

No. 892,432.

PATENTED JULY 7, 1908.

F. I. JUDSON.
TRICK AMUSEMENT DEVICE.
APPLICATION FILED MAR. 24, 1908.

3 SHEETS—SHEET 1.

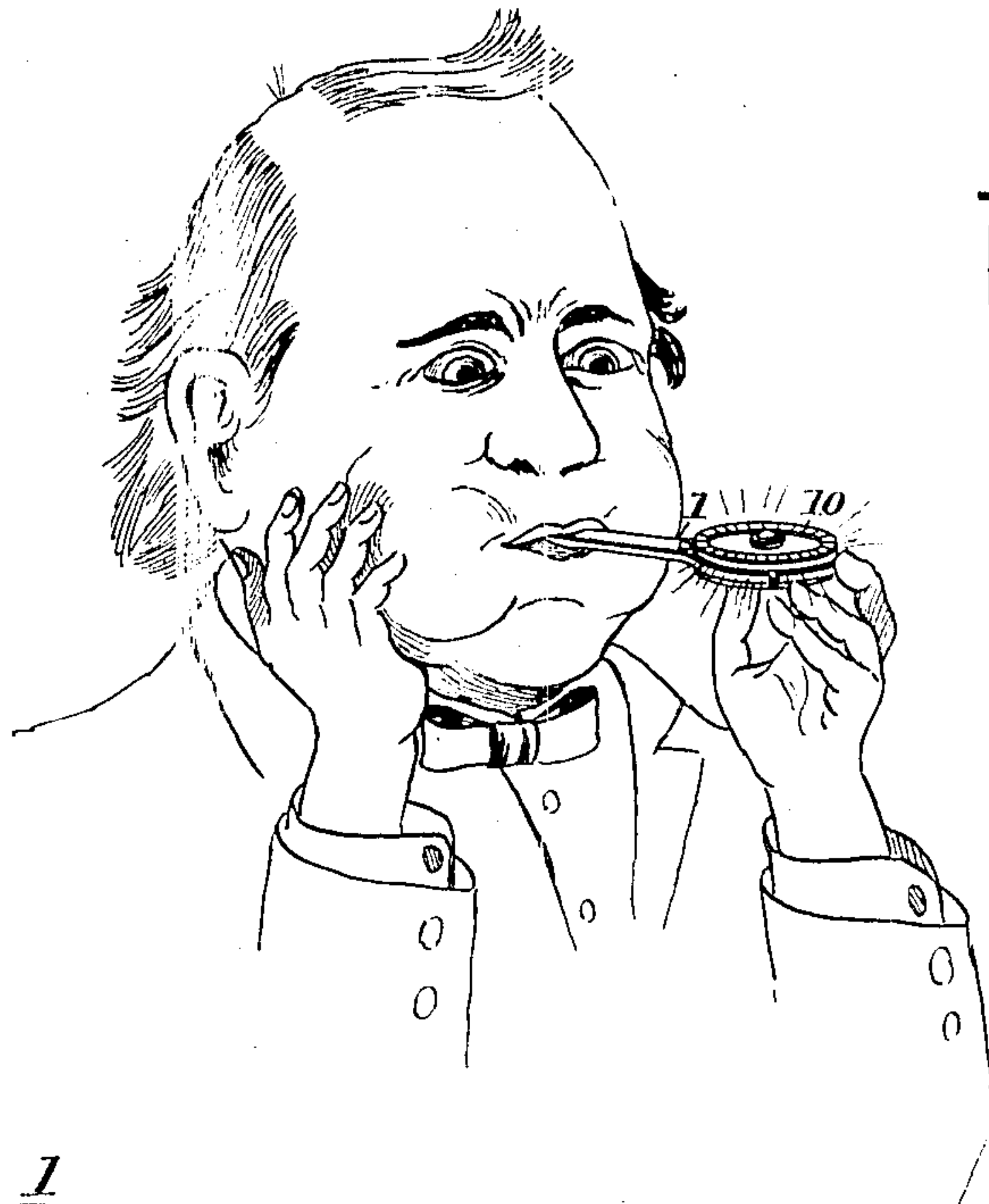


Fig. 1.

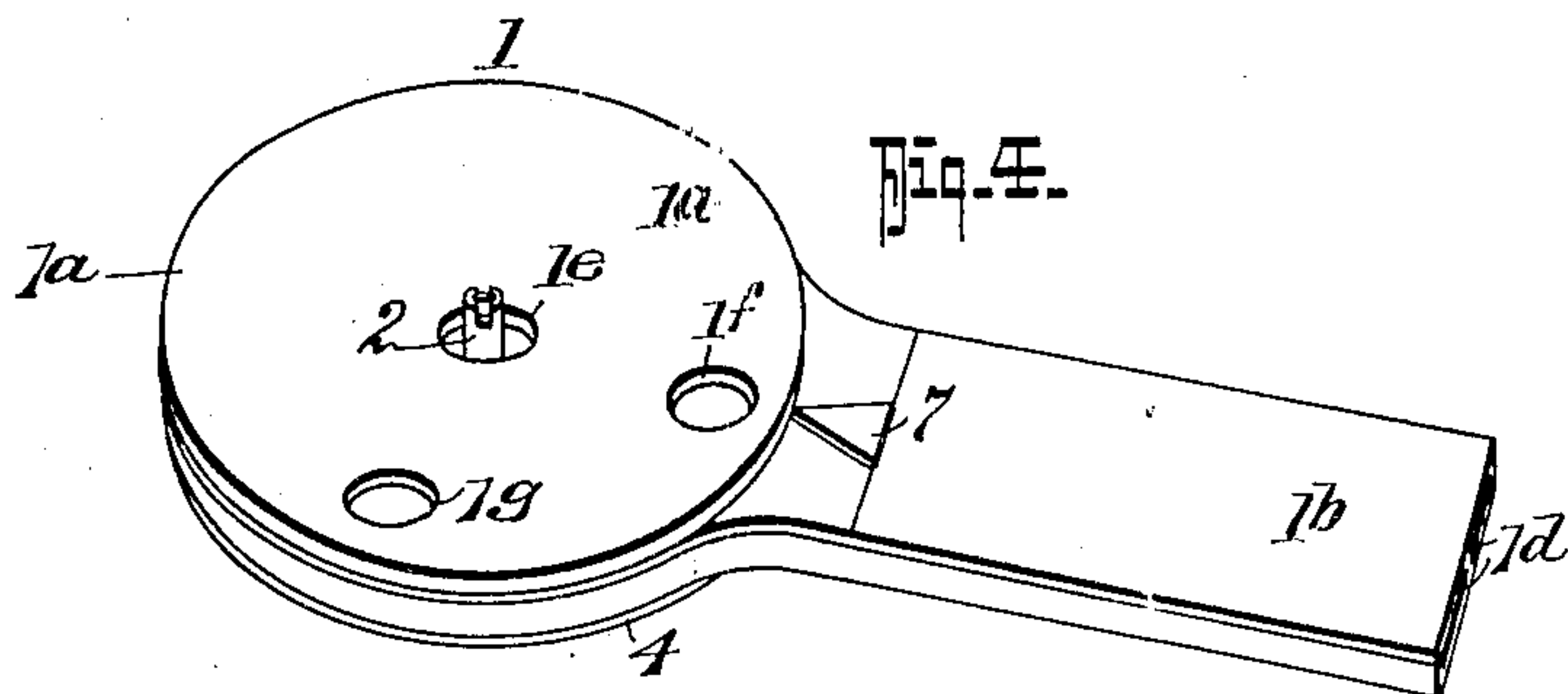


Fig. 4.

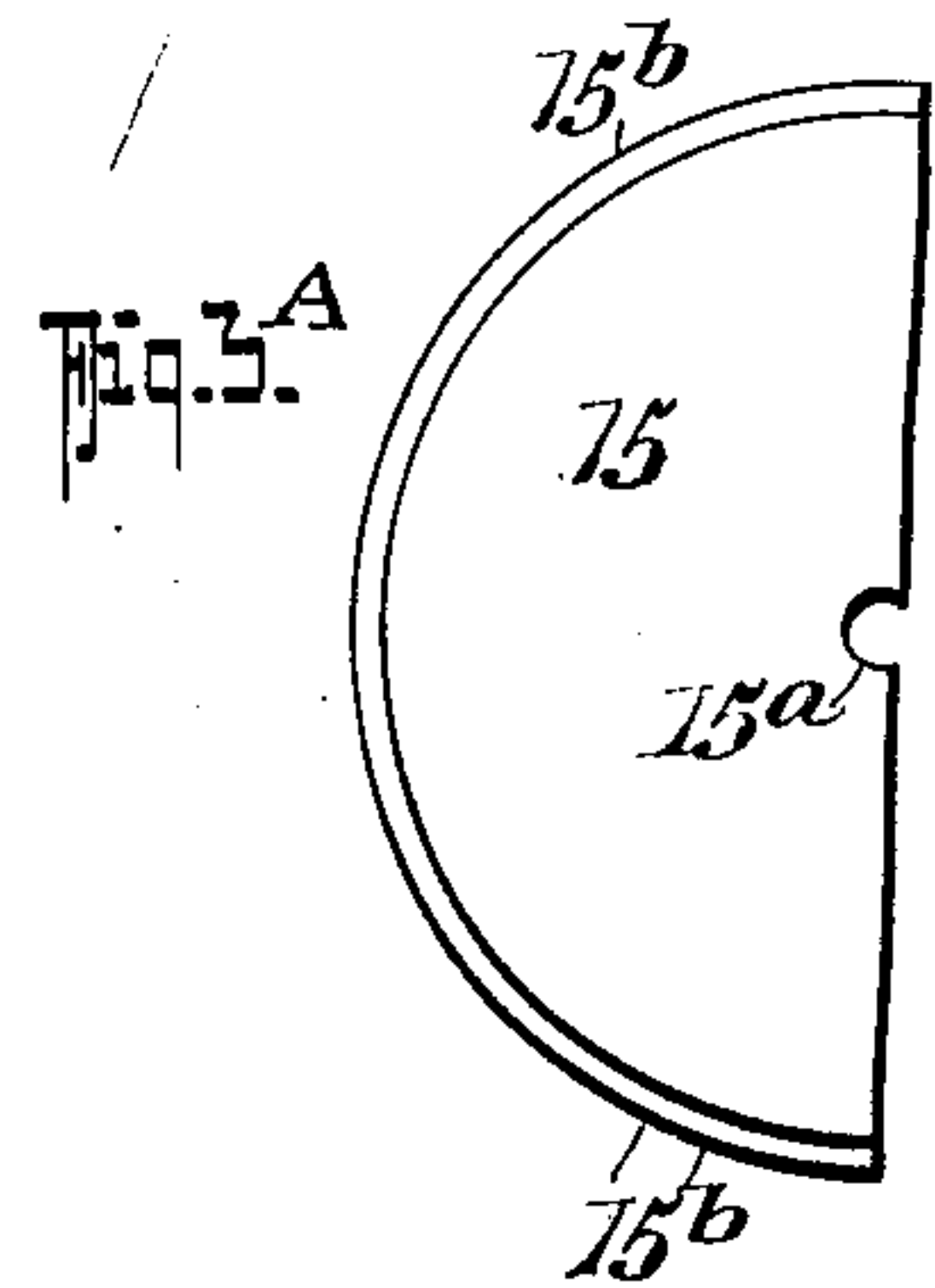


Fig. 3.

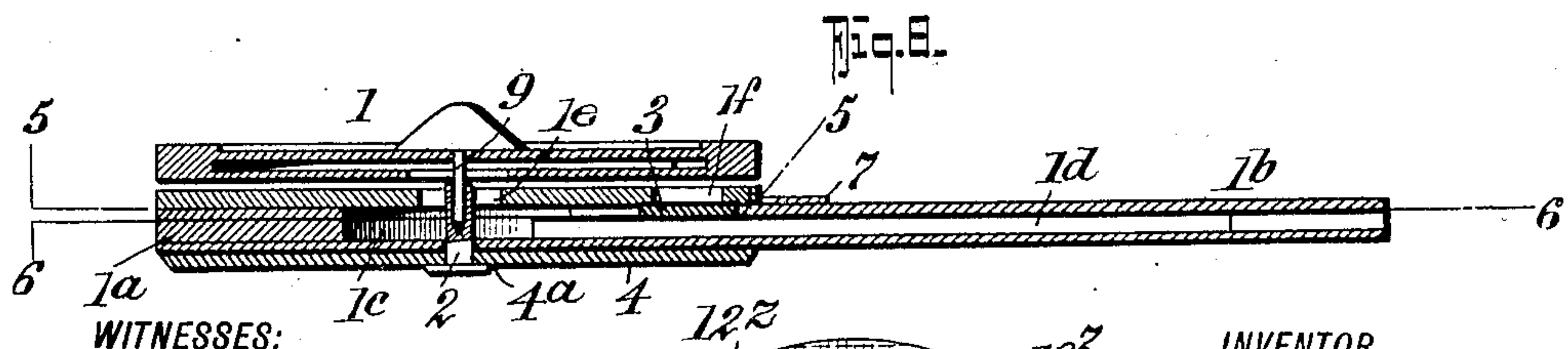
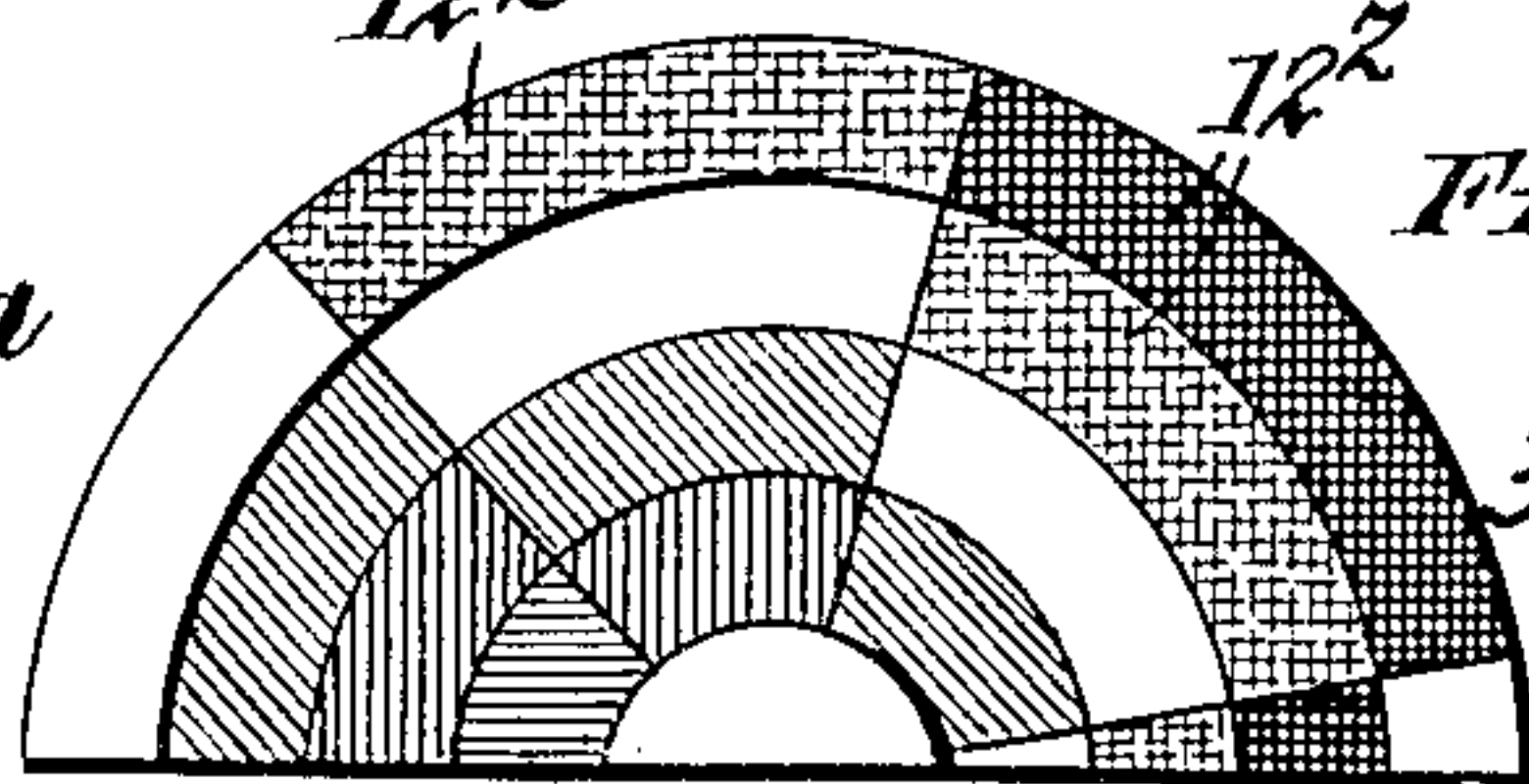


Fig. 8.

WITNESSES:

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Fig. 10.



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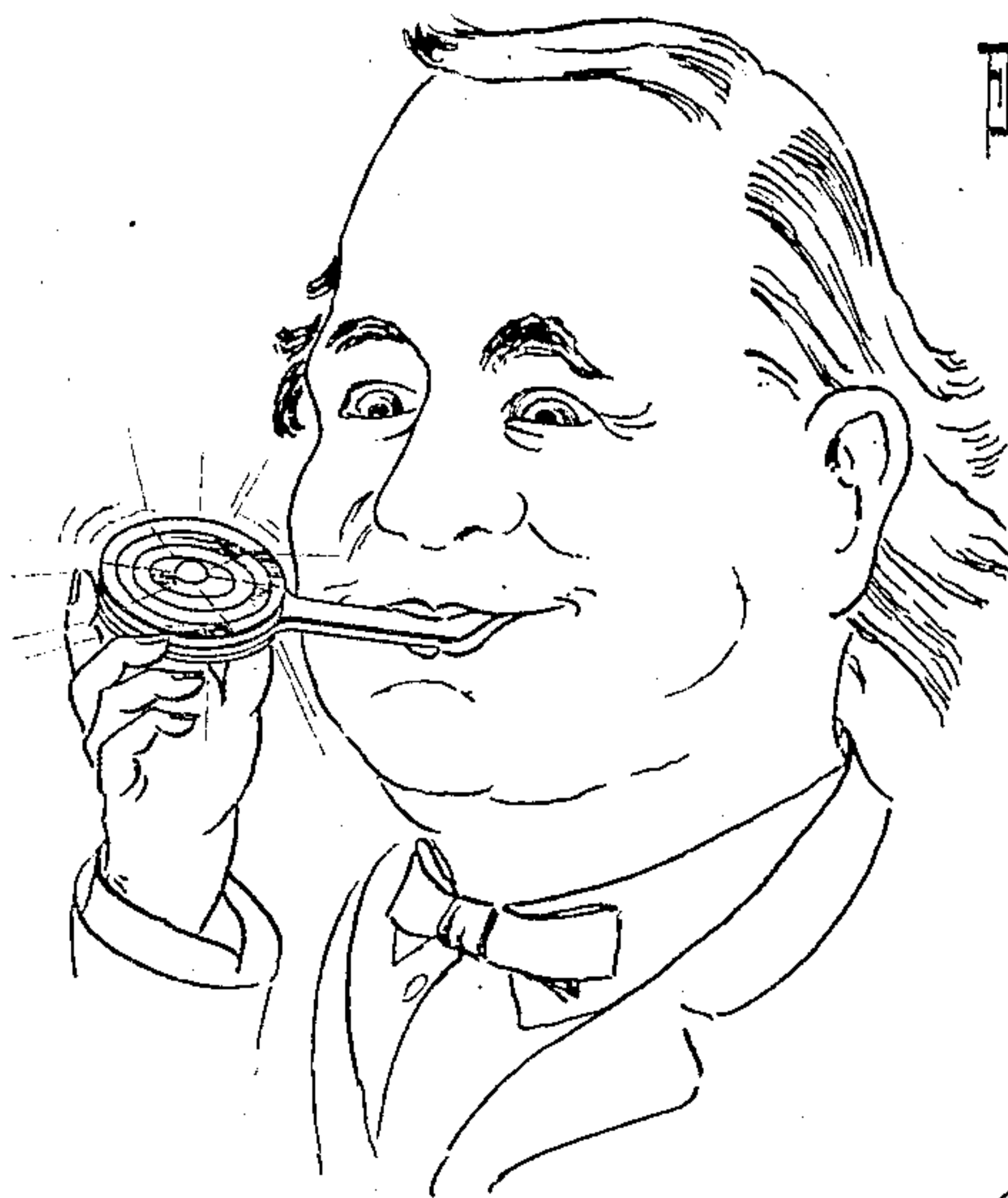


Fig. 2.

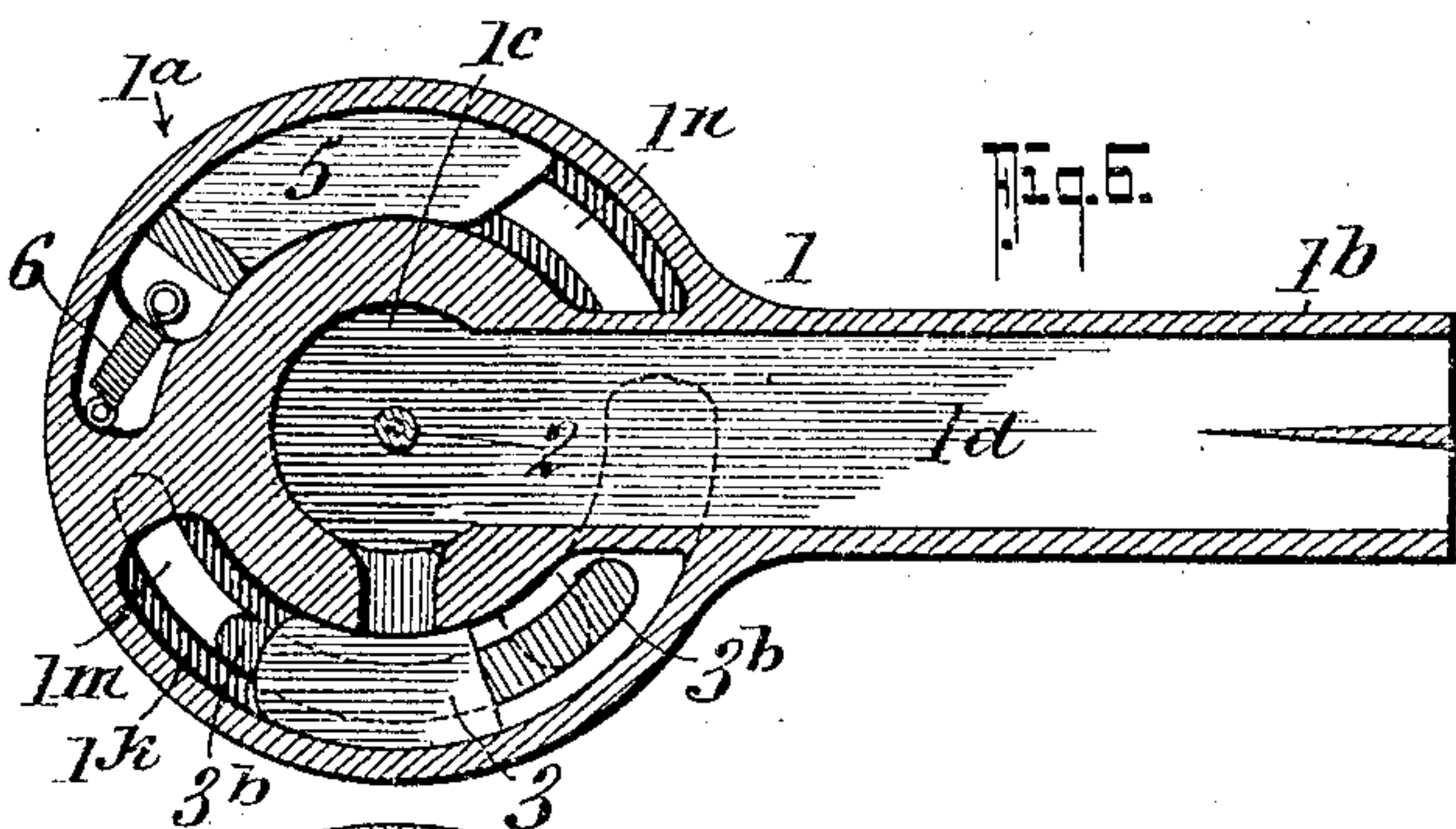


Fig. 5.

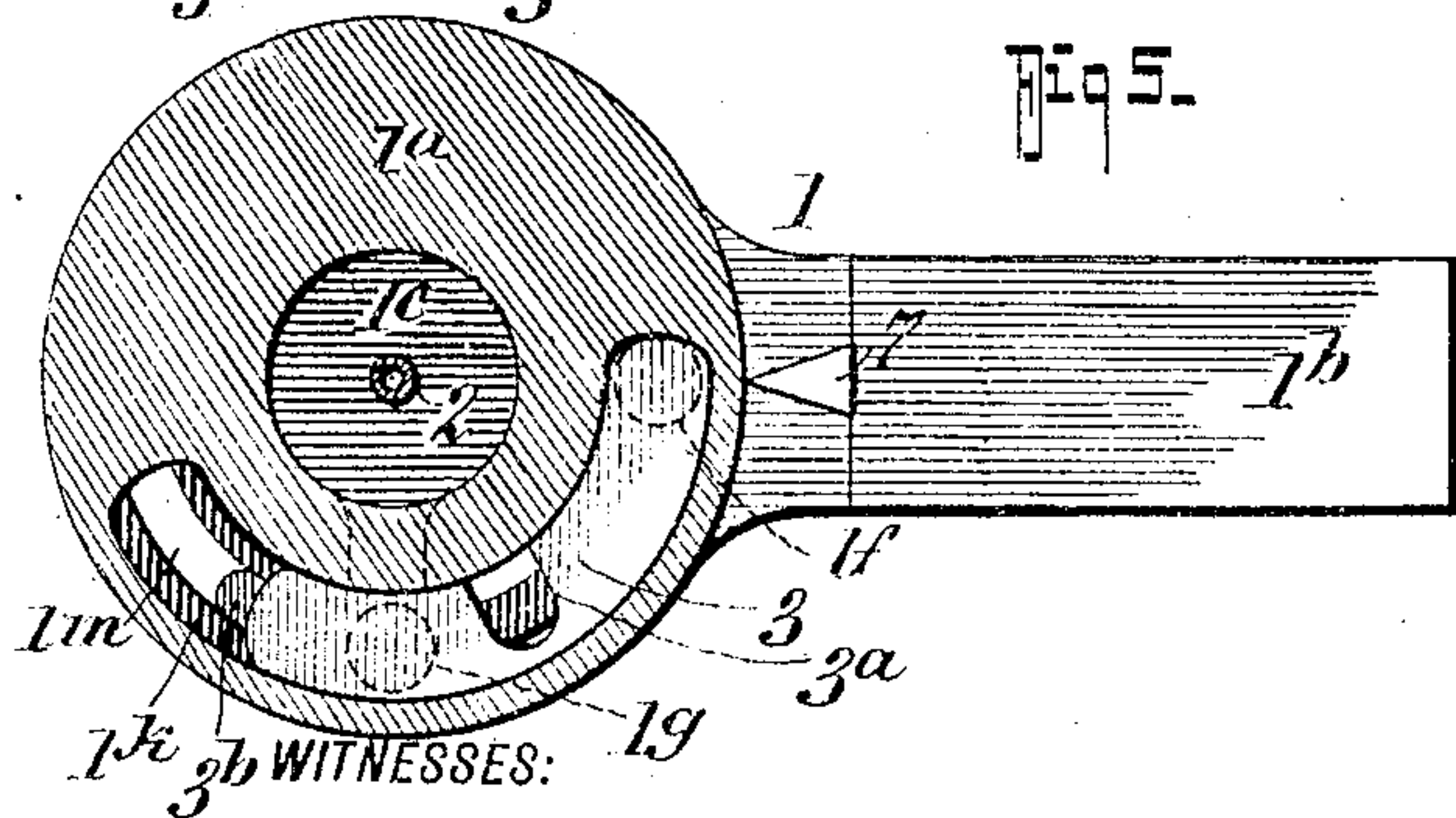


Fig. 5.

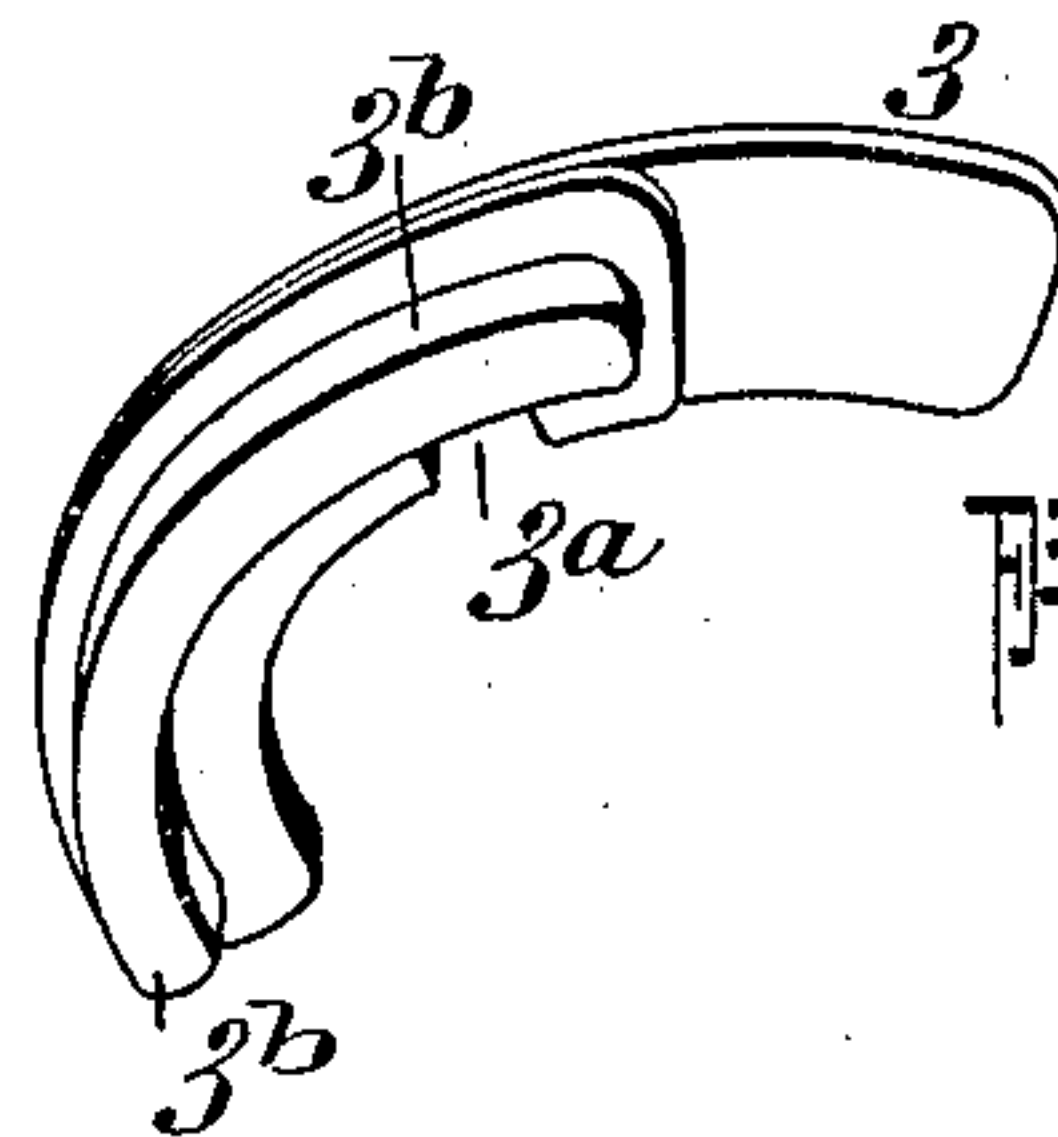


Fig. 12.



Fig. 13.

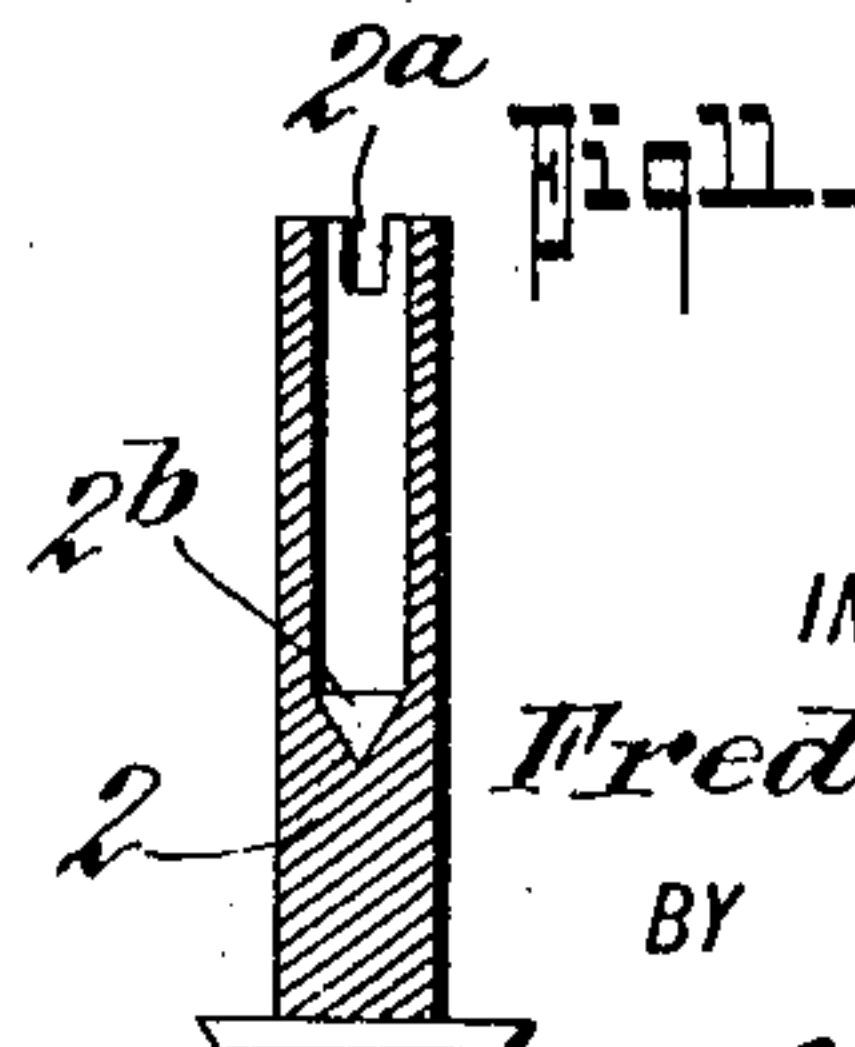


Fig. 11.

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3 SHEETS—SHEET 3.

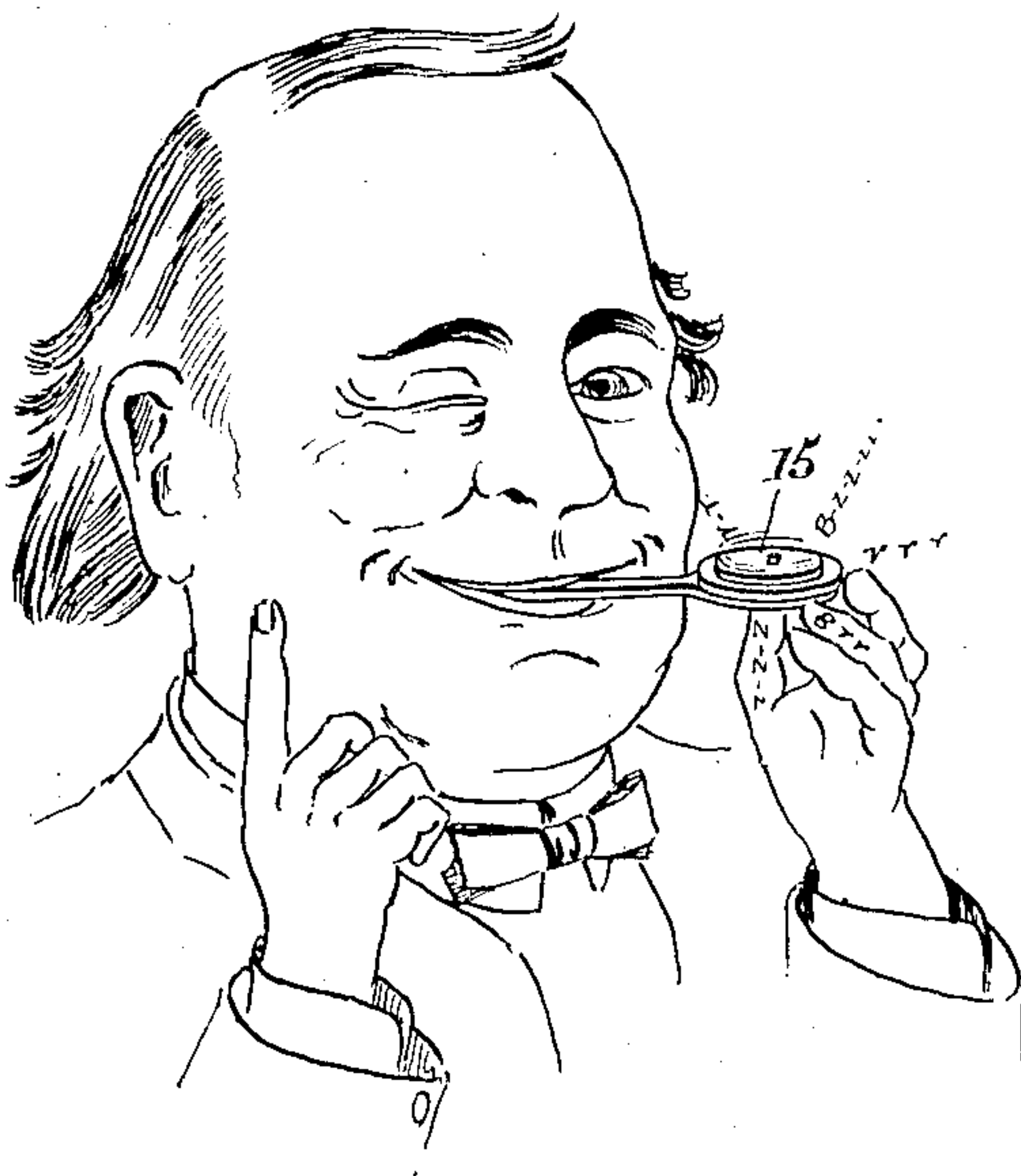


Fig. 7.

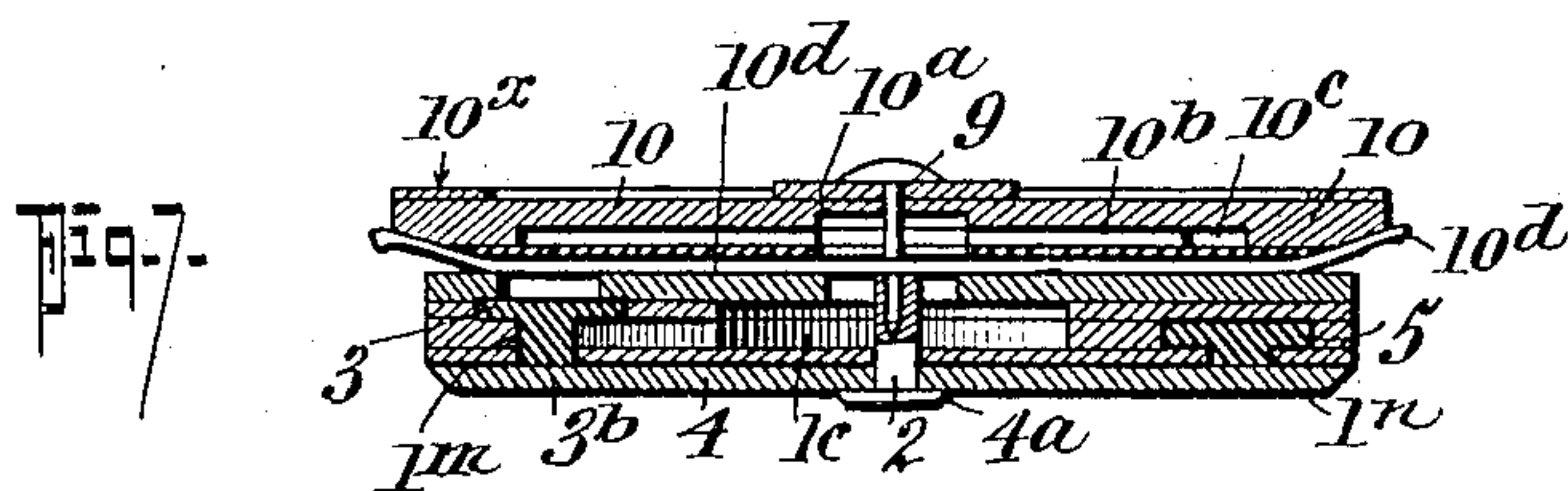


Fig. 8.

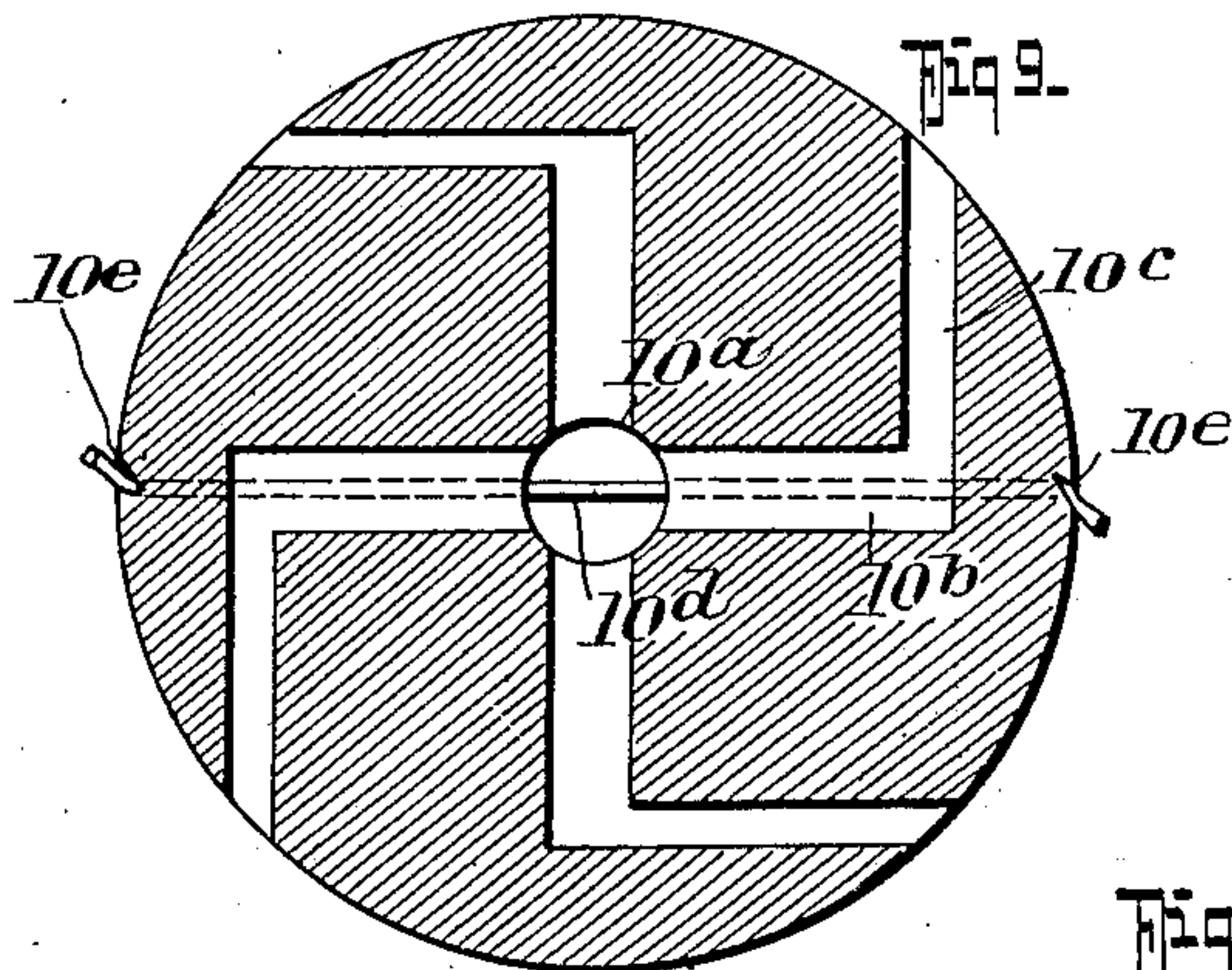


Fig. 9.

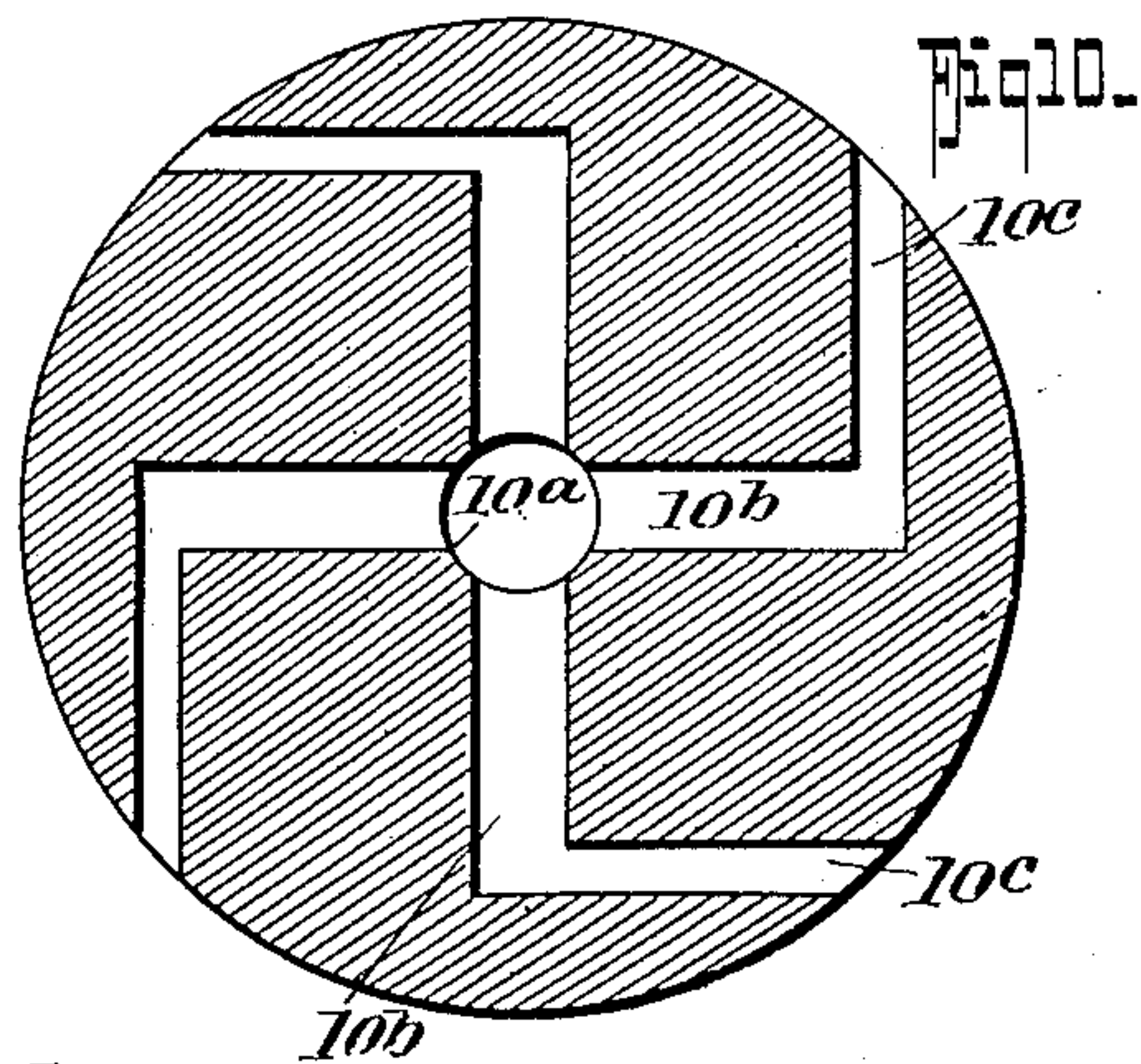


Fig. 10.

Fig. 9A.

WITNESSES:

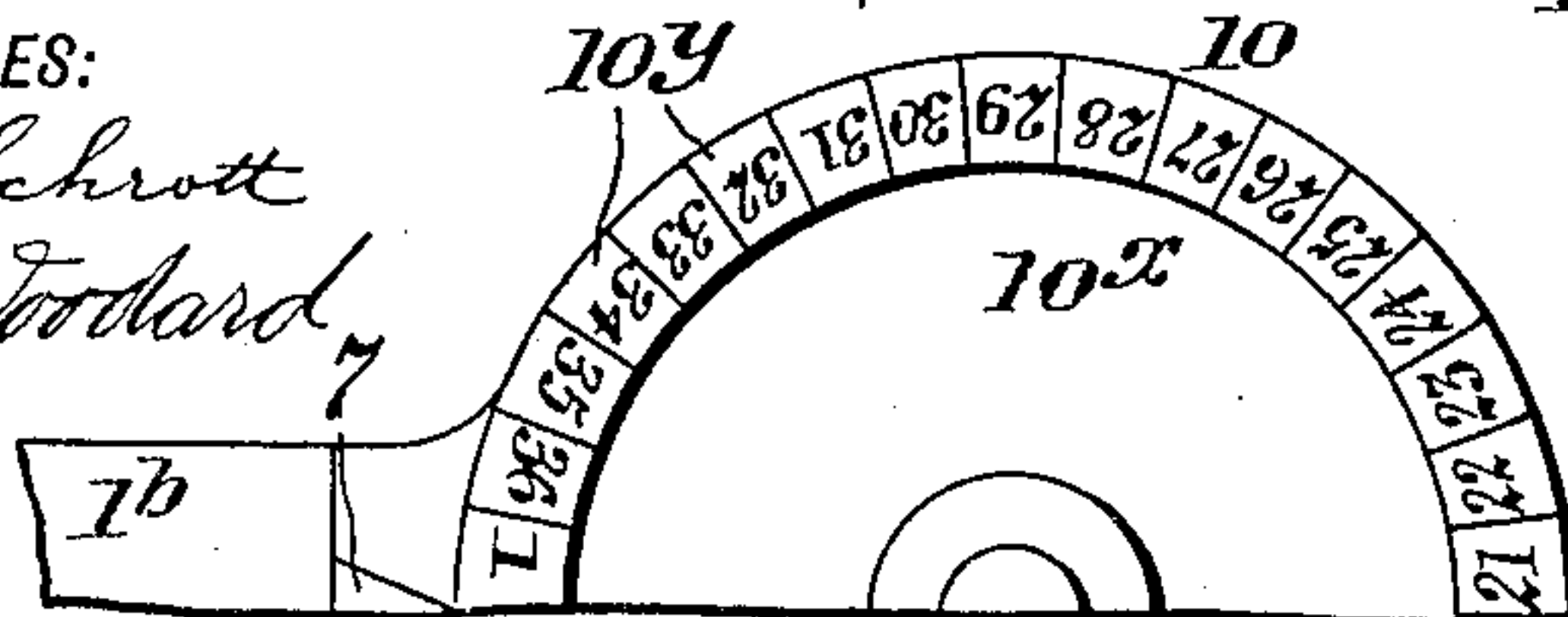
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UNITED STATES PATENT OFFICE.

FRED I. JUDSON, OF HOUSTON, TEXAS.

TRICK AMUSEMENT DEVICE.

No. 892,432.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed March 24, 1908. Serial No. 422,929.

To all whom it may concern:

Be it known that I, FRED I. JUDSON, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Trick Amusement Devices, of which the following is a specification.

My invention has for its object to provide a simple and interesting toy in the nature of a trick or puzzle consisting of a blower and a lid therefor, and in its generic nature the invention embodies essentially those principles of operation embodied in the trick pipe forming the subject-matter of my co-pending application, Serial No. 402,302, filed November 15, 1907.

More specifically my present invention comprises an improved form of blower having a body with a chamber and a central outlet together with a blowing stem in communication with said chamber, and a rotary valve mechanism coöperating with a supplemental outlet from the chamber to permit the air to pass through the main or central outlet and the supplemental outlet at times. A lid is pivotally mounted centrally over the central outlet.

My present invention also includes improved forms of lids for use in connection with my blower, the simplest form of which consists of a plain disk which is adapted to vibrate when air passes out of the main or central outlet and produces musical notes, the air passing out through the central outlet of the blower body and radiating toward the periphery of the lid disk to form air currents of such nature as to retain the lid in position in a manner similar to that disclosed in my co-pending application hereinbefore referred to.

Another form of lid includes a color disk provided with air passages communicating with a central opening which combines with the main outlet of the blower body, and thus as the air passes through the lid passages the lid will be rotated and various color effects produced.

A modification of this latter form of my invention consists in providing a lid with numbered spaces and a retarding device to coöperate therewith whereby the blower and lid may be used as a lung tester.

In its more specific nature the invention embodies certain novel details of construction, combination and arrangement of parts, all of which will be first described in detail,

and specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:—

Figure 1, is a perspective view of my invention, showing one form of my invention in use as a lung tester. Fig. 2, is a perspective view of another form of my invention showing a freely rotatable lid in use. Fig. 3, is a view showing in perspective another form in which the lid is in the nature of a plain disk. Fig. 3^a, is a detail view of the disks shown in Fig. 3. Fig. 4, is a perspective view of the blower, *per se*. Fig. 5, is a horizontal section on the line 5—5 of Fig. 8. Fig. 6, is a similar view on the line 6—6 of Fig. 8. Fig. 7, is a transverse section through the pivot of the blower and lid, the lid shown in Fig. 1 being in position in this form. Fig. 8, is a vertical longitudinal section of the blower and lid, the lid shown in Fig. 2 being in position in this form. Fig. 9, is a horizontal section of the lid shown in Fig. 1. Fig. 9^a, is a detail view of the disk shown in Fig. 1. Fig. 10, is a similar view of the lid shown in Fig. 2. Fig. 10^a, is a detail view of the disk shown in Fig. 2. Fig. 11, is an enlarged detail section of the pivot post and pin. Figs. 12 and 13, are detail perspective views of the pipe valves hereinafter referred to.

Referring now to the accompanying drawings, in which like letters and numerals of reference indicate like parts in all of the figures, 1 designates the blower, shown in detail in Fig. 4, and which comprises the body 1^a and the stem 1^b.

The body 1^a has an internal chamber 1^c which is in communication with the air passage 1^d of the stem 1^b, and is provided with a central post 2 that projects up through the central or main outlet 1^e of the body 1^a. The body 1^a is also provided with one or more supplemental outlets 1^f—1^g controlled by a rotary valve 3 that slides in a segmental arc in a recess 1^k in the body 1^a, and which is adapted to normally close the apertures 1^f—1^g, the valve 3 having a port 3^a to communicate with the outlet 1^g, when in register therewith. To the under side of the valve 3 is secured a guide 3^b, which projects through a slot 1^m in the bottom of the body 1^a and is secured to a rotary valve disk 4, pivoted at 4^a and susceptible of rotary movement.

5 designates a segmental arc guide mounted in a T-slot 1ⁿ of the body 1^a and secured to the rotary valve disk 4, as clearly indi-

cated in Fig. 6. A spring 6 normally holds the guide 5 in position to rotate the valve 3 to close the ports 1^f—1^g and the spring 6 may be either a coil spring or an elastic band, such as an ordinary rubber band.

7 designates a pointer carried by the blower for a purpose which will be presently explained.

The post 2 shown in detail in Fig. 11, consists of a hollow tubular member having notches 2^a at its upper end, and a bearing 2^b within the same to receive the pivot pin 9 of the lids which will be hereinafter described.

In Fig. 1, my invention is shown adapted for use as a lung tester, the lid 10 being provided and consisting of a disk having a central bearing pin 9, upon which the lid is adapted to pivot when held in the post 2, over the body 1^a of the blower 1. The lid 10 is provided with a central inlet 10^a of similar form and area to the outlet 1^e of the blower body 1^a, and from the inlet 10^a a series of radial passages 10^b project, the passages 10^b, however, do not go directly to the periphery of the lid, but terminate in portions 10^c running at right angles to the passages 10^b and discharging substantially tangential to the direction of rotation of the lid. The elastic 10^d is secured at 10^e to the disk 10 and when the disk is in place on the blower, the elastic rests in the notches 2^a of the post 2 so that as the disk rotates in one direction the elastic will be wound around the post and offer a resistance to the returning of the disk. The upper or exposed face 10^x of the disk 10 has a series of radial numbered divisions 10^y that cooperate with the pointer 7.

In the practical application of the form of my invention shown in Fig. 1, the lid 10 is placed over the blower body 1^a with its pin 9 in the post 2 and its elastic 10^d in the notches 2^a in the post, the parts being positioned so that the numbers on the graduated portion of the disk will register with the indicator 7. The operator then blows through the mouth-piece or stem 1^b, causing air to pass from the outlet 1^e of the blower body to the inlet 10^a of the disk, which air as it passes through the passages 10^b—10^c will cause the disk to rotate in a direction opposite to that of the air as it passes through the passages 10^e, the amount of rotation being governed by the power of the operator and the quantity of air that passes through the disk. As the disk is rotated the elastic will wind on the post 2, as above stated, and thus offer a resistance to the rotation, which resistance is overcome to a more or less extent by the operator, when blowing through the mouth-piece 1^b, the amount of rotation of the disk being indicated by the pointer 7 on the scale of the disk. As soon as the operator has stopped blowing the elastic will return the disk to its normal position.

The disk shown in Fig. 1, will be prevented

from blowing off when the ports 1^f—1^g are closed, by the action of the air against the disk, but if it is desired to blow the disk shown in Fig. 1, off the blower body 1^a, the operator turns the valve disk 4 to open the ports 1^f—1^g, when the air will escape therethrough against the under side of the disk and blow it off.

In Fig. 2, I have shown another form of my invention which is constructed precisely as the form shown in Fig. 1, with the exception that the elastic 10^d is removed and in lieu of the numbered divisions 10^y the top of the disk 12 is divided into a series of spaces 12^z which are colored in different colors, and as the disk is rotated various color effects will be produced, depending upon the speed of rotation of the disk and the combination of colors used.

In Fig. 3, I have shown another form of lid which is designated in the drawings by 15, and this lid consists of a plain disk without the passages 10^b—10^c, but with a central aperture 15^a, so that the disk may be placed over the projecting post 2, the edge 15^b of the disk 15 being preferably beveled on its upper surface to aid in its action of vibration.

When the disk 15 is used, the operator blowing through the mouth-piece or stem 1^b, causes the air to radiate beneath the lid in a manner similar to that disclosed in my co-pending application hereinbefore referred to, and inasmuch as the body 1^a is of larger area than the lid, a vibration of the lid will be set up causing musical notes to be emitted, depending for their pitch on the relative size of the disk 15, as compared with the body 1^a of the blower.

In all of the forms shown in Figs. 1, 2 and 3, of the drawings, the apparatus may be used as a trick device, for by opening the ports 1^f—1^g, through the medium of the rotary valve, the rotation of the lids shown in Figs. 1 and 2, will be prevented and the lids may be blown off as well as that shown in Fig. 3. Any combination of colors may be used upon the lid 12, shown in Fig. 2, of the drawings, which may be found desirable, and I make no special claim to any particular combination of colors. Also the lid shown in Fig. 1 may be provided with colors on its exposed face, if found desirable.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the complete construction, operation and advantageous features of my invention will be readily understood by those skilled in the art to which the invention appertains.

What I claim is:

1. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in

communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, rotary valve devices for controlling said supplemental outlet, and a lid mounted over said outlets and the pivot post.

2. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, valve devices for controlling said supplemental devices, and a lid mounted over said main air outlet and pivot post.

3. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, rotary valve devices for controlling said supplemental outlet, and a lid mounted over said main outlet and having a pivot pin to cooperate with said pivot post.

4. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, rotary valve devices for controlling said supplemental outlet, a lid mounted over said main outlet and having a pivot pin to cooperate with said pivot post, said lid having a central air inlet and air passages in communication with said air inlet and terminating at the periphery of said lid.

5. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, valve devices for controlling said supplemental outlet, and a lid rotatably mounted over said main air outlet, a pivot pin carried by said lid for engaging said pivot post.

6. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air

chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, valve devices for controlling the supplemental outlet, a lid rotatably mounted over said main air outlet, a pivot pin carried by said lid for engaging said pivot post, said lid having peripheral numerical divisions on its exposed surface, and a pointer carried by the blower for cooperating with said numerical divisions, said lid also having air passages in communication with the main air outlet of the blower whereby the air currents will rotate the lid.

7. In a device of the class described, a blower comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, valve devices for controlling the supplemental outlet, a lid rotatably mounted over said main air outlet, a pivot pin carried by said lid for engaging said pivot post, said lid having peripheral numerical divisions on its exposed surface, a pointer carried by the blower for cooperating with said numerical divisions, said lid also having air passages in communication with the main air outlet of the blower whereby the air current will rotate the lid, and means for retarding the rotary movement of the lid.

8. In a device of the character described comprising a body having an air chamber and a stem having an air passage in communication with said air chamber, said body having a main air outlet for the air chamber and a supplemental air outlet in communication with the air passage and chamber, a pivot post carried by said body and projecting through said main air outlet, valve devices for controlling said supplemental outlet, a lid rotatably mounted over said main air outlet, a pivot pin carried by said lid for engaging said pivot post, said lid having peripheral numerical divisions on its exposed surface, a pointer carried by the blower for cooperating with said numerical divisions, said lid also having air passages in communication with the main air outlet of the blower whereby the air current will rotate the lid, means for retarding the rotary movement of the lid, said last named means comprising an elastic member carried by the lid and cooperatively engaging the pivot post of the blower to wind thereon as the lid is rotated.

9. In a device of the class described, a blower comprising a body portion and a blowing stem having an air passage in communication with an air chamber in the body portion, said body portion having an outlet

for said air chamber, a pivot post projecting through said outlet, combined with a lid having a pivot pin cooperating with said pivot post and mounted over said outlet, said lid
5 having an air passage in communication with said blower outlet whereby the air from the blower will pass through the lid to impart rotary motion thereto.

10 10. In a device of the class described, a blower comprising a body portion and a blowing stem having an air passage in communication with an air chamber in the body portion, said body portion having an outlet for said air chamber, a pivot post projecting
15 through said outlet, combined with a lid having a pivot pin cooperating with said pivot post and mounted over said outlet, said lid having an air passage in communication with
20 said blower outlet whereby the air from the blower will pass through the lid to impart rotary motion thereof, and means for retarding the rotary motion of said lid.

11. In a device of the class described, a blower comprising a body portion and a
25 blowing stem having an air passage in communication with the air chamber in the body portion, said body portion having an outlet for said air chamber, a pivot post projecting through said outlet, combined with a lid hav-
30 ing a pivot pin cooperating with said pivot post and mounted over said outlet, said lid having an air passage in communication with said blower outlet whereby the air from the blower will pass through the lid to impart ro-
35 tary motion thereto, and means carried by the lid and cooperatively engaging a fixed part of the blower for retarding the rotary motion of the lid.

12. In a device of the class described, a
40 blower comprising a body portion and a blowing stem having an air passage in communication with the air chamber in the body portion, said body portion having an outlet

for said air chamber, a pivot post projecting through said outlet, combined with a lid hav- 45
ing a pivot pin cooperating with said pivot post and mounted over said outlet, said lid having an air passage in communication with
50 said blower outlet whereby the air from the blower will pass through the lid to impart rotary motion thereto, means carried by the lid and cooperatively engaging a fixed part of the blower for retarding the rotary motion of the lid, said last named means comprising an elastic member carried by the lid 55
and cooperatively engaging the pivot post of the blower to wind thereon as the lid is rotated.

13. In a device of the class described, a blower comprising a body portion and a 60
blowing stem having an air passage in communication with the air chamber in the body portion, said body portion having an outlet for said air chamber, a pivot post projecting
65 through said outlet, combined with a lid having a pivot pin cooperating with said pivot post and mounted over said outlet, said lid having an air passage in communication with
70 said blower outlet whereby the air from the blower will pass through the lid to impart rotary motion thereto, means carried by the lid and cooperatively engaging a fixed part of the blower for retarding the rotary motion of the lid, said last named means comprising an
75 elastic member carried by the lid and cooperatively engaging the pivot post of the blower to wind thereon as the lid is rotated, said lid having numbered divisions on its exposed surface and a pointer carried by the blower
80 for cooperating with said numbered divisions to act as an indicator.

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Witnesses:

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C. U. SMITH.