

No. 776,622.

PATENTED DEC. 6, 1904.

J. F. SKIRROW & C. SHIRLEY.

RESONATOR.

APPLICATION FILED JUNE 23, 1903.

NO MODEL.

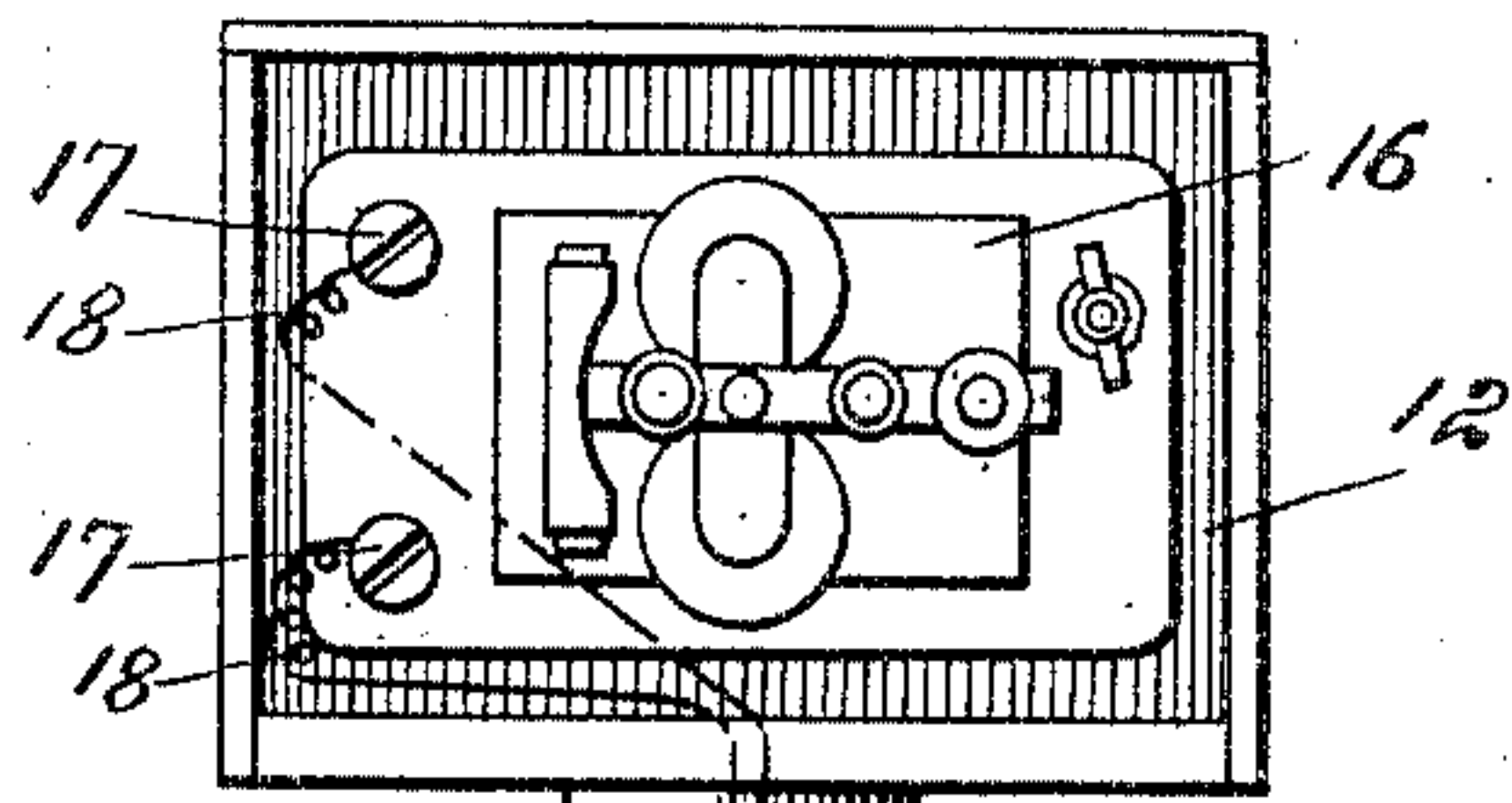


Fig. 1.

Fig. 2.

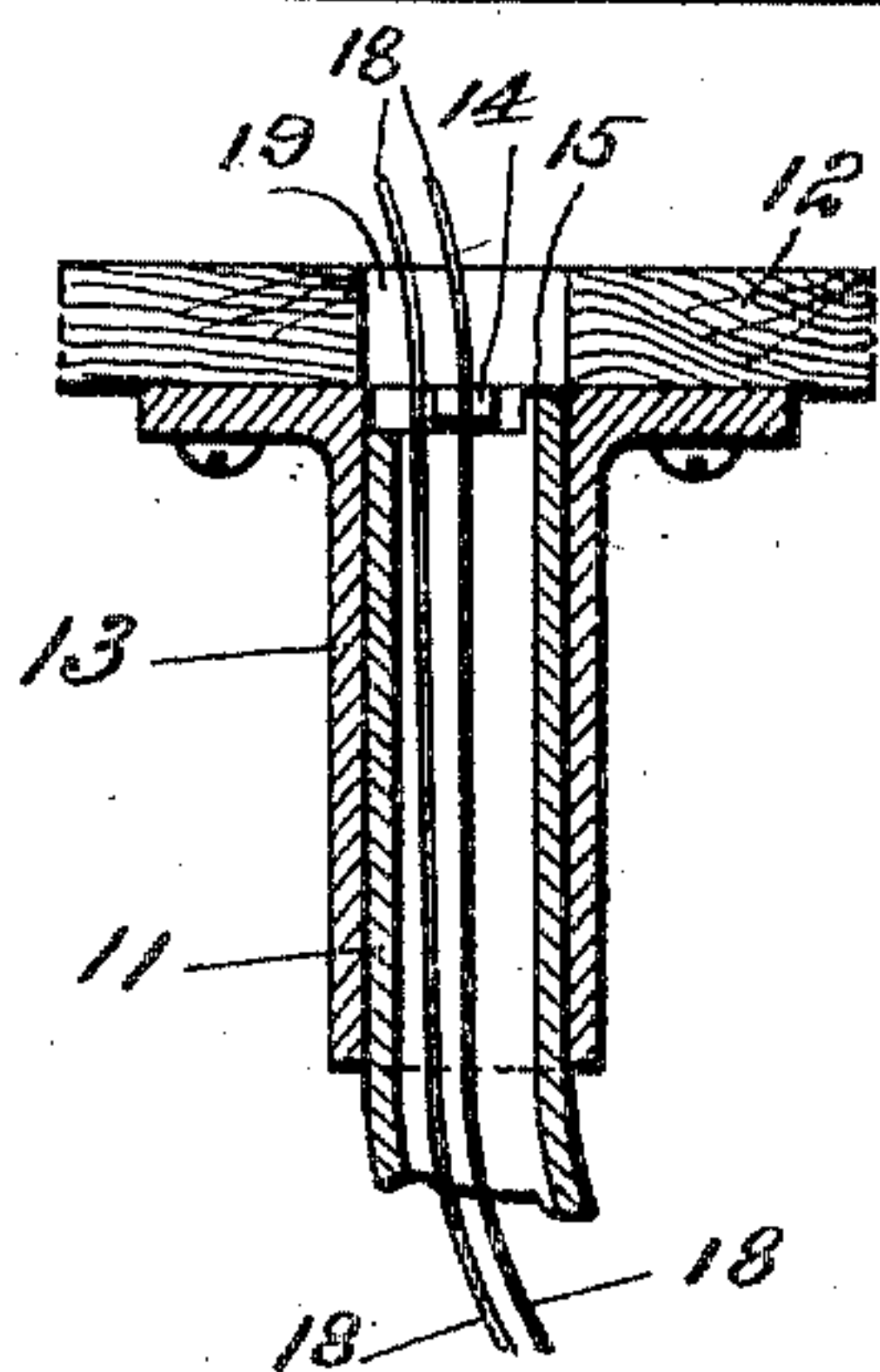


Fig. 3.

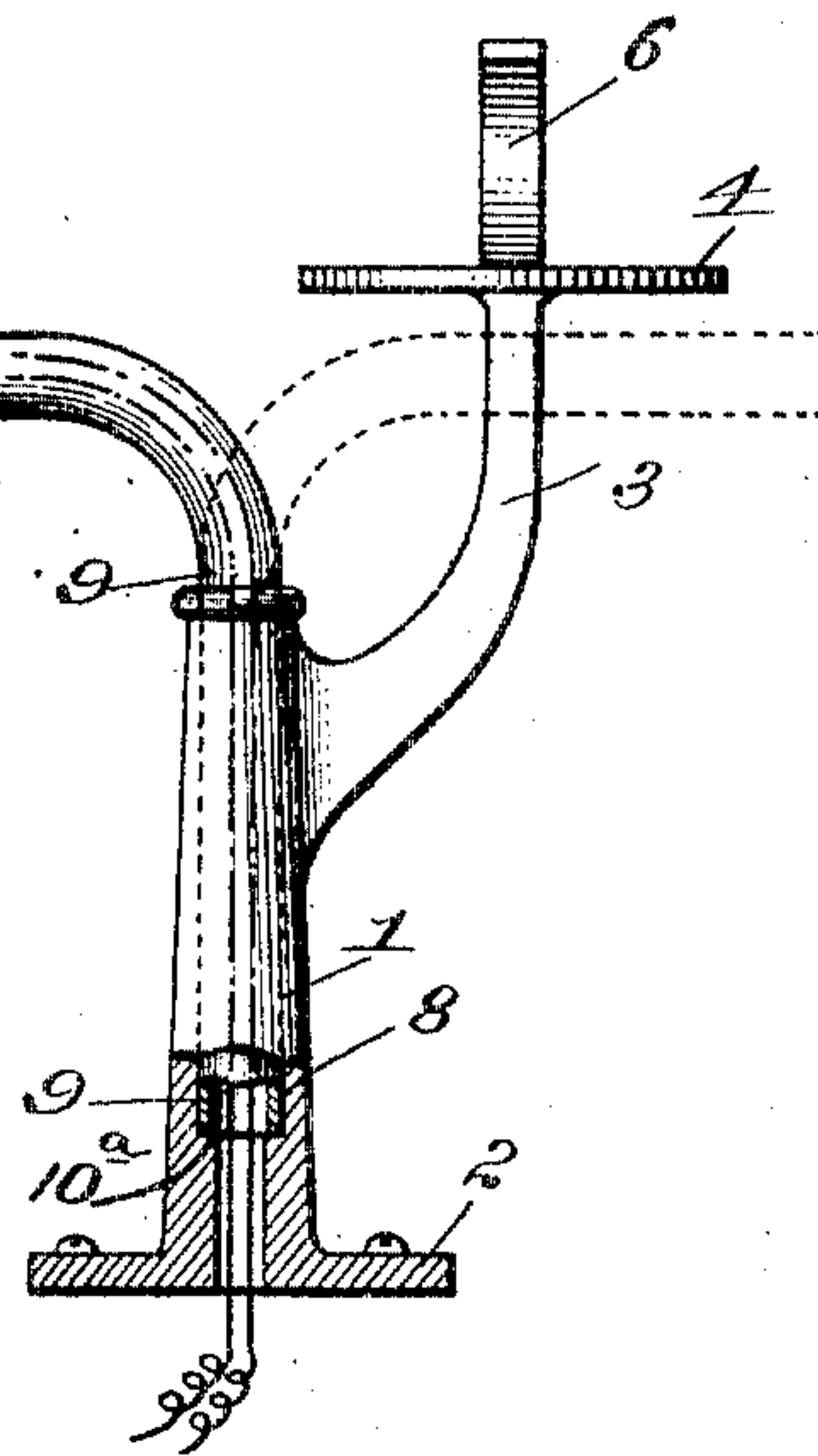
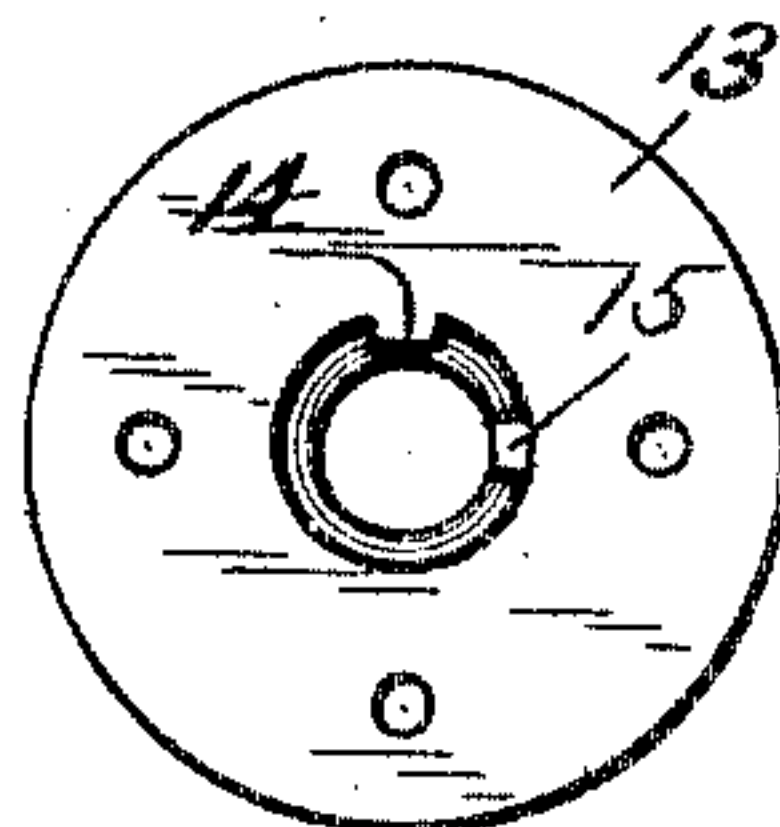


Fig. 4.

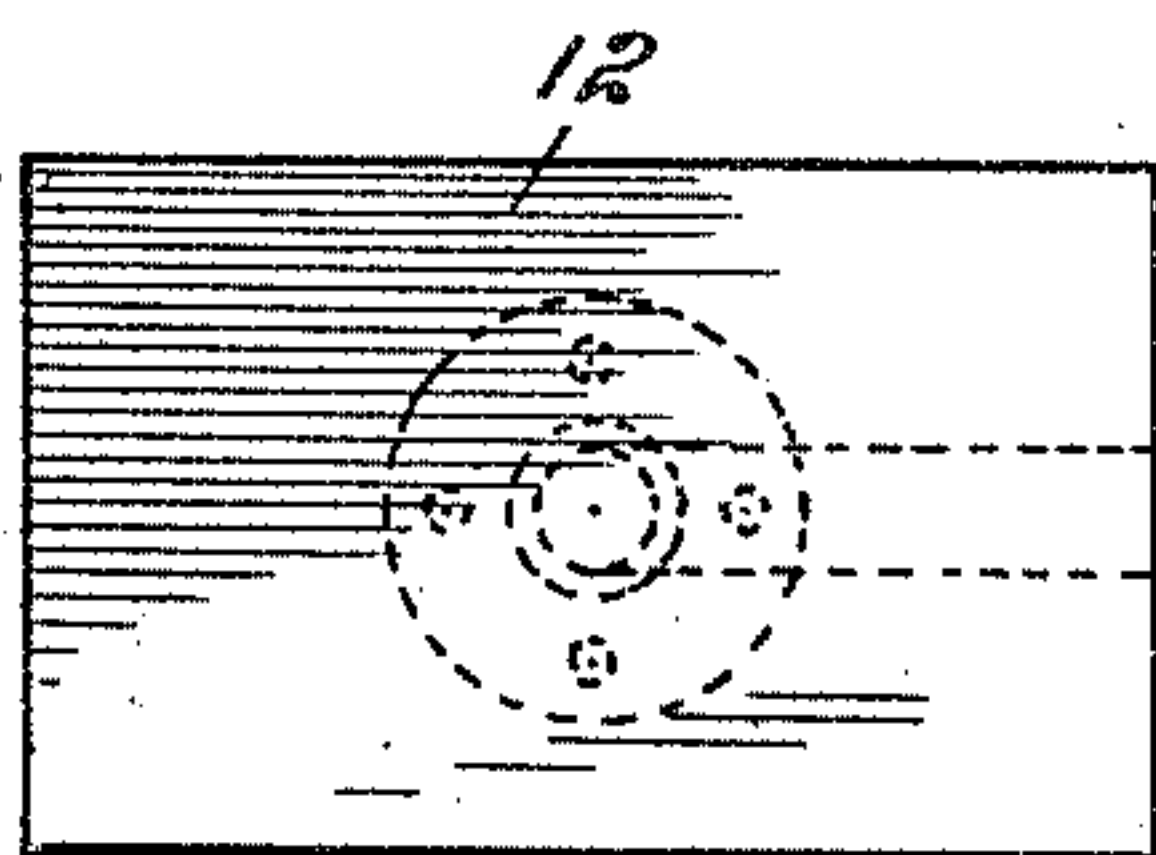
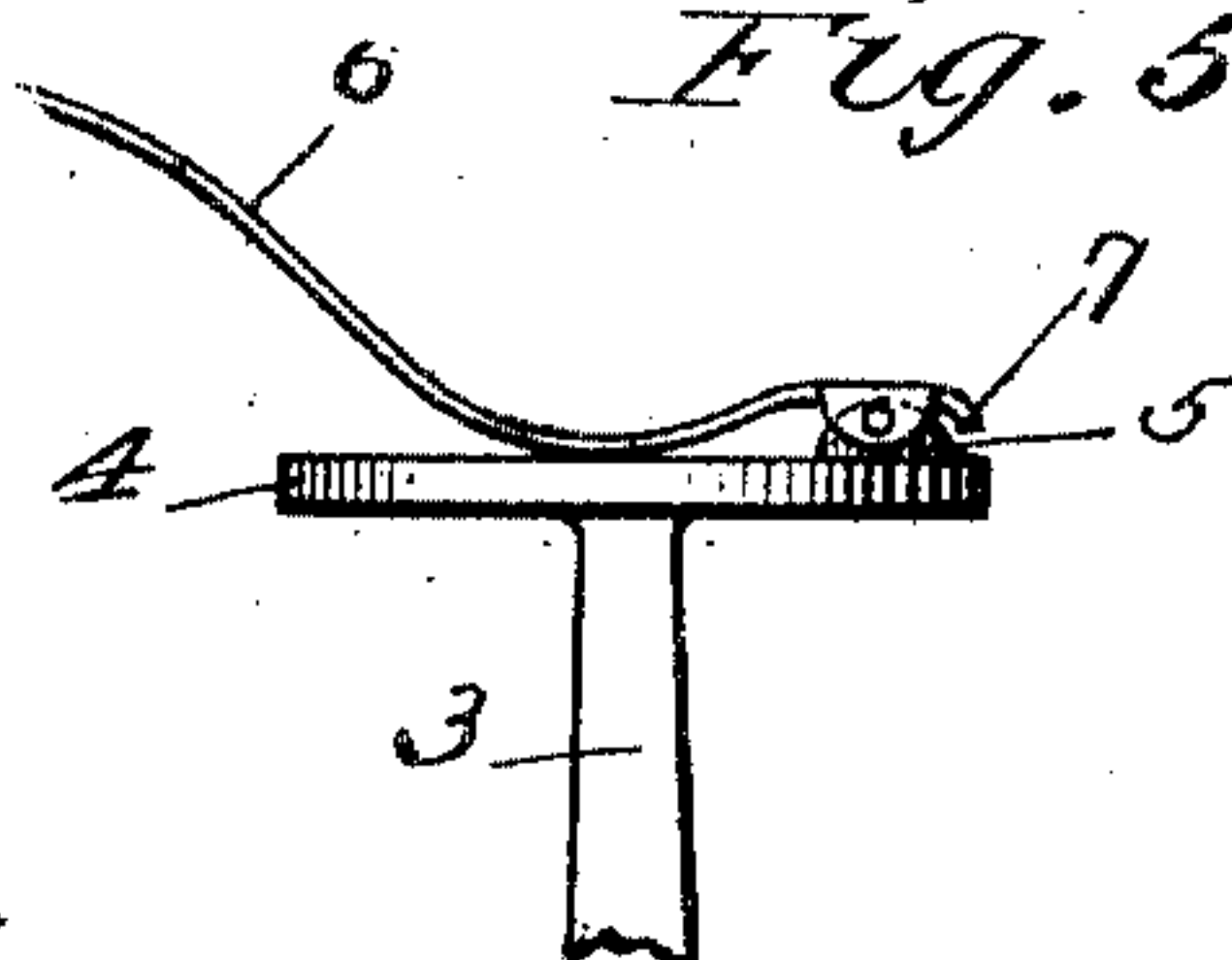


Fig. 5.



Witnesses
R. D. White
E. J. Johnson

John F. Skirrow
Charles Shirley
Inventors

By their Attorney, *Carver & Davis*

UNITED STATES PATENT OFFICE.

JOHN F. SKIRROW, OF EAST ORANGE, NEW JERSEY, AND CHARLES SHIRLEY, OF NEW YORK, N. Y.

RESONATOR.

SPECIFICATION forming part of Letters Patent No. 776,622, dated December 6, 1904.

Application filed June 23, 1903. Serial No. 162,730. (No model.)

To all whom it may concern:

Be it known that we, JOHN F. SKIRROW, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, and CHARLES SHIRLEY, a subject of the King of Great Britain, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Resonators, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation, the lower portion of the standard being shown in section; Fig. 2, a detail vertical sectional view of the means for rotatably mounting the sounder-box on the outer end of the swinging arm; Fig. 3, a plan view of this means, the sounder-box being removed; Fig. 4, a plan view, and Fig. 5, a detail elevation, of the message-clip.

The object of this invention is to produce a simple and efficient adjustable resonator which may be cheaply manufactured.

Referring to the various parts by numerals, 1 designates a tubular standard or support which is formed with a suitable base 2 and with the upward-extending post 3 near its upper end, this post carrying a horizontal message-slip-holding table 4 at its upper end. On the top of the table is formed an upward-extending lug 5, to which one end of a gravity message-clip 6 is pivoted. This clip is a rigid bar bent downward at a point substantially over the center of the table, its free end being inclined upward and outward from said downward-bent portion to form a message-slip-receiving mouth, the downward-bent portion contacting with the slip-holding table. The other end of the message-clip is bent downward to form a stop 7, which is adapted to contact with the table, and thereby prevent the message-clip being thrown over backward on its pivot. This clip forms a gravity-holder for the message-slips.

The bore of the standard is enlarged to form the socket 8, which receives the downward-extending part 9 of the swinging arm 10. The

lower end of this part 9 rests on shoulder 10^a at the bottom of the socket 8. The swinging arm 10 is tubular and cylindrical, and its outer end is bent upward to form the vertical part 11, on which is rotatably mounted a sounder-box 12. To the bottom of this box is secured a tubular socket 13, within which fits the part 11 of the swinging arm. The socket is formed at its upper end with the inward-extending lug 14, which rests on the upper end of the part 11 and supports the post thereon and which is adapted to contact with the upward-extending lug 15, formed on the upper end of the part 11 to prevent a complete rotation of the sounder-box. Within the sounder-box on the back thereof is mounted a sounder 16, which is provided with the usual binding-posts 17. Connected to these posts are the terminal wires 18. These wires are led through an opening 19 in the base of the sounder-box into the upper end of the part 11 of the tubular swinging arm 10 and are then carried through said tubular arm and the vertical part 9 thereof and down through the standard.

The swinging arm 10 is preferably formed of a single piece of tubing bent at its ends to form parts 9 and 11; but of course it may be formed of separate pieces, if desired. This arm may be swung around horizontally, part 9 turning in the socket 8 and the upward-extending post 3 forming a suitable stop to prevent a complete rotation of the said arm about the standard. It will be noted that the post 3 extends upward far enough to support the table 4 above the horizontal part of the swinging arm and to permit said part to swing under the table and contact with the post 3. It is important that the means be provided to prevent a complete rotation of the sounder-box and a complete rotation of the swinging arm about the standard in order to keep the terminal wires 18 from being twisted and broken, it being obvious that if these parts were capable of complete rotation the wires would soon become broken.

From the foregoing it is manifest that by our invention we produce an extremely sim-

ple and cheap adjustable resonator which will be efficient for the purpose for which it is designed.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A resonator comprising, a tubular standard, an upward-extending post secured thereto, a message-table carried by said post, a message-clip to yieldingly hold message-slips on said table, said table being supported above the top of the standard, a tubular swinging arm formed with a downward-extending part adapted to fit and turn in the tubular standard and with an upward-extending part at its outer end, the upward-extending post on the standard serving as a stop to prevent a complete rotation of the swinging arm about the standard, and a sounder-box rotatably mounted on the upward-extending outer end of the tubular swinging arm.

2. A resonator comprising, a tubular standard, an upward-extending post secured thereto, a message-table carried by said post, a message-clip to yieldingly hold message-slips on said table, said table being supported above the top of the standard, a tubular swinging arm formed with a downward-extending part adapted to fit and turn in the tubular standard and with an upward-extending part at its outer end, the upward-extending post on the standard serving as a stop to prevent a complete rotation of the swinging arm about the standard, a sounder-box rotatably mounted on the upward-extending outer end of the tubular swinging arm, and means to prevent the sounder-box making a complete rotation on the upper end of the swinging arm.

3. A resonator comprising a tubular standard formed with a vertical socket therein and with an inward-extending shoulder at the base of said socket, a tubular swinging arm formed of a single piece bent at one of its ends to form a downward-extending part adapted to fit within the socket of the standard and at its other end to form an upward-extending part, a sounder-box, a depending tubular socket secured to the bottom thereof and adapted to receive the upward-extending part of the swinging arm, an inward-extending lug formed at the upper end of the socket, a lug formed on the upward-extending part of the swinging arm and adapted to contact with the lug on the socket to prevent a complete rotation of the sounder-box, a sounder secured within the sounder-box, and a terminal wire or wires connected to said sounder and extending through the tubular swinging arm and the standard, and means to prevent a complete rotation of the swinging arm about the standard.

4. A resonator comprising, a tubular standard, an upward-extending post connected thereto and extending above the standard, a

message-slip table carried by said post, a gravity-clip carried by said table, one end of said clip extending upward and the other end extending downward to form a stop adapted to contact with the table to limit the upward movement of the clip, a tubular swinging arm mounted in the standard, the upward-extending post carried by the standard serving as a stop to prevent the swinging arm from rotating entirely around the standard, a sounder-box carried by said swinging arm, and means to prevent a complete rotation of the sounder-box.

5. A resonator comprising, a standard formed with a vertical socket therein at its upper end, a tubular swinging arm formed of a single piece bent at one of its ends to form a downward extending part adapted to fit within the socket of the standard and bent at its other end to form an upward-extending part, a sounder-box, a depending tubular socket secured to the bottom of said box and adapted to receive the upward-extending part of the swinging arm, means to prevent a complete rotation of the sounder-box, a sounder secured within the sounder-box and a terminal wire or wires connected to said sounder and extending through the tubular swinging arm and the standard, and means to prevent a complete rotation of the swinging arm.

6. A resonator for telegraphic sounders and the like, comprising a base-bracket to be connected to a fixture, an arm mounted upon said base-bracket and free to swing radially, mechanism connected with the free end of said arm for supporting a resonator, means for actuating said mechanism and thereby turning said resonator in different directions, and limiting-stops for preventing said resonator from turning beyond certain predetermined limits.

7. A resonator comprising, a tubular support, a tubular swinging arm mounted in the support, said arm being adapted to swing radially, means to prevent said swinging arm turning beyond predetermined limits, a sounder-box, a depending tubular socket secured to the bottom of said sounder-box and adapted to be rotatably mounted on the free end of the swinging arm, means to prevent said sounder-box from turning beyond certain predetermined limits, and a continuous flexible conductor extending from the sounder-box through the tubular socket thereof, the swinging arm and the tubular support.

8. A resonator comprising, a tubular support, a tubular swinging arm mounted in the support, said arm being adapted to swing radially, means to prevent said swinging arm turning beyond predetermined limits, a sounder-box, a depending tubular socket secured to the bottom of said sounder-box and adapted to be rotatably mounted on the free end of the swinging arm, means to prevent

said sounder-box from turning beyond certain predetermined limits, a sounder supported in the sounder-box and a continuous flexible conductor connected to said sounder and
5 extending through the tubular socket, the swinging arm, and the tubular support.

In testimony whereof we hereunto affix our

signatures, in the presence of two witnesses,
this 22d day of June, 1903.

JOHN F. SKIRROW.
CHARLES SHIRLEY.

Witnesses:

W. M. CRAWFORD,
THOS. I. HARRIS.