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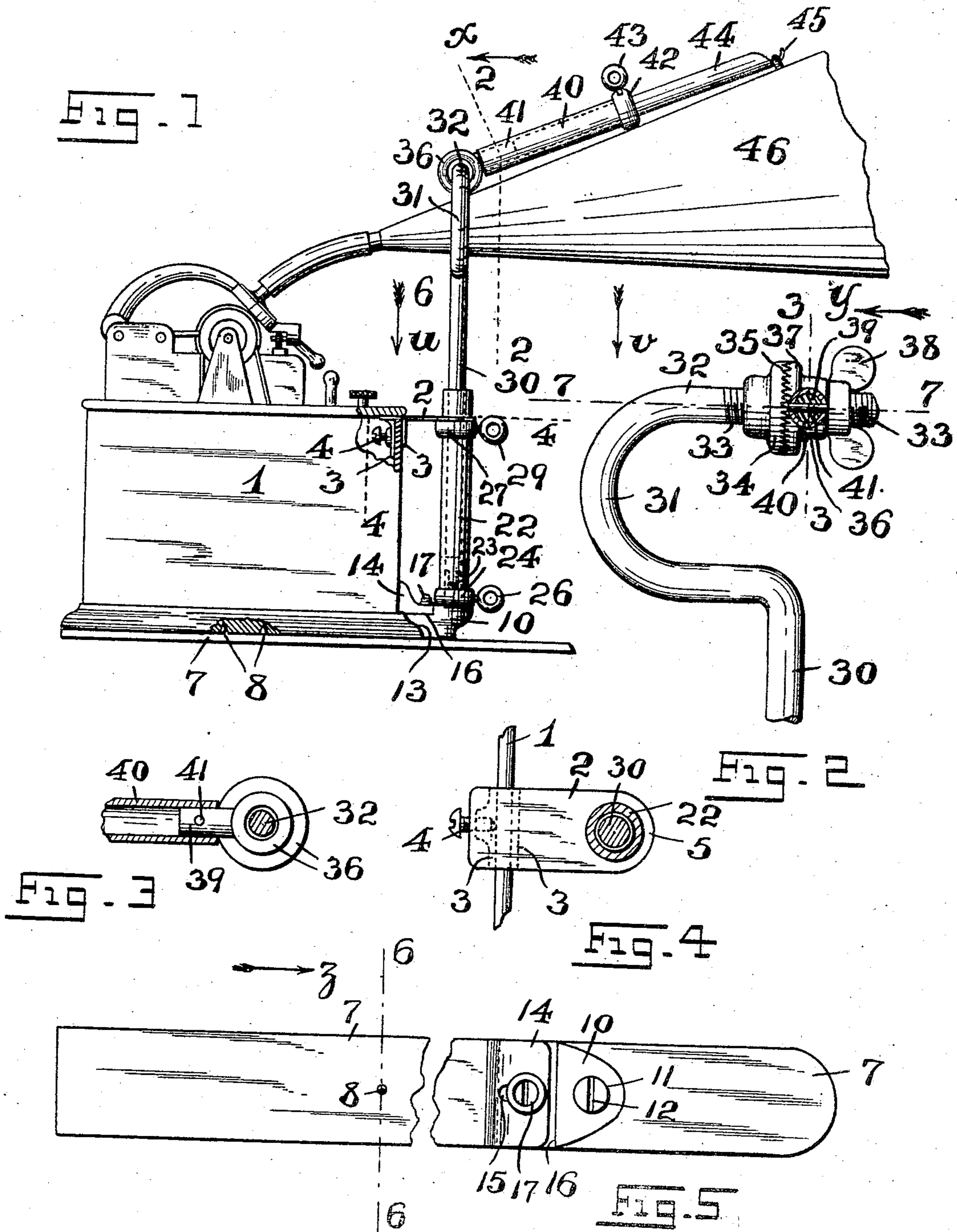
PATENTED MAR. 27, 1906.

E. S. OLIVER.

HORN SUPPORT FOR TALKING MACHINES.

APPLICATION FILED JUNE 25, 1904.

3 SHEETS—SHEET 1.



WITNESSES:

F. H. W. Fraentzel
Edmund Stevenson

INVENTOR:

E. S. Oliver,

BY

Fred K. Fraentzel,
ATTORNEY

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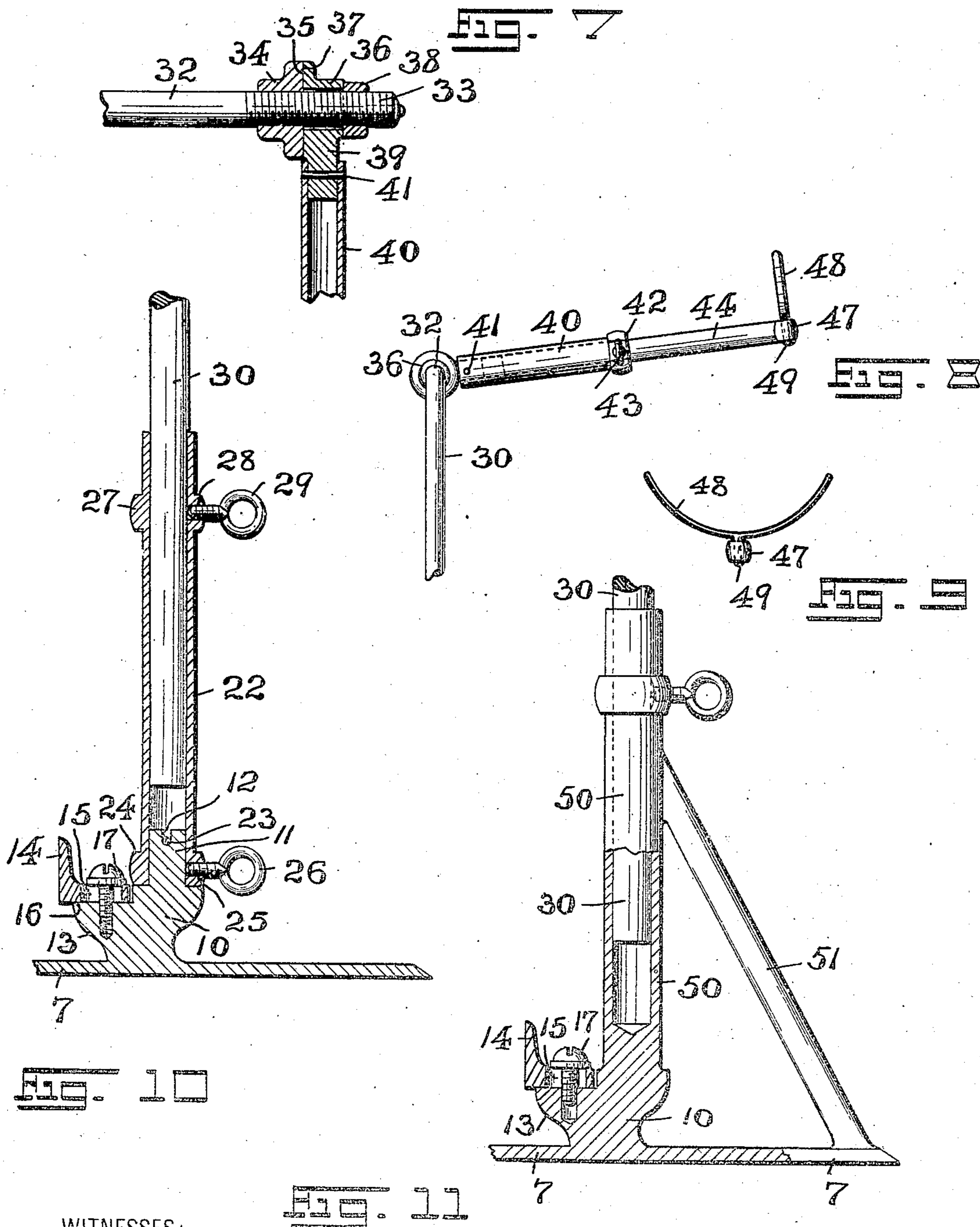
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WITNESSES:

F. H. W. Fraentzel
Geo. D. Richards

INVENTOR:

Ellis S. Oliver,

BY

Fred C. Fraentzel,
ATTORNEY

No. 816,178.

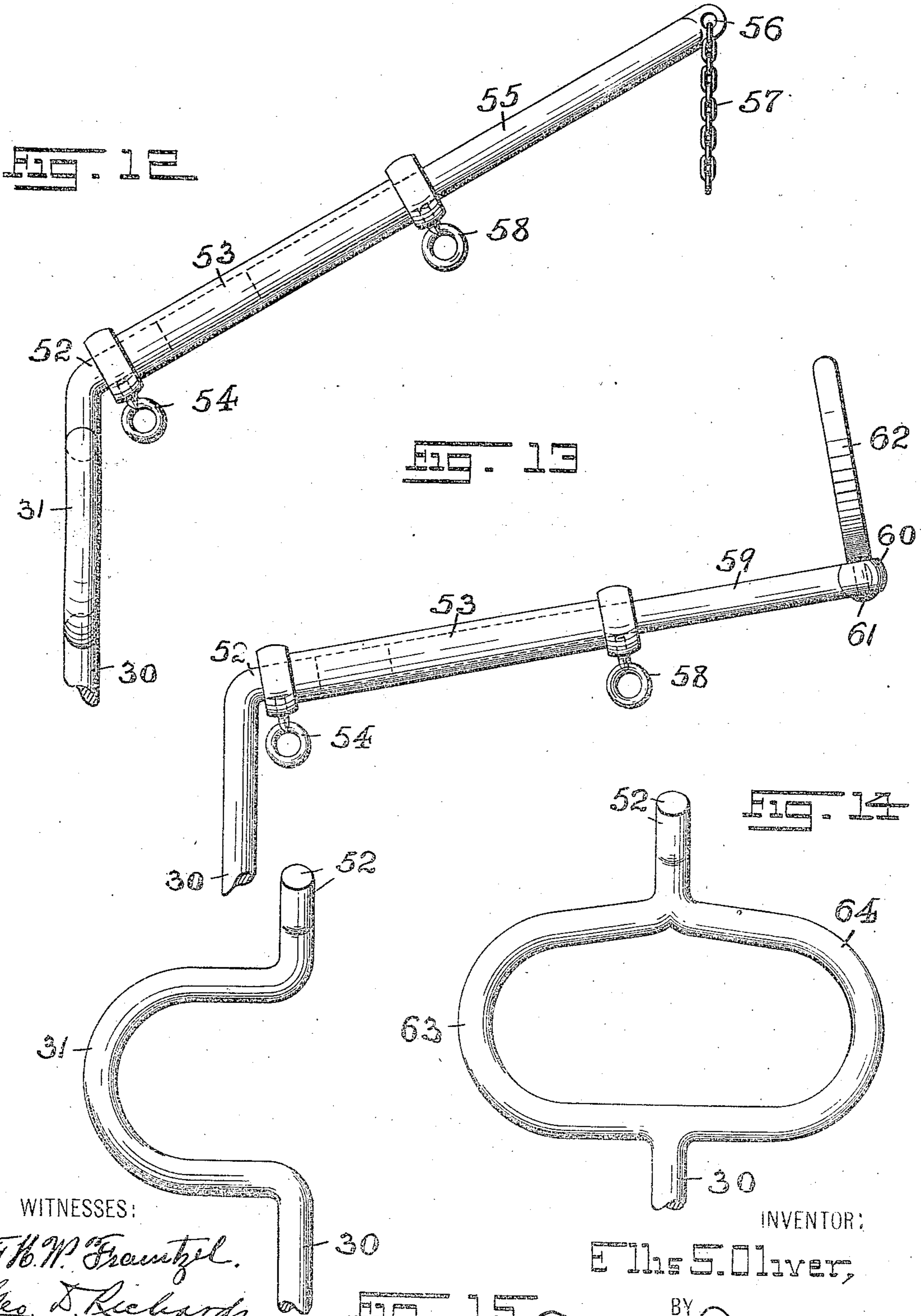
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WITNESSES:

F. H. W. Graetz
Geo. D. Richards

INVENTOR:

E. S. Oliver

BY

Fred. Graetz
ATTORNEY

UNITED STATES PATENT OFFICE.

ELLIS S. OLIVER, OF NEWARK, NEW JERSEY.

HORN-SUPPORT FOR TALKING-MACHINES.

No. 816,178.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed June 25, 1904. Serial No. 214,092.

To all whom it may concern:

Be it known that I, ELLIS S. OLIVER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Horn-Supports for Talking-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention has reference to improvements in horn-supports for talking-machines, and more especially for phonographs; and the invention has for its principal object to provide a simple, cheap, and novel construction of horn-support for phonographs, the parts of such support being readily adjustable, whereby the reproducing-horn can be suitably brought in its suspended position in front of the phonograph to produce the best results, and, furthermore, the parts of the adjustable support being of such construction and arrangement that a perfectly strong and rigid support will be the result, from which the largest horn can be suspended without danger of tilting or swaying and without any possibility of damaging any portion of the talking-machine due to the undue and unstable support of the horn.

Other objects of my present invention will be clearly evident from the following detailed description of the adjustable support embodied in the following specification.

With the various objects of my present invention in view the same consists, primarily, in the novel horn-support for talking-machines hereinafter set forth; and, furthermore, this invention consists in the arrangements and combinations of devices and parts, as well as in the details of the construction of the same, all of which will be fully described in the following specification and then finally embodied in the clauses of the claim, which are appended to and which form an inseparable part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a phonograph and the adjustable horn-support embodying the principles of my invention, the phonograph box or casing being shown partially broken away in two places, these portions being rep-

resented in vertical section. Fig. 2 is a detail sectional view of a portion of the adjustable horn-support, said section being taken on line 2 2 in said Fig. 1 looking in the direction of the arrow *x*, illustrating, in connection with the end portion of the main support, an adjusting device capable of a rotary motion and a tightening-nut for securing the parts in their adjusted relations. Fig. 3 is a cross-section taken on line 3 3 in said Fig. 2 looking in the direction of the arrow *y*, certain portions being represented in elevation. Fig. 4 is a horizontal section taken on line 4 4 in Fig. 1 looking in the direction of the arrow *u*, showing a supporting-bracket connected with the phonograph box or case in plan view. Fig. 5 is a plan or top view of the base-plate of the horn-support, the main supporting-bar and tubular post in which said main supporting-bar is arranged being omitted from said view; and Fig. 6 is a transverse vertical section taken on line 6 6 in said Fig. 5 looking in the direction of the arrow *z*. Fig. 7 is a horizontal section taken on line 7 7 in said Fig. 2 looking in the direction of the arrow *v*. Figs. 8 and 9 are a side view and end view, respectively, of a horn-support of a modified form of construction. Fig. 10 is a longitudinal vertical section, on an enlarged scale, of portions of the horn-support represented in said Fig. 1; and Fig. 11 is a similar sectional representation of a modified form of horn-support. Figs. 12, 13, 14, and 15 are detail views of portions of modified forms of horn-supports.

Similar characters of reference are employed in all of the above-described views to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference character 1 indicates the usual case or box of a talking-machine, such as a phonograph, with which the horn-support embodying the principles of my present invention is to be used. Suitably connected with the said box or case and projecting at right angles, or approximately so, from the front of the said box or case is a bracket 2, which is provided with a receiving-opening 5 (see Fig. 4) and is formed with a pair of downwardly-extending flanges or braces, as 3, which are adapted to be arranged upon the opposite sides of the front wall or other portion of the said box or case 1 and then secured in their clamped or holding relation with the said wall by means of a suitably-arranged set-screw 4, as clearly indicated in

Figs. 1 and 4 of the drawings; but it will be understood that any other fastening means may be employed for securing the said bracket 2 in its operative position upon any suitable part of the said case or box 1.

The horn-supporting device proper is indicated by the reference character 6, and the construction represented in said Figs. 1 to 7, inclusive, and in Fig. 10 consists, essentially, of a suitable base-plate 7 of any desired width and length, which is provided with one or more points 8 for indentation in the bottom of the case or box 1, as represented in Fig. 1 of the drawings. At or near the forward end portion of the said base-plate 7 the same is made with a projection 10, formed with a cylindrical post or stud 11, which is provided in its upper end with a diametrically-extending groove or slot 12. This said projection 10 is also preferably made with the laterally-extending undercut marginal surface portion 13, (see Figs. 1 and 10,) beneath which a portion of the base of the box or case 1 is arranged, as shown in said Fig. 1, and a suitably-constructed shoe 14, having an elongated slot or opening 15, being employed for securing or holding these portions of the box or case 1 and the projection 10 securely together when the said shoe or block is screwed down upon the cut-away part 16 of the said projection 10 by means of a screw 17, as clearly indicated in Figs. 1, 5, and 10 of the drawings. Thus when the shoe or brace 14 is arranged against the lower front edge of the box of the talking-machine, with the base-plate 7 beneath the bottom of the box and the point or points 8 indented in the said bottom, the said base-plate 7 is securely retained in its operative relation against the lower and under face of the box or case 1, as will be clearly understood.

Referring now more particularly to Fig. 10 of the drawings, it will be seen that I have arranged upon the post 11 of the projection 10 a tubular post 22, the same having its lower end resting upon the upper surface of the said projection 10 and being prevented from turning upon the said post 11 by a pin 23, which extends across the interior of the said tube 22 and lies in the slot or groove 12 of said post 11, substantially as illustrated in said Fig. 10, the said pin 23 having its respective ends arranged and secured in perforations in the opposite sides of the lower end portion of said tube 22. The said tubular post 22 may also be provided at its lower end portion with an enlargement, as 24, having a screw-threaded hole 25 for the reception of a suitably-formed set-screw 26, which screw may have its end screwed up against the side of the post 11 as an extra precaution to prevent the parts from turning. The said tubular post 22 may be provided with a second enlargement, as 27, which is provided with a screw-threaded hole 28 for the reception of a

suitable set-screw 29 for adjustably securing and holding the lower portion of a supporting-rod 30 within the said tubular post 22, as clearly illustrated in said Fig. 10. The upper end portion of the said tubular post or support 22, as will be seen from an inspection of Figs. 1 and 4, extends into and through the opening 5 in the bracket 2 to positively retain the said post 22 in its vertical position, as will be clearly evident.

From an inspection of Figs. 1 and 2 of the drawings it will be seen that the upper end portion of the said rod 30 is made with a bent or curved portion 31, that said upper end portion of the said rod extends around the horn when in its suspended position, the said bent or curved portion 31 of the said rod terminating in a laterally-extending end portion or supporting-finger 32, which is provided with a screw-thread 33. Upon this screw-threaded portion of the said rod 30 I have screwed a suitable nut 34, provided with the toothed or serrated surface 35, and loosely or slidably arranged upon the said screw-threaded portion of the said rod 30 is a collar 36, which is provided with a toothed portion or serrations 37, which can be brought in holding engagement with the teeth or serrations of the nut 34 when a thumb-screw or other suitable nut 38 is firmly screwed against the said collar 36, as shown in Fig. 7 of the drawings. Extending from one side of the said collar 36 is a projection or finger 39, upon which is slipped the one end of a tube 40, the same being firmly secured upon said projection or finger 39, preferably by means of a pin 41; but it will be evident that any other suitable fastening means may be employed, if desired. The upper end portion of the said tube 40 may be provided with an enlarged portion, as 42, having a screw-threaded hole in which is arranged a set-screw 43, and adjustably and slidably arranged within the said tube 40 is a rod 44, which is secured and held in its adjusted position by means of the said screw 43. The free end or other suitable portion of the said rod 44 is provided with a suspension device, preferably a hook 45, from which the usual horn 47 can be suspended in its proper position in front of the phonograph and in the manner clearly illustrated in said Fig. 1 of the drawings.

From the foregoing description of the horn-support represented in said Figs. 1 to 7, inclusive, and in Fig. 10 of the drawings it will be evident that I have produced a serviceable and strong device which is capable of various adjustments to locate the horn in the best position in front of the case or box of the talking-machine, the device being capable of adjustment vertically, and by means of the nuts 34 and 38 and the collar 36 a rotary adjustment being possible to bring the laterally-extending projection or finger 39 of the collar 36 in the most desirable position that the

horn will project in the right direction in front of the box or case 1.

By slightly unscrewing the set-screws 26 and 29, which are connected with the tubular post 22, and lifting the pin 23 from within the slot or groove 12 in the post 11 the said tube 22 and the various parts are capable also of a rotary adjustment upon the post 11, in which adjusted positions these parts can be secured and held by again tightening the said set-screws 26 and 29.

Instead of providing the rod 44 with a supporting-hook 45, from which the horn is suspended, the said rod, as will be seen from an inspection of Figs. 8 and 9, may be provided with an eye 47, in which can be arranged the stud 49 of a supporting fork or yoke 48, upon which the horn 46 can be placed, the said horn in this case being arranged above the tube 40 and the rod 44 therein instead of being suspended below these parts, as represented in Fig. 1 of the drawings.

From an inspection of Fig. 11 of the drawings it will be seen that instead of providing the projection 10 of the base-plate 7 with the post or projection 11 and a separable tubular post 22 the said projection 10 may be formed with a tubular post 50, which is cast integral with the said projection of the base-plate, and, furthermore, a brace, as 51, may be arranged between the said base-plate and said post 50 for strength, the said brace 51 being cast integral with the said parts or being otherwise connected with the same. In all other respects the bar 30, which carries the horn-supporting tube 40, and bar or rod 44 is the same as that described in connection with the construction of horn-supporting device illustrated in Figs. 1 to 7, inclusive.

In some instances instead of providing the free end portion of the rod or bar 30 with the screw-threaded end portion 32 and the locking device thereon the said rod 30 may be provided at its free end with an angular projection or extension 52, as clearly indicated in Figs. 12, 13, and 15, upon which can be slipped the one end of a tube 53, which is secured upon the said extension 52 by means of a set-screw 54, and slidably arranged within said tube 53 and secured therein in its adjustable positions by means of a set-screw 58 is a rod 55, preferably provided with an eye 56 and chain 57 or other supporting means for the suspension of the horn from the free end of the said rod 55. Instead of this rod 55 I may arrange in the tube 53, as clearly illustrated in Fig. 13, the rod 59, provided with an eye 60, in which may be arranged the stud or post 61 of a supporting-yoke 62.

In all the constructions hereinabove described and as illustrated in the several figures of the drawings I have shown the supporting-rod 30 provided with but one bent or curved portion 31 at the one side of the rod; but to provide greater strength of said rod

when the device is to be used for the purpose of supporting extra-large horns the rod or bar 30 may be provided with the oppositely bent or curved portions 63 and 64, as clearly illustrated in Fig. 14 of the drawings, the same providing an opening surrounded by a double brace between which the smaller end of the horn is arranged.

The simplicity of construction and the utility of the horn-support for application to the various kinds of talking-machines, and especially to phonographs, will be clearly evident from the previous description of my invention and need, therefore, not be further dwelt upon here.

Having thus described my invention, what I claim is—

1. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-extending portion, a supporting-rod-carrying projection connected with said base-plate and extending upwardly in front of the front face of said case or box, said projection being provided with a cut-away part, and a shoe or brace on said cut-away part, said shoe or brace extending upwardly and being in engagement with a portion of the front face of the case or box, substantially as and for the purposes set forth.

2. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-extending portion, a supporting-rod-carrying projection connected with said base-plate and extending upwardly in front of the front face of said case or box, said projection being provided with a cut-away part, a shoe or brace on said cut-away part, said shoe or brace extending upwardly and being in engagement with a portion of the front face of the case or box, and means extending upwardly from said base-plate for engagement with the bottom of said case or box, substantially as and for the purposes set forth.

3. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-extending portion, a supporting-rod-carrying projection connected with said base-plate and extending upwardly in front of the front face of said case or box, said projection being provided with a cut-away part, and a shoe or brace slidably arranged upon said cut-away part, said shoe or brace extending upwardly and in engagement with a portion of the front face of the case or box, substantially as and for the purposes set forth.

4. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-

extending portion, a supporting-rod-carrying projection connected with said base-plate and extending upwardly in front of the front face of said case or box, said projection being
 5 provided with a cut-away part, a shoe or brace slidably arranged upon said cut-away part, said shoe or brace extending upwardly and in engagement with a portion of the front face of the case or box, and means extending
 10 upwardly from said base-plate for engagement with the bottom of said case or box, substantially as and for the purposes set forth.

5. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-projecting portion, a projection connected with said base-plate and extending upwardly
 20 in front of the front face of said case or box, a tubular post on said projection, a rod adjustably arranged in said tubular post, and means connected with said rod for the suspension of a horn from said rod, said projection upon the base-plate being provided with a cut-away part, and a shoe or brace on said cut-away part, said shoe or brace extending upwardly and being in engagement with a portion of the front face of the case or box,
 30 substantially as and for the purposes set forth.

6. A horn-support for talking-machines, comprising a base-plate adapted to be arranged beneath the base of the case or box of the machine, and provided with a forwardly-projecting portion, a projection connected with said base-plate and extending upwardly in front of the front face of said case or box, a tubular post on said projection, a rod adjustably arranged in said tubular post, and means connected with said rod for the suspension of a horn from said rod, said projection upon the base-plate being provided with a cut-away part, a shoe or brace on said cut-away part, said shoe or brace extending upwardly and being in engagement with a portion of the front face of the case or box, and a holding-point extending upwardly from said base-plate for engagement with the bottom of the case or box, substantially as and for the purposes set forth.

7. In a horn-support for talking-machines, the combination, with a base-plate and means for connecting said plate with a portion of the case or box of the talking-machine, of a tubular post connected with said base-plate, a rod adjustably arranged in said tubular post, said rod having a curved or

bent portion adapted to extend around the sound-reproducing horn of the machine and terminating in an extension, a tube connected with said extension, a rod adjustably connected with said tube, and a horn-suspension device on said rod, substantially as and for the purposes set forth.

8. In a horn-support for talking-machines, the combination, with a base-plate and means for connecting said plate with a portion of the case or box of the talking-machine, of a tubular post connected with said base-plate, a rod adjustably arranged in said tubular post, said rod having a curved or bent portion adapted to extend around the sound-reproducing horn of the machine and terminating in a screw-threaded extension, a collar and a pair of tightening-nuts on said extension, a finger on said collar, and means connected with said finger for the suspension of a horn thereon, substantially as and for the purposes set forth.

9. In a horn-support for talking-machines, the combination, with a base-plate and means for connecting said plate with a portion of the case or box of the talking-machine, of a tubular post connected with said base-plate, a rod adjustably arranged in said tubular post, said rod having a curved or bent portion adapted to extend around the sound-reproducing horn of the machine and terminating in a screw-threaded extension, a collar and a pair of tightening-nuts on said extension, a finger on said collar, a tube extending from said finger, a rod adjustably connected with said tube, and means on said rod for the suspension of a horn thereon, substantially as and for the purposes set forth.

10. In a horn-support for talking-machines, the combination, with a base-plate provided with a projection and means for connecting said base-plate with a portion of the case or box of the talking-machine, of a stud on said projection, a tubular post on said stud, means on said stud and said tubular post to prevent turning of the latter on said stud, a rod adjustably arranged in said tubular post, and means connected with said rod for the suspension of a horn from said rod, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 21st day of June, 1904.

ELLIS S. OLIVER.

Witnesses:

FREDK. C. FRAENTZEL,
 GEO. D. RICHARDS.