

No. 874,350.

PATENTED DEC. 17, 1907.

W. C. RUNGE.
REPRODUCING TRUMPET SUPPORT.
APPLICATION FILED JULY 3, 1906.

3 SHEETS—SHEET 1.

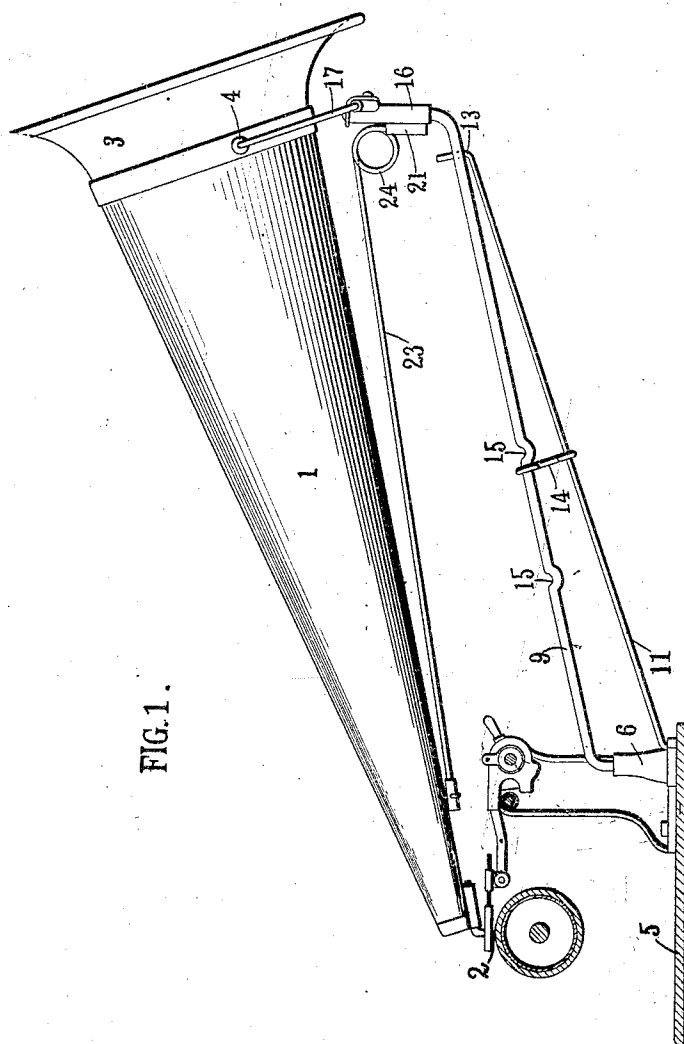


FIG. 1.

WITNESSES

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Conrad Liebel

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ATTORNEY

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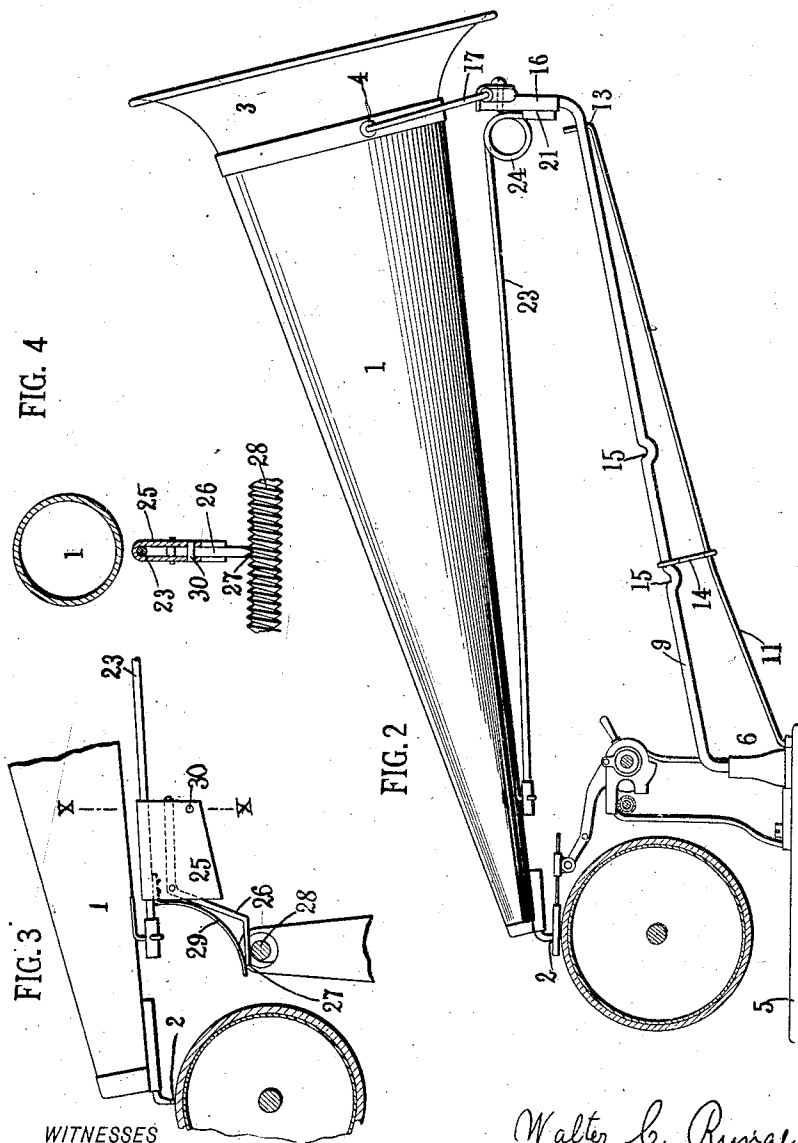


FIG. 4

FIG. 2

FIG. 3

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3 SHEETS—SHEET 3.

FIG. 5

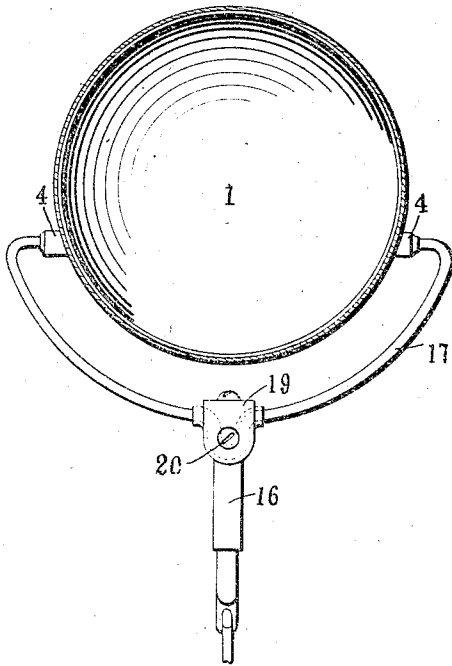


FIG. 6

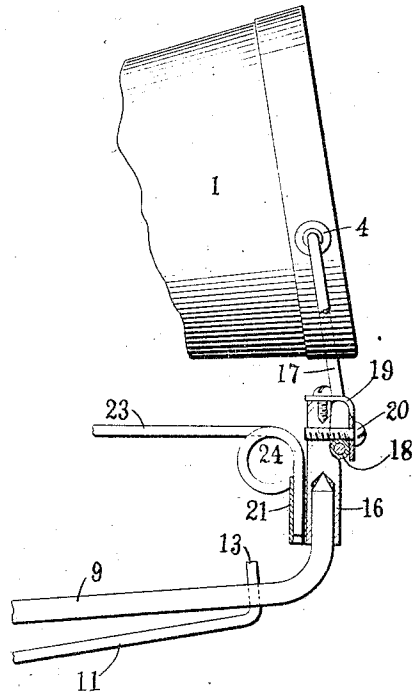


FIG. 7

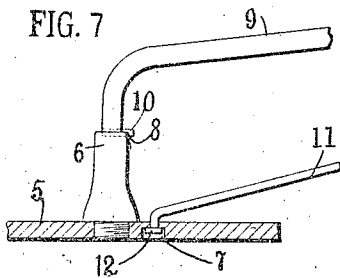
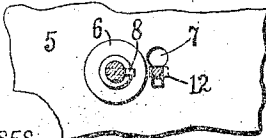


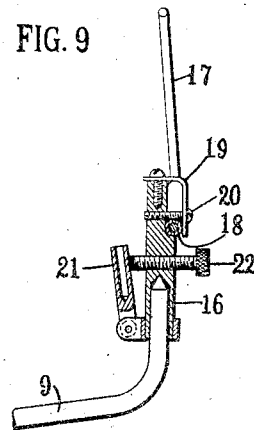
FIG. 8



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FIG. 9



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UNITED STATES PATENT OFFICE.

WALTER C. RUNGE, OF CAMDEN, NEW JERSEY, ASSIGNOR TO INTERNATIONAL ROYAL PHONE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

REPRODUCING-TRUMPET SUPPORT.

No. 874,350.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed July 3, 1906. Serial No. 324,608.

To all whom it may concern:

Be it known that I, WALTER C. RUNGE, a citizen of the United States, residing at Camden, Camden county, New Jersey, have invented a new and useful Improvement in Reproducing-Trumpet Supports, of which the following is a specification.

My invention relates to supports for the trumpets of talking machines in which the stylus, or the sound box, is directly attached to, and moves with the trumpet, being carried wholly thereby.

One object is to provide means for utilizing the same trumpet and support in connection with records of different diameters.

Another object is to so mount the trumpet that it will be insulated from the talking machine thereby eliminating machine noise and foreign sounds during reproduction.

Another object is to so mount the trumpet that it will be supported when removed from a record thereby preventing the stylus from striking the machine and becoming chipped or broken.

I attain these objects in the manner illustrated in the accompanying drawings in which

Figure 1 is a side view of my improved trumpet support in connection with a small record; Fig. 2 a like view of the trumpet support in connection with a large record; Fig. 3 a detail view of a device for feeding the trumpet across the record; Fig. 4 a sectional view of the structure of Fig. 3 on the line $x-x$; Figs. 5 and 6 detail views of the yoke engaging trumpet; Figs. 7 and 8 detail views showing a manner of securing the support to the base of the machine; and Fig. 9 a detail view, partly in section, of mechanism for varying the pressure of the stylus on the record.

Like reference characters designate like parts throughout the several views.

A reproducing trumpet 1, provided with a stylus 2 and an amplifying bell 3 has sockets 4 4 on either side thereof. A base plate 5 carries the machine and trumpet support and is provided with a hollow post 6 and a key-hole slot 7 adjacent thereto. The top of the post is notched as indicated at 8. An arm 9 provided with a pin 10 is adapted to be inserted into the post, the pin engaging the notch to prevent turning, and to accurately position the arm. A brace 11 is made with a button head 12 at one end which is

adapted to engage the key-hole slot 7 in the base, the other end being adapted to engage the arm 9 at 13 near its outer end. A link 14 connects the arm 9 and brace 11 and is slidable thereon. The arm 9 may be provided with stops 15 15 to engage the link 14 at the proper points. A sleeve 16 is mounted on the end of the arm 9 and is adapted to rotate thereon. Its front face is flattened and a yoke 17 is secured thereto, being first protected by the elastic packing 18 where it contacts with the sleeve. This yoke is fastened in place by a plate clip 19 which is secured to the top of the sleeve and to the front thereof, the yoke being held between 70 the plate and the sleeve, the screw 20 passing between the horns of the yoke 17. By this construction and the use of the packing 18 a slight universal movement is permitted and a sound insulator is provided which prevents extraneous machine vibrations from reaching the trumpet.

The ends of the yoke 17 engage the sockets 4 4 on the trumpet and permit a free vertical oscillation thereof, the sleeve 16 permitting a free horizontal oscillation. A second sleeve 21 is secured to the inner face of the sleeve 16, preferably in the manner shown in Fig. 9 in which it is hinged at the bottom, a set screw 22 acting as an adjustable stop. One end of a spring rod 23 engages this socket while the other end is secured to the trumpet near its small end exerting a downward pressure. This spring may be provided with a coil 24 to increase its resiliency. By moving the screw 22 the downward pressure may be varied at will. When the stylus is off the record the spring 23 acts as a support for the inner end of the trumpet and prevents the stylus from striking the machine or its support.

To feed the stylus across the record the mechanism shown in Figs. 3 and 4 may be employed. A clip or box 25 is secured to the spring 23. A bent lever 26 provided with a knife edge 27 is pivoted in the box. A light spring 29 presses the lever down so the knife edge 27 will engage a feed screw 28 on the machine. A stop 30 limits the movement of the lever.

In use on a small record the trumpet is mounted as shown in Fig. 1 with the link 14 in engagement with the outer stop 15, the knife edge 27 engaging the feed screw 28. On operating the machine the stylus and

trumpet will be propelled across the record, the trumpet reproducing it. The spring 23 holds the stylus to the record with the proper degree of pressure, while the sockets, 4 4 and yoke 17 permit a vertical movement of the trumpet in the case of eccentric records. The sleeve 16 permits the lateral motion necessary to enable the stylus to travel along the record. As the radius of oscillation of the stylus is great as compared with the length of a record the segment described by the stylus is so flat that for all practical purposes it is a straight line. It is obvious that the knife edge 27 will remain in the feed screw 28 regardless of eccentricities in the record. The feed screw and knife edge may be dispensed with and the trumpet propelled across the record by the sound groove therein.

If a "concert" or record of large diameter is employed as shown in Fig. 2 the link 14 is slid along to the inner stop to bring the stylus into proper position on the record, the arm 9 and brace 11 bending, thereby swinging the yoke and sliding the stylus. As the pressure required on a large record is greater than that on a small one the raising of the stylus end on the trumpet increases the tension of the spring 23 and automatically provides the increased pressure.

The elastic packing 18 permits a slight universal motion of the yoke and trumpet independent of that afforded by the sleeve and sockets and the compensation provided thereby is, in most cases, sufficient to take

care of the slight eccentricities in commercial records.

I claim:—

1. A reproducing trumpet support comprising an arm secured to a talking machine at one end, a brace secured to the machine at one end and to the arm at the other, and a link slidable on the arm and brace for the purposes set forth.

2. A reproducing trumpet support comprising an arm secured to a talking machine, a brace also secured to the machine at one end and to the arm at the other, a link slidable on the arm and brace and a yoke rotatably mounted on the arm and adapted to engage a reproducing trumpet.

3. A reproducing trumpet support comprising an arm secured to a talking machine at one end, a sleeve rotatably secured to the other end thereof, a yoke adapted to engage a reproducing trumpet, a clip plate secured to the sleeve and holding the yoke in position between it and the sleeve, and an elastic packing protecting said yoke where it engages the clip plate and sleeve for the purpose of affording a slight universal movement and providing an insulated joint.

In testimony whereof I have hereunto subscribed my name in the presence of two attesting witnesses.

WALTER C. RUNGE.

Witnesses:

ROBT. B. KILLGORE,
CONRAD DIEHL.