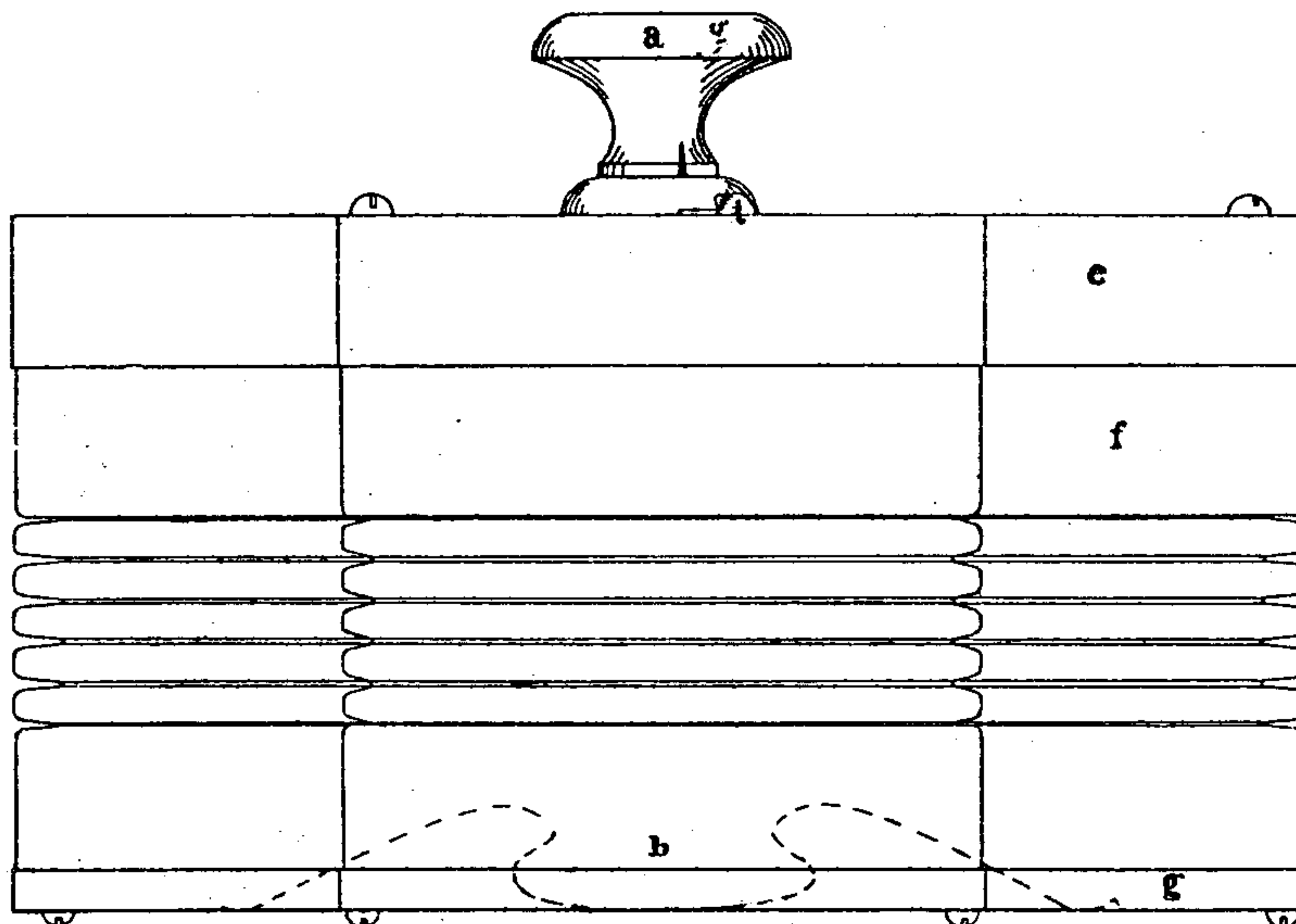


Fig 2

Witnesses

Geo. M. Young,  
Att. J. P. Tuckwell.

William Horatio Clarke.

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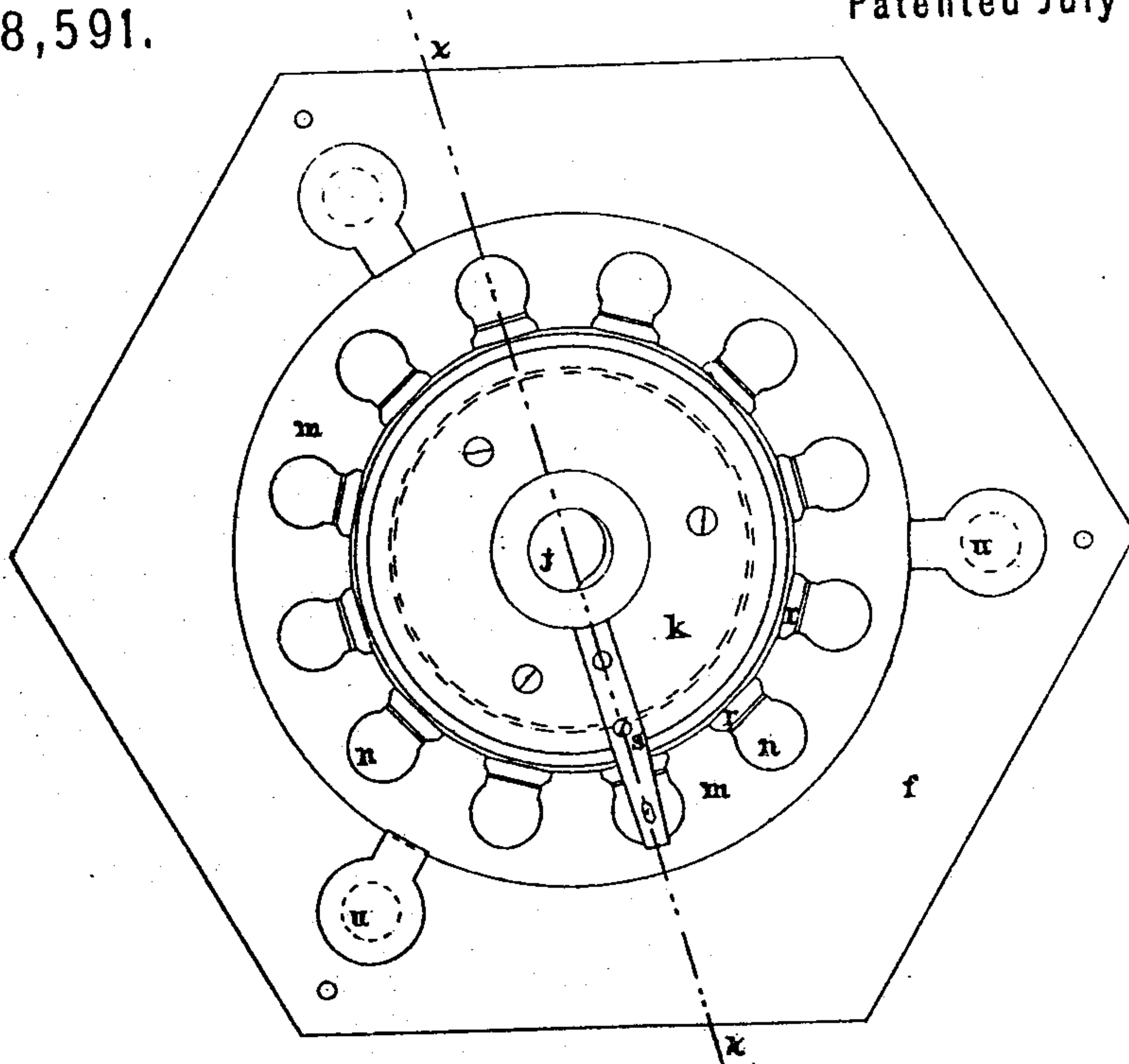


Fig. 3

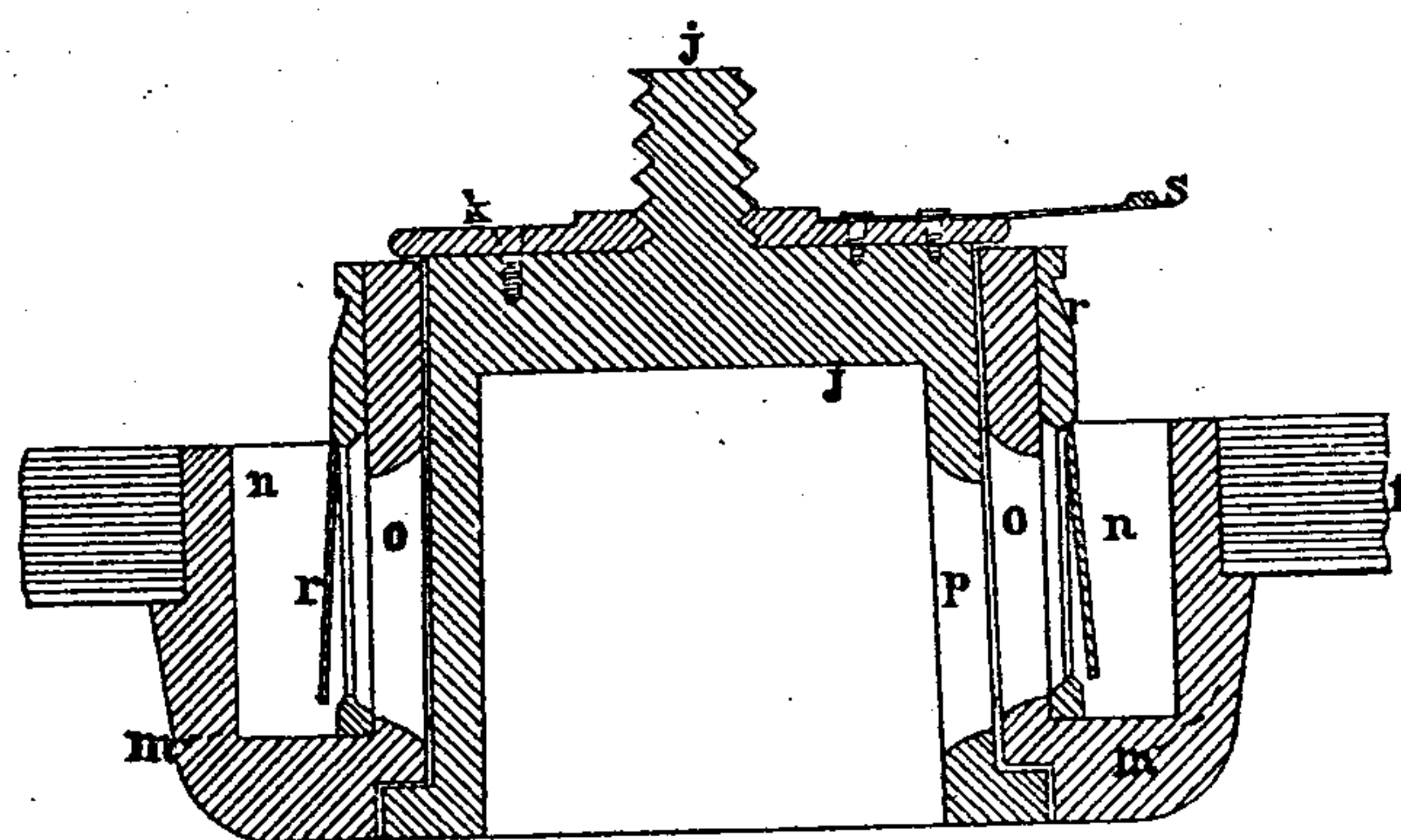


Fig. 4

*Witness*  
*Geo. M. Young*  
*Att. for Invt.*

*William Horatio Clarke.*



## UNITED STATES PATENT OFFICE

WILLIAM HORATIO CLARKE, OF DAYTON, OHIO.

## IMPROVEMENT IN MUSICAL-TONE INDEXES.

Specification forming part of Letters Patent No. 128,591, dated July 2, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM H. CLARKE, of Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Improvement in Musical-Tone Indexes, of which the following is a specification:

The object of my invention is to provide an instrument by which the proper symbol of the musical tone of any one of a series of reeds will be indicated upon a dial-plate upon applying a current of air to the reed desired, as hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a plan or top view of a musical-tone index embodying my improvements; Fig. 2, a side elevation of the same; Fig. 3, a plan of the same with the top removed to show the arrangement of the reed-cells; and Fig. 4, a vertical section at the line *xx* of Fig. 3.

A plate, *e*, of circular or polygonal form, in connection with a similarly-formed bellows, *f*, on top of which it is secured, serves as a case for the mechanism of the instrument; but if it is preferred to produce the sound by blowing or inhaling air from the mouth upon or through the reed the bellows may be dispensed with, and a simple case of proper dimensions employed. An annular plate, *d*, having a musical scale marked upon it, is secured to the plate *e*. This scale consists of the symbols of the various tones of the diatonic scale and all the chromatic intervals. (flats and sharps) included in one octave from middle C upward, and constitutes a circular music-staff. Apertures *tt* are formed in the plates *d* and *e* adjacent to the respective symbols, through which apertures the air passes on its way to the reeds. A movable dial or transposing-scale, *c*, Fig. 1, is placed in the space inside the annular dial-plate *d*. An internally-threaded knob, *a*, is secured to the upper plate *e* of the instrument, to which a hollow cylinder, *J*, is secured by a screw, *j*. A slot or opening, *p*, is formed in the periphery of the cylinder *J*, which is provided with a flange at its lower end to support an outer cylinder, *m*, which can be turned freely upon it. A series of reed-cells, *nn*, in each of which is placed a reed, *r*, is formed in the cylinder, the reeds being secured to the cylinder and extending downward into the cells. An opening, *o* is,

formed in each reed-cell adjacent to the cylinder *m*. A plate, *k*, is secured to the top of the cylinder *J*, and carries an indicator, *S*. The indicator is formed of a plate-spring secured at one end to the plate *k*, or otherwise to the cylinder *J*, and bent upward or downward, or provided with a projection at its free end to take into the apertures *tt* in the dial-plate, or it may simply point at the desired symbol. A catch, *i*, is secured to the transposing-scale *c* to hold the scale in position. The bellows *f* is of the ordinary construction used in musical instruments, and is provided with a knob, *b*, by which, in connection with the knob *a*, it can be operated, and is also provided with valves *uu*, to allow the rapid egress of the air; but the bellows may be dispensed with and air blown directly from the mouth, if preferred, as before stated.

The key-note of a desired scale and its diatonic order may be indicated by moving the transposing-scale *c* to the symbol of the required tone, and by turning the knob *a* so as to bring the indicator *s* opposite to the symbol of the particular tone desired, the opening *p* in the inner cylinder *J* is brought opposite the opening *o* in the reed-cell containing the reed of corresponding tone. Upon opening the bellows the air passes in through the apertures *tt* to the reed-cell, and, escaping through the opening *p* into the bellows, produces the tone desired with invariable exactness. When the bellows is released the air passes out through the valves *uu*.

I claim as my invention—

1. The combination, with a musical-tone index, of a circular music-staff, substantially as set forth.

2. The combination, in a musical-tone index, of the dial-plate, the outer cylinder carrying the reed-cells, the inside cylinder provided with an opening to communicate with a reed-cell, and an index which indicates upon the dial-plate the tone of the reed with which the inside cylinder is in communication, substantially as set forth.

3. The combination, in a musical-tone index, of a circular music-staff and a series of reed-cells, substantially as set forth.

4. The combination, in a musical-tone index, of a circular music-staff, a transposing-scale

in a revolving disk, and an indicator, substantially as set forth.

5. The combination, in a musical-tone index, of the circular music-staff, the transposing-scale, the indicator, the outer cylinder carrying the reed-cells, and the inner cylinder provided with an opening to communicate with a reed-cell, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM HORATIO CLARKE.

Witnesses:

O. M. GOTTSCHALL,  
GEO. M. YOUNG.