

No. 776,183.

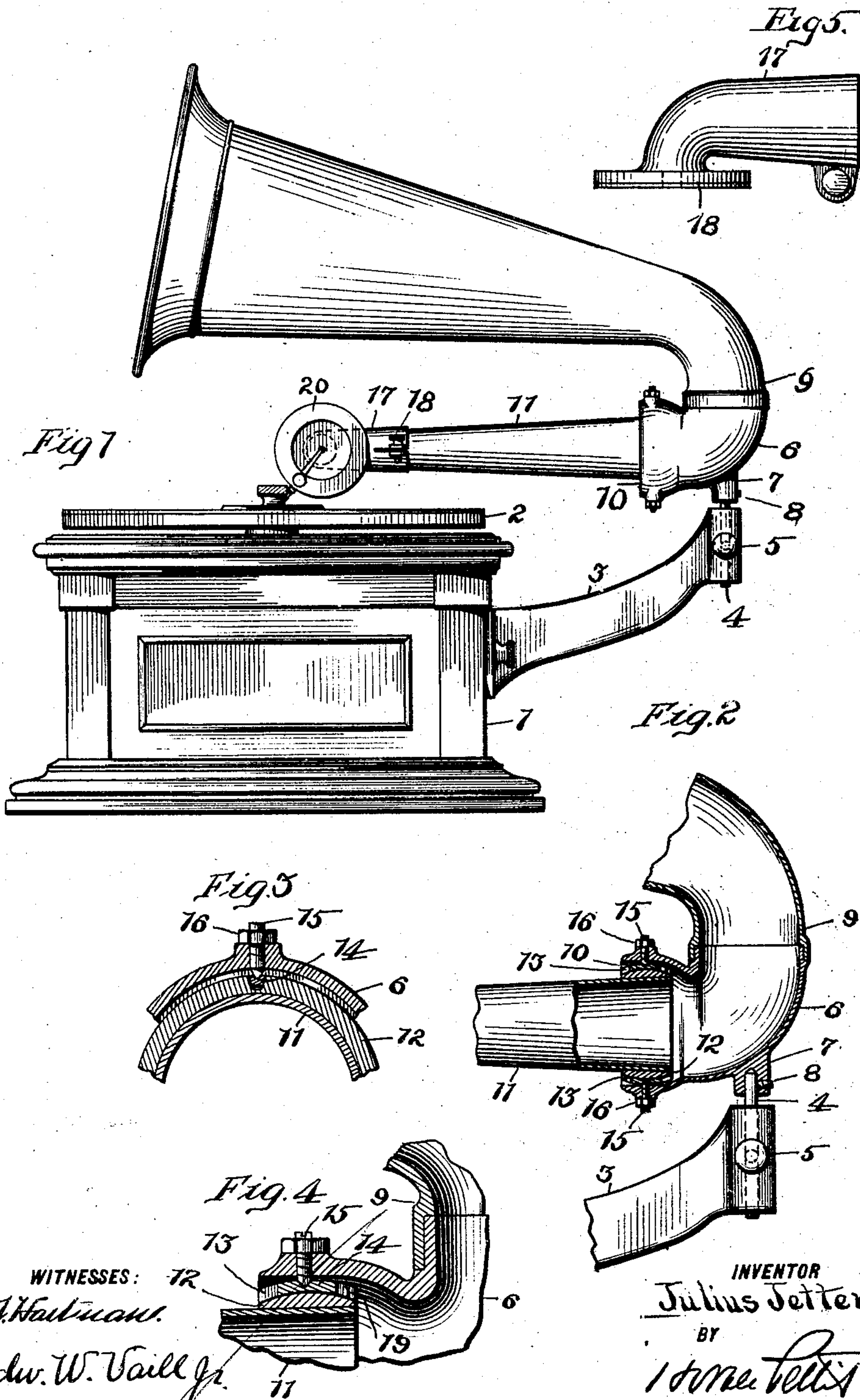
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J. JETTER.

HOLLOW SOUND CONVEYING TUBE FOR TALKING MACHINES.

APPLICATION FILED APR. 28, 1904.

NO MODEL.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## HOLLOW SOUND-CONVEYING TUBE FOR TALKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 776,183, dated November 29, 1904.

Application filed April 28, 1904. Serial No. 205,279. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS JETTER, a citizen of the United States, and a resident of the city of Camden, State of New Jersey, have invented  
5 certain new and useful Improvements in Hollow Sound-Conveying Tubes for Talking-Machines, of which the following is a full, clear, and complete disclosure.

The object of this form of my invention is  
10 to provide such a construction in hollow sound-conveying tubes for connecting the sound-box with the amplifying-horn of talking-machines that the interior of said tube is unobstructed by any projections, while at the same time  
15 said tube is supported or pivoted so that the same may be easily moved in different directions required in the use of a machine, and the structure or parts are greatly simplified and reduced in number.

Briefly, this form of my invention comprises a hollow sound-conveying tube or arm, which carries at one end thereof the usual sound-box and which is pivoted at its other  
25 end to a hollow fixed connection, said connection also being adapted to support the amplifying-horn.

For a full, clear, and detailed description of this form of my invention reference may be had to the following specification and to the accompanying drawings, forming a part thereof,  
30 in which—

Figure 1 is a side elevation of a talking-machine embodying this form of my invention. Figs. 2, 3, 4, and 5 are views illustrating details of construction, certain parts being shown  
35 in section.

Referring to the drawings, the numeral 1 indicates the usual casing, which contains the spring-motor or other driving mechanism,  
40 which is connected by a vertical spindle with the usual turn-table 2. Attached to the motor-casing is a laterally-extending arm or bracket 3, which has at its outer end a vertical opening or socket, which carries a cylindrical  
45 rod or post 4, said rod or post 4 being retained adjustably within said opening by means of a thumb-screw 5. Upon the upper end of said rod 4 I place an elbow connection 6, which is

in the form of a casting, having a lug or boss 7 at its lower portion, said lug or boss having  
50 a socket into which the post 4 is adapted to be retained, there being a driving fit between said parts. The set-screw 8 is also provided for holding the said post 4 within the boss 7.

The upper end of the elbow-piece 6 is adapted to telescope with the smaller end of the  
55 amplifying-horn proper, as indicated at 9. The horizontal end of the elbow-piece 6 has a somewhat enlarged cylindrical opening 10 therein, which is adapted to receive one end of the  
60 sound-conveying tube 11. Said sound-conveying tube 11 is provided at its end within said opening 10 with a flange 12, having a surface which is a part of a sphere. Said flange is also provided with two segmental trans-  
65 verse grooves, as indicated at 13, within which are placed segmental shoes or keys 14. At points corresponding to opposite ends of a vertical diameter of the opening 10 in the elbow  
61 I provide pivot-screws 15, which pass through  
70 said elbow and the tapering ends of which engage recesses in the shoes or keys 14. Said screws are held in position by suitable set-nuts 16. Within each groove 13 I may prefer to place pins or stops 19, which limit the vertical  
75 downward movement of the tube 11, so that when the sound-box is not in operation upon the record the arm will not drop beyond a certain predetermined point.

The sound-box 20 may be attached with the  
80 outer end of the tube 11 in any suitable manner; but I have herein shown a split connection 17, which is in the form of an elbow and is attached to the sound-box by means of a vertical plate or disk 18.  
85

By the construction above described it will be seen that I have provided an extremely simple and efficient joint by which the sound-conducting tube may be connected with the  
90 amplifying-horn, all the parts being made of cast or drawn pieces without requiring delicate machine-work, and therefore being very easily assembled and interchangeable. The passages forming communication between the  
95 sound-box and the amplifying-horn are unobstructed by any pins or bars, and all parts be-



ing gradually curved give no hindrance to the movement of the sound-waves as they pass through said passages. Moving parts which give a vertical and horizontal play to the arm  
5 are reduced to the smallest size, and therefore produce a minimum amount of friction.

Having thus described my invention, it will be evident that changes may be made in the form and arrangement of parts without departing from the spirit and scope of my invention; but,  
10

What I claim, and desire to protect by Letters Patent of the United States, is—

1. In a talking-machine, the combination  
15 with a sound-conveying tube, a fixed connecting-elbow adapted to telescope therewith, vertical pivots carried by said elbow, and means carried by said tube for engaging said pivots, and for allowing a vertical movement of said  
20 tube.

2. In a talking-machine, the combination with a sound-conveying tube, a fixed elbow adapted to telescope therewith, vertical pivots carried by one end of said elbow, a flange located upon the end of said tube, and having  
25 transverse grooves therein, shoes carried in said grooves, and adapted to be engaged by said pivots.

3. In a talking-machine, the combination  
30 with a sound-conveying tube, a spherical flange carried at one end thereof having transverse grooves therein, slidable shoes located in said grooves, a fixed elbow, one end of which is

adapted to telescope with the flange portion of said tube, and vertical pivots carried by said  
35 elbow adapted to engage said shoes.

4. In a talking-machine, the combination with a sound-conveying tube, a fixed elbow, a support for said elbow comprising an arm having a vertical opening therein, a pin adjust-  
40 ably held in said opening, said pin being adapted to engage a socket in said elbow, and a pair of vertical pivots connecting said tube, and elbow including slidable means to give a vertical movement to said tube, said slidable means  
45 being engaged by said pivots.

5. In a talking-machine, the combination with a sound-conveying tube, a fixed connecting part adapted to telescope therewith, pivots carried by one of said parts, and shoes longitudinally slidable in relation to said parts, and  
50 which engage said pivots for allowing a vertical and horizontal movement of said tube.

6. In a talking-machine, the combination with a sound-conveying tube, a fixed connecting part adapted to telescope therewith, one of  
55 said parts having longitudinal grooves, shoes carried in said grooves, and pivots carried by the other of said parts and engaging said shoes.

In witness whereof I have hereunto set my  
60 hand this 20th day of April, A. D. 1904.

JULIUS JETTER.

Witnesses:

LEWIS H. VAN DUSEN,  
EDW. W. VAILL, Jr.