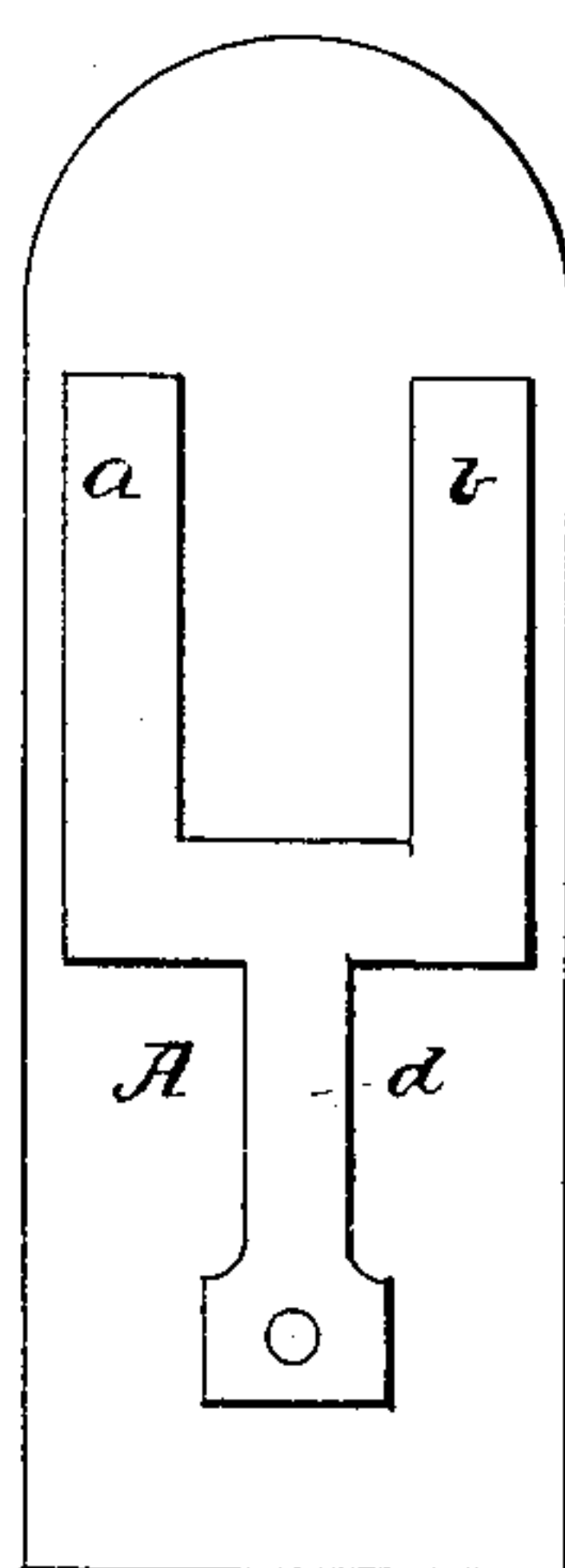
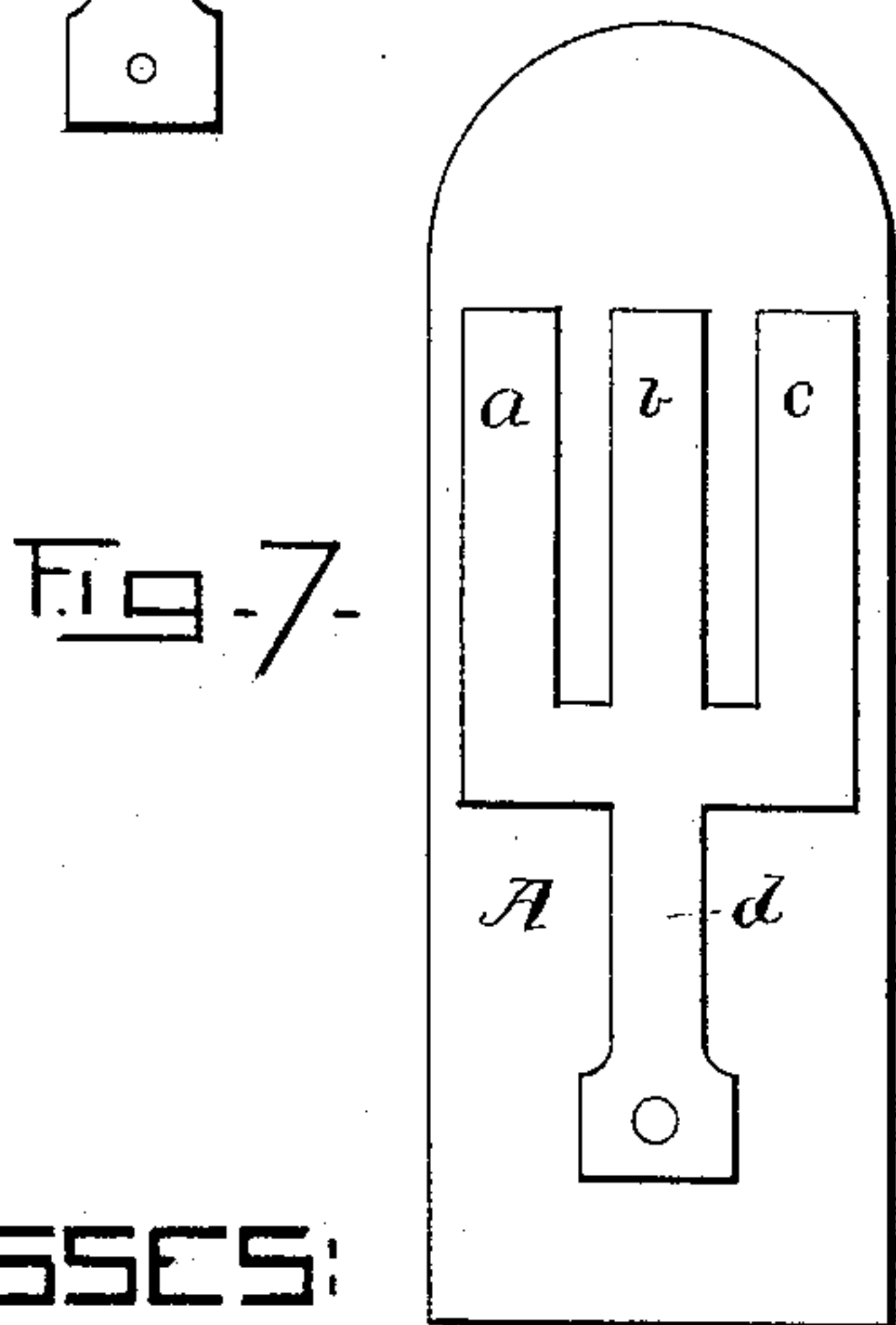
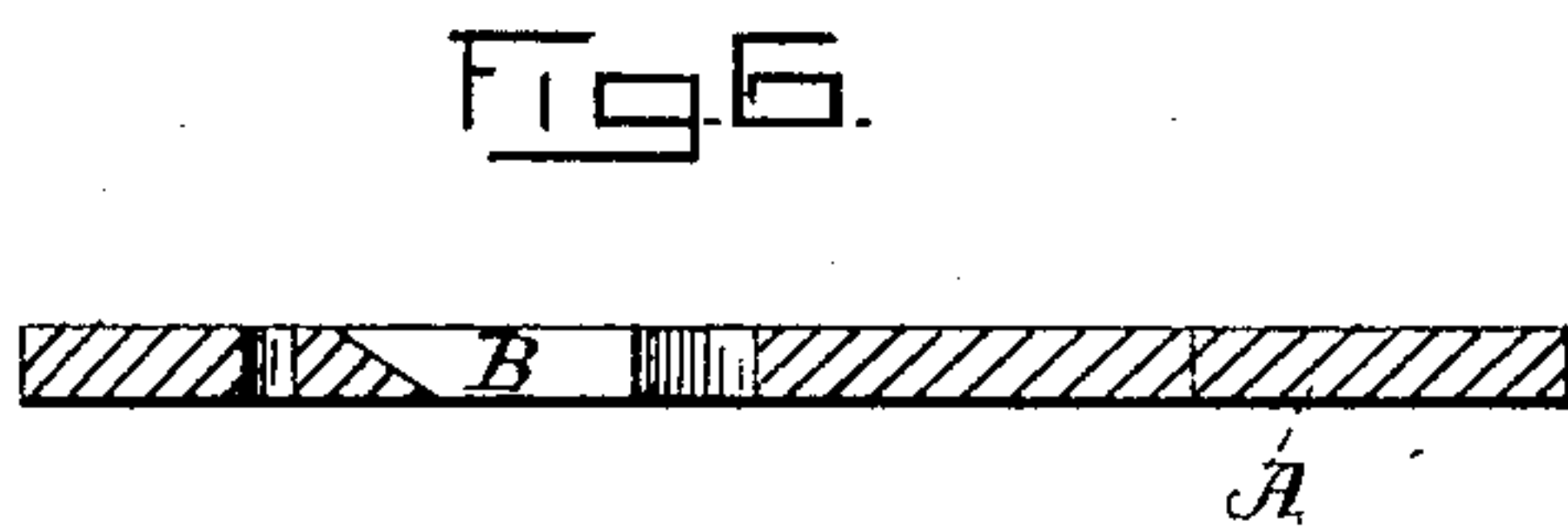
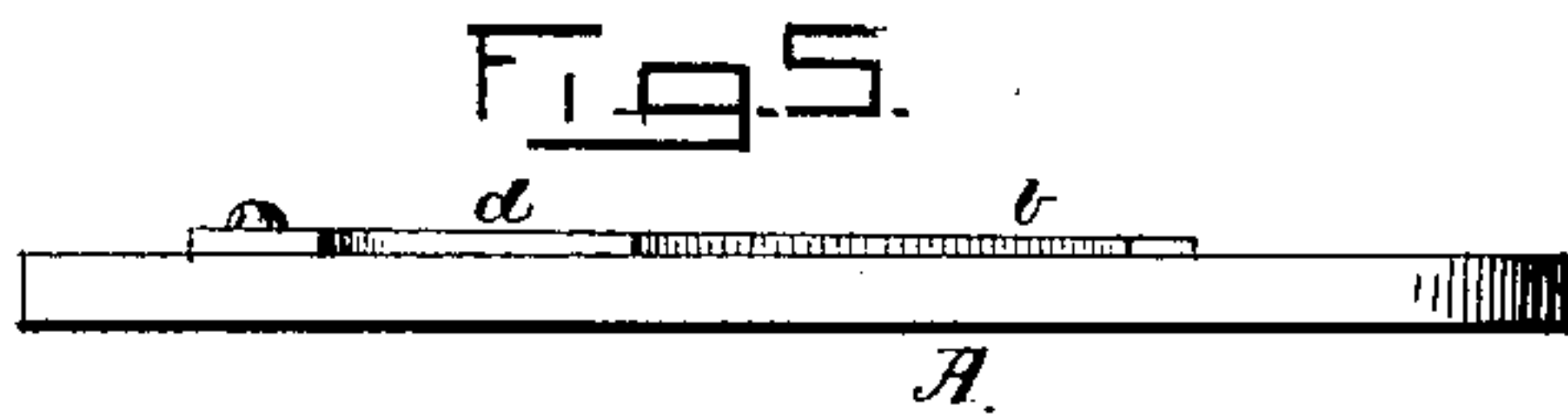
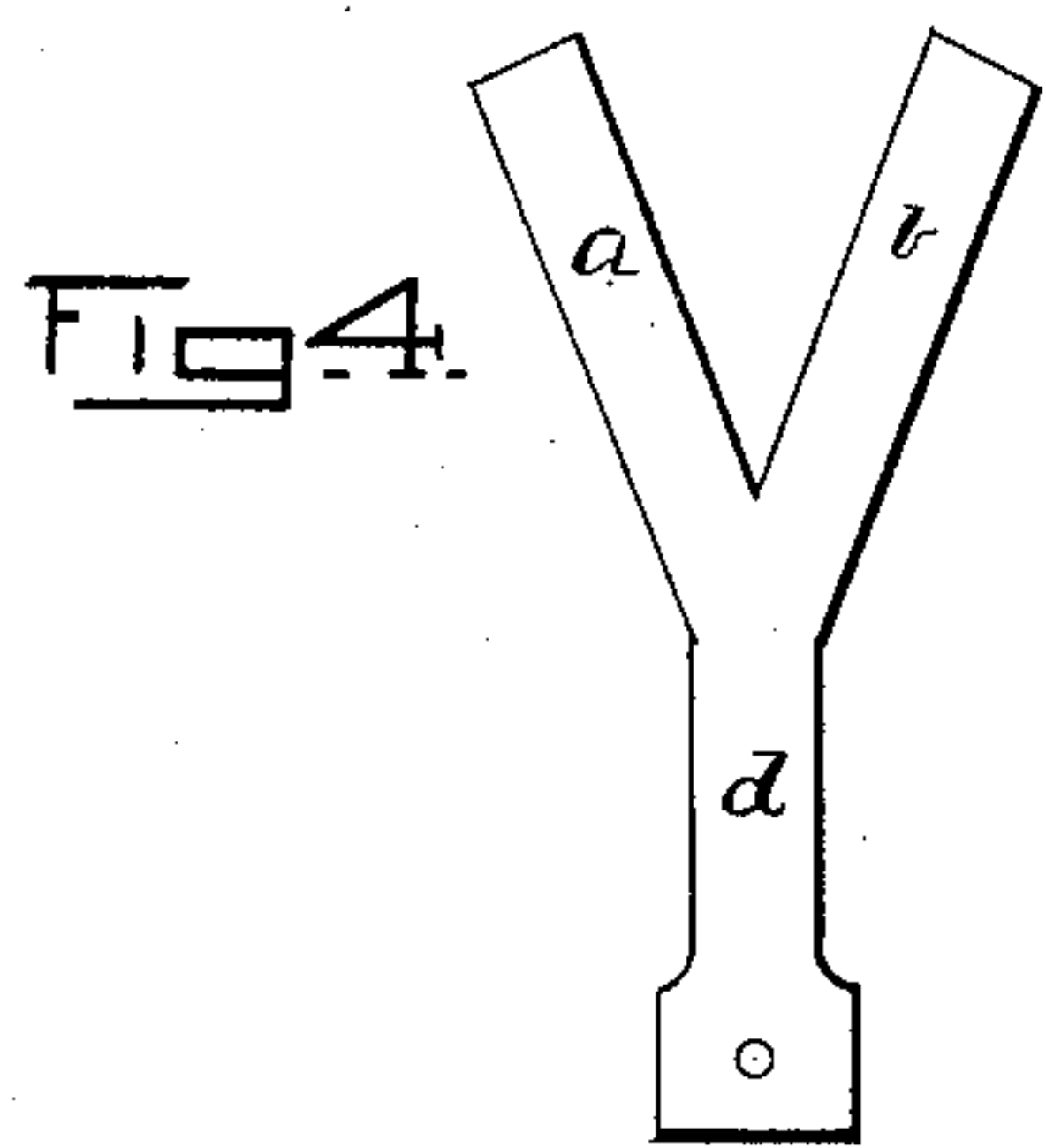
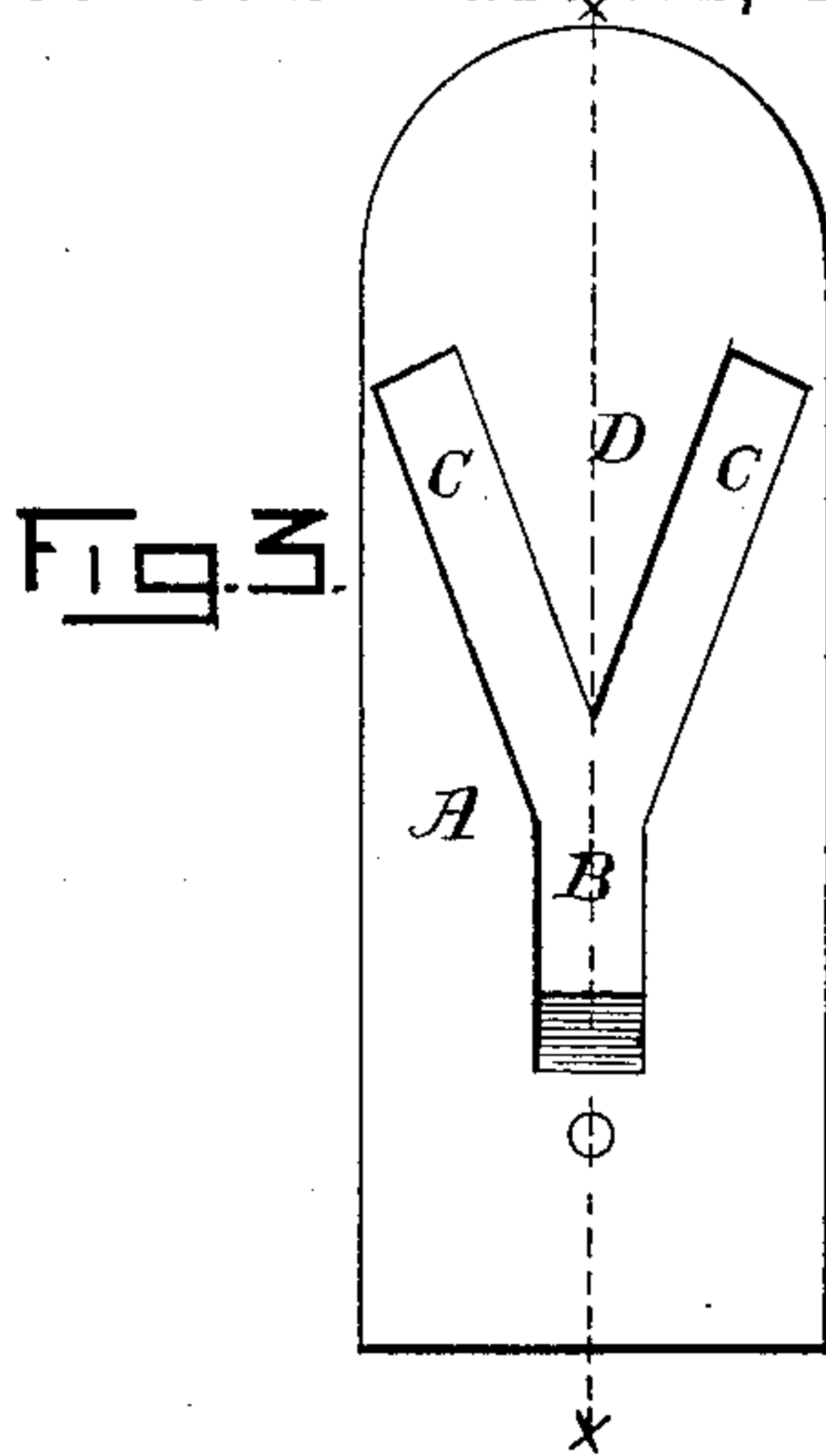
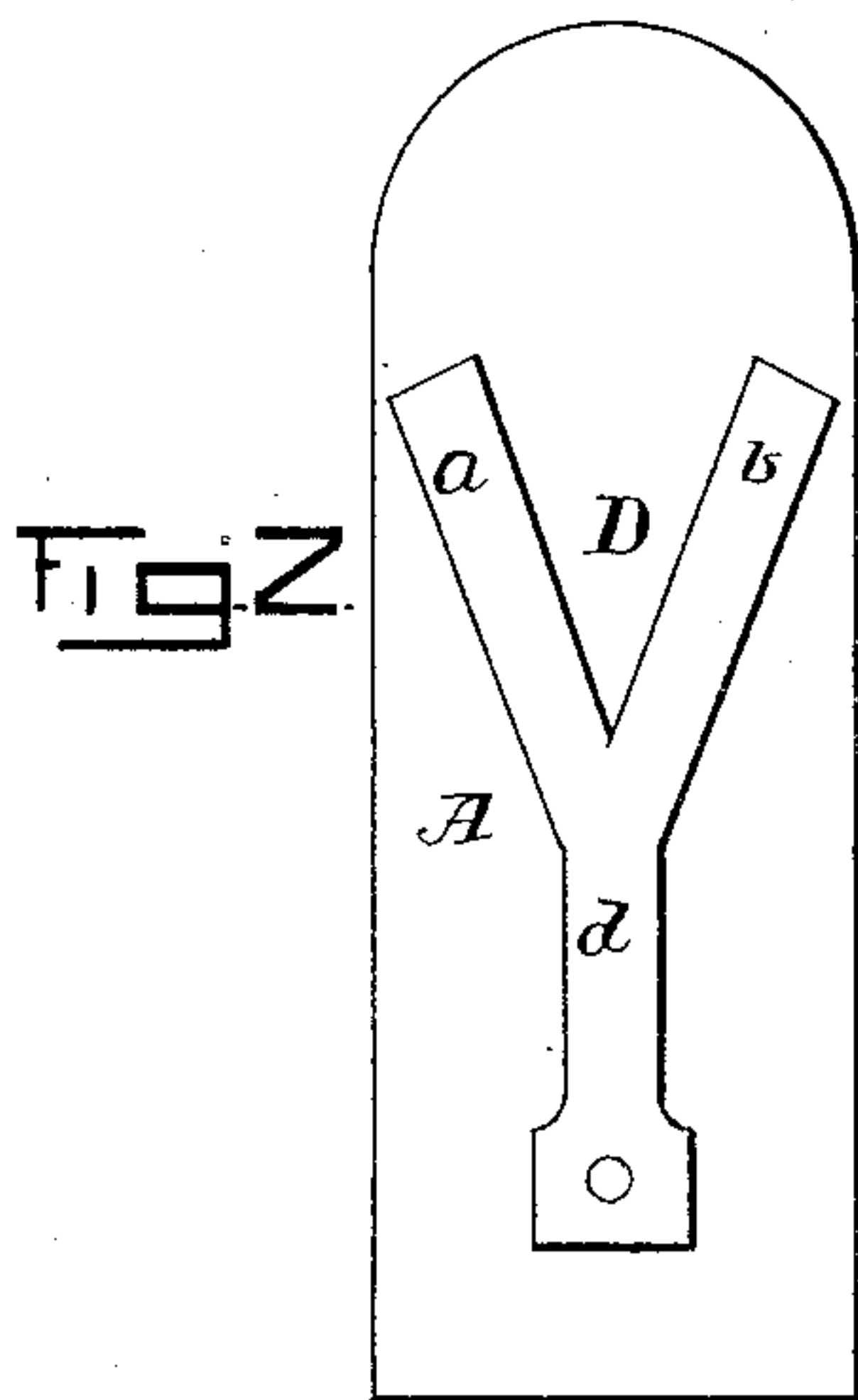
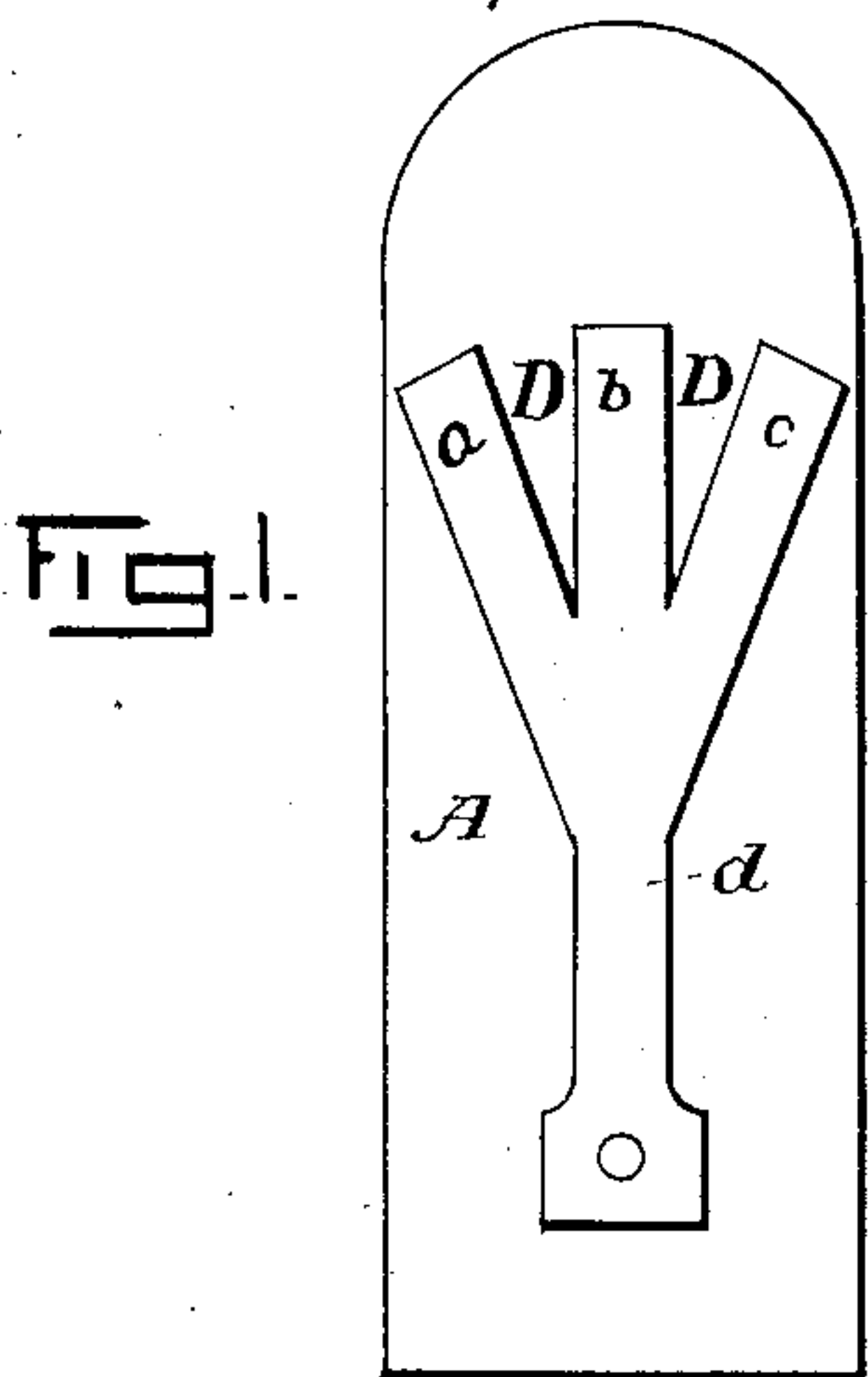


(No Model.)

M. GALLY.
ORGAN REED.

No. 314,234.

Patented Mar. 24, 1885.



WITNESSES:

INVENTOR.

J. Harry Stuart.
M. L. Williams.

Merritt Gally

By W. A. Bartlett
His ATTY.

UNITED STATES PATENT OFFICE.

MERRITT GALLY, OF NEW YORK, N. Y.

ORGAN-REED.

SPECIFICATION forming part of Letters Patent No. 314,234, dated March 24, 1885.

Application filed February 18, 1884. (No model.) Patented in England May 14, 1884, No. 7,708.

To all whom it may concern:

Be it known that I, MERRITT GALLY, a citizen of the United States, residing in the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Organ-Reeds, of which the following is a specification.

This invention is patented in England, May 14, 1884, No. 7,708, and in no other country foreign to the United States with the consent or knowledge of this inventor.

Figure 1 is a plan of a reed which illustrates the principle of my invention. Fig. 2 is a similar view of a modification. Fig. 3 is a plan of the reed-block, Fig. 2, with tongue removed. Fig. 4 is a view of the tongue of same. Fig. 5 is a side elevation of reed, and Fig. 6 a section of Fig. 3 on the line *x x*. Figs. 7 and 8 are plan views of modified forms of reed.

A indicates the reed-block, which is of usual material and thickness. A slot, B, is cut through this block, and at the end away from the tongue-anchorage this slot is divided and prolonged, forming extensions C C, which extensions are divided by the projections D D from the front end of the reed-block.

The reed-tongue is composed of a thin plate of metal, as usual, and is secured to the reed-block in usual way. The shank or body portion *d* and the projecting prongs *a b c* are in one piece, and the prongs *a b* or *a b c* lie side by side. The reed tongue and block are made to conform to each other, as usual in musical reeds.

The power and volume of tone of an organ-reed depends upon the quantity of air set in vibration by the action of the tongue, and this is determined by the extent of the boundary-edge of the tongue, which corresponds with the boundary-line of the opening in the reed-block in which the tongue vibrates. To produce a tone of any given pitch, the tongue of an ordinary organ-reed is to a great extent limited as to its length, breadth, and thickness, and in the ordinary construction is limited to the extent of its boundary-edge. To increase the volume and power of the tone of any given pitch, when it is not desirable to employ the octaves of the tone, a number of unison-reeds are commonly employed; but it is difficult to cause these unison-reeds to vibrate exactly on the same beat. Instead of

increasing the volume and power of the tone as a single sound, the tone of each reed remains distinct in itself without increase in power or volume. Unison-sets are therefore seldom used in organs, except for variety stops. Different means have been employed, with some degree of success, in endeavoring to cause a number of unison-reeds to vibrate in perfect unison; but the difficulties in the way have been great, and good results have only followed very careful and expensive manipulation. For example, we take a number of reeds, all nicely tuned to unison. Each one of these reeds has required a certain amount of labor to tune it, this labor being multiplied by the number of reeds. The tongues of these reeds, each having its own attachment as a base from which to vibrate, may then be tied together by means of metal yokes or staples; but when this is done the tuning is destroyed, and each must be again tuned, the faulty tone of one hindering the tuning of the others, and so on, making it a difficult matter. Besides these difficulties, too much space is occupied by the number of tied reeds, their speaking capacity is comparatively slow, and unless exact uniformity is preserved in shaping the tongues during the tuning process an impurity of tone is produced.

The object of my invention is to increase the capacity of an ordinary organ-reed for setting air in vibration, and thus increase the power and volume of its tone. The greatest vibration of a reed-tongue is at the point most distant from the place of its attachment to the reed-block. The vibrations of the shank *d* of the reed-tongue are slight, but nevertheless determine the character of the vibrations of the entire tongue. In order to increase the extent of the boundary-line of that portion of the tongue which has the greatest amount of movement, I terminate the tongue in a number of prongs, as shown in Figs. 1 and 2. Thus the boundary-line is greatly increased, and as the prongs *a, b*, and *c* depend upon the single body *d* for their vibration, the tuning is almost as easily done as in an ordinary reed. The reed costs only a trifle more than an ordinary reed to manufacture, and is multiplied a number of times in volume and power.

The form which the branches of the slot and the prongs of the reed take, determine, in great

measure, the character of the tone. I have devised several modifications which I do not herein describe, as I am not permitted under the rules of the Patent Office to claim them 5 herein; but such modifications I do not abandon to the public. One such modification is described in an application filed by me, June 28, 1884, to which application the Office has given the serial number 136,228, and another 10 filed August 9, 1884, has been numbered 140,074.

I claim herein, broadly, as follows:

1. A musical reed-block having a slot in its body portion, which slot is extended and forms 15 a plurality of slots at one end, as described.

2. A musical reed-block having a slot in its body portion, which slot is extended into a series of separated branches, the united width of the branches being greater than that of the 20 main slot.

3. A musical reed-tongue having a single

vibrating shank or body portion, and a series of prongs integral therewith lying side by side.

4. A musical reed-tongue having a single shank or body and a plurality of prongs integral therewith and lying side by side, the combined width of the prongs being greater than 25 that of the shank, substantially as described.

5. The combination, with a reed-block having a branching slot, of a reed-tongue having 30 prongs corresponding with the branches in the slot, as described.

6. The combination, with a reed-tongue having a single body portion, of a series of prongs integral therewith and extending in the same 35 direction as the body, and a reed-block having a slot corresponding to the shape of tongue, as set forth.

MERRITT GALLY.

Witnesses:

D. B. GALLY,

WM. A. GALLY.