No. 793,013. PATENTED JUNE 20, 1905.

H. C. MILLER.

COMBINED STAND AND HORN FOR TALKING MACHINES.

APPLICATION FILED DEC. 6, 1904.

3 SHEETS—SHEET 1.

FIG. 1.

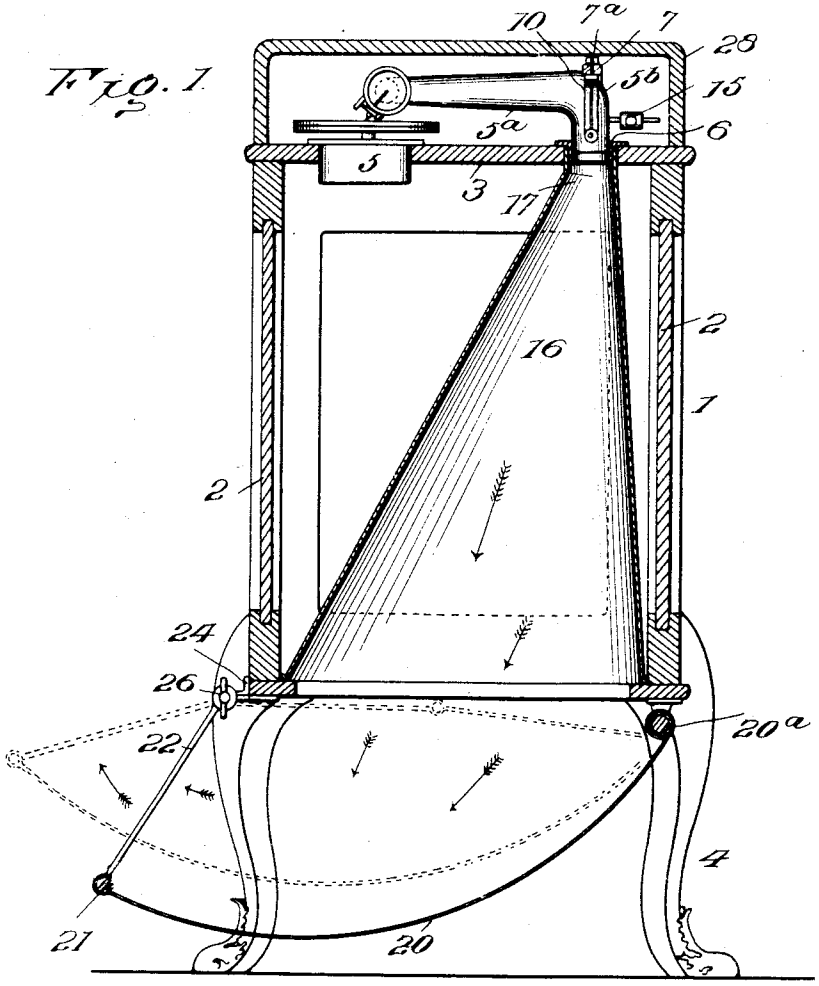
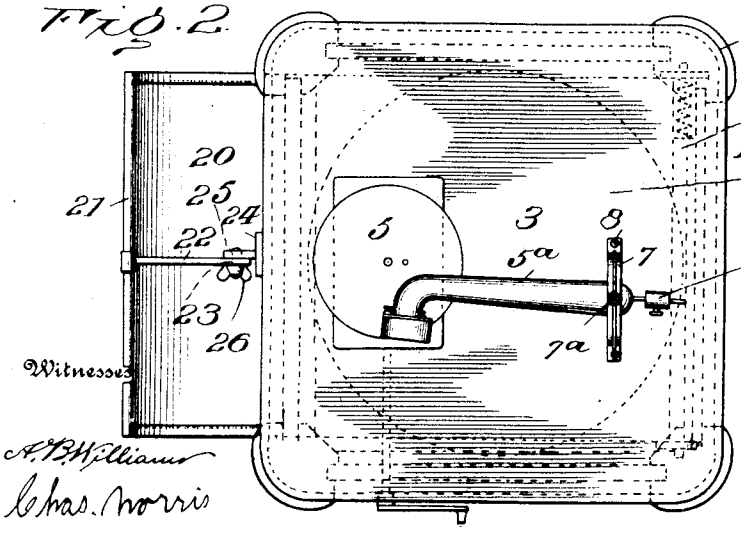


FIG. 2.



Witnesses:

A. B. Williams

Chas. Morris

Inventor

H. C. Miller

by

Attorney

No. 793,013. PATENTED JUNE 20, 1905.

H. C. MILLER.

COMBINED STAND AND HORN FOR TALKING MACHINES.

APPLICATION FILED DEC. 6, 1904.

3 SHEETS—SHEET 2.

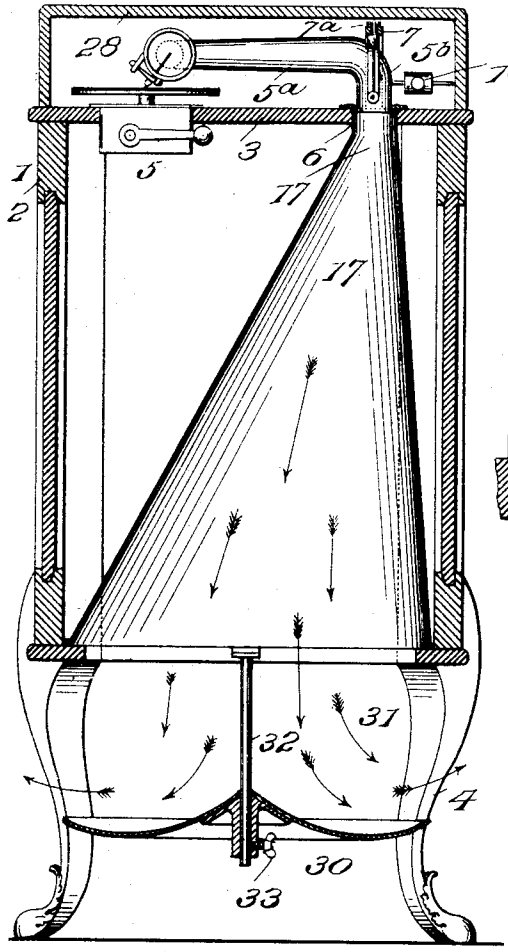


Fig. 4.

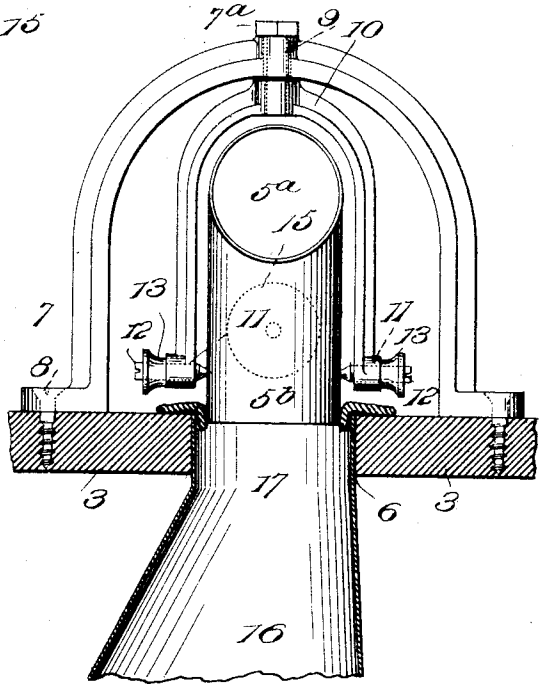


Fig. 3.

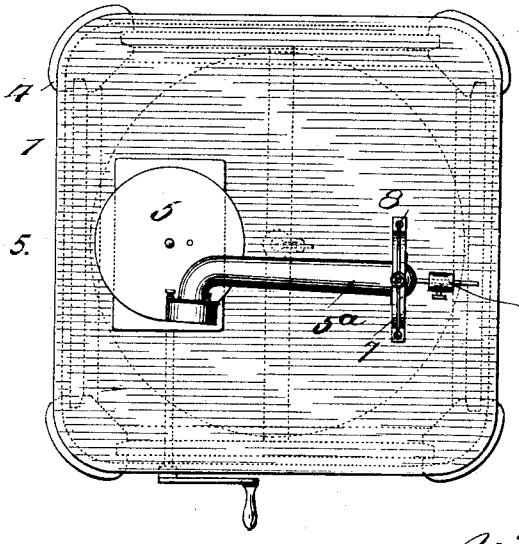


Fig. 5.

Witnesses.

A. B. Williamson

Chas. Morris

Inventor.

H. C. Miller.

by [illegible] Atty

No. 793,013. PATENTED JUNE 20, 1905.

H. C. MILLER.

COMBINED STAND AND HORN FOR TALKING MACHINES.

APPLICATION FILED DEC. 6, 1904.

3 SHEETS—SHEET 3.

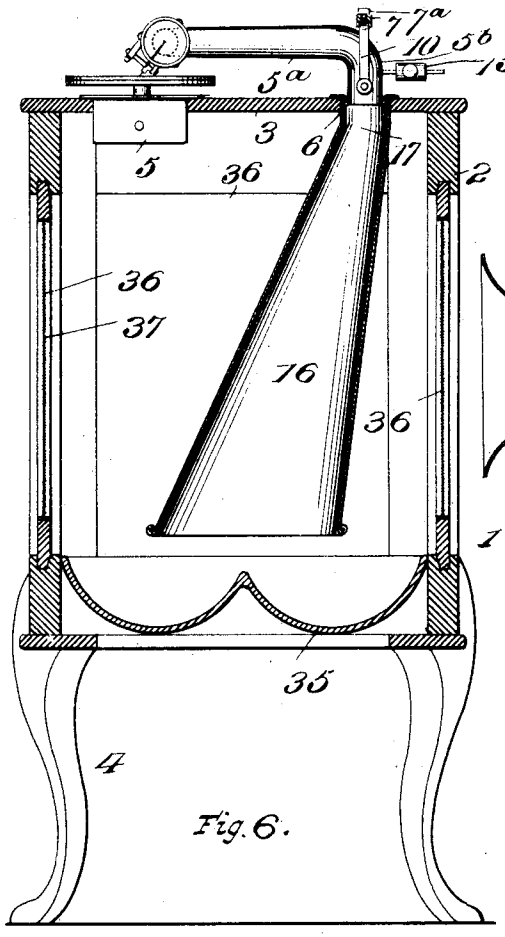


Fig. 6.

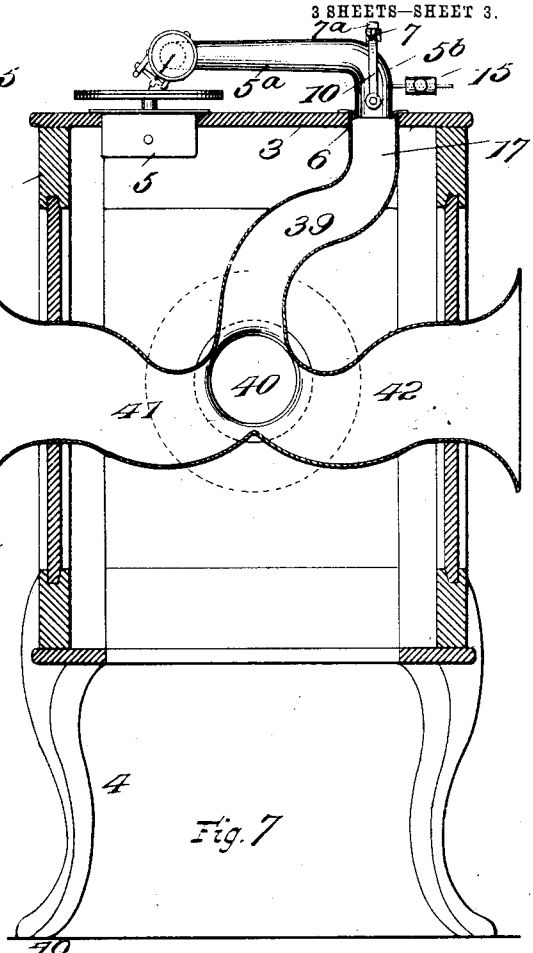


Fig. 7

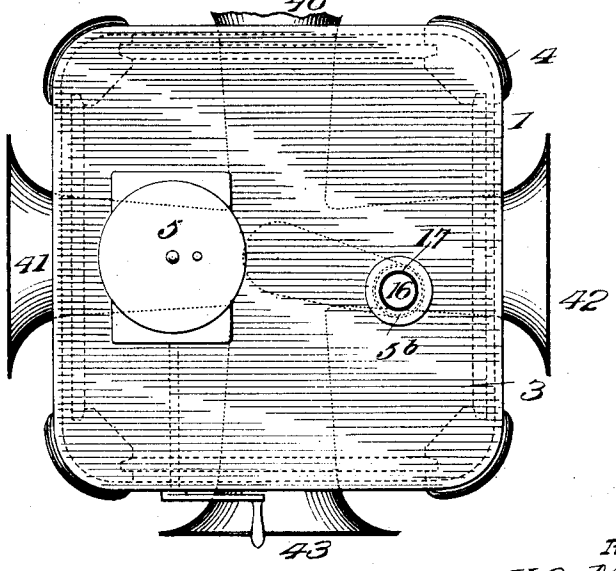


Fig. 8.

Witnesses.

A. B. Williamson

C. Chas. Morris

Inventor.

H. C. Miller

by Jno. Imrie Atty.

No. 793,013. Patented June 20, 1905.

UNITED STATES PATENT OFFICE.

HENRY C. MILLER, OF WATERFORD, NEW YORK.

COMBINED STAND AND HORN FOR TALKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 793,013, dated June 20, 1905.

Application filed December 6, 1904. Serial No. 235,722.

To all whom it may concern:

Be it known that I, HENRY C. MILLER, a citizen of the United States, residing at Waterford, in the county of Saratoga and State of New York, have invented new and useful Improvements in a Combined Stand and Horn for Talking-Machines, of which the following is a specification.

This invention relates to improvements in a combined stand and horn for a talking-machine.

Talking-machines now in use employ a horn extending out from the sound-box, which is large, unsightly, and frequently takes up so much room that it is in the way. I have found that it is not essential to extend the horn from the machine and have therefore constructed a cabinet on which the talking-machine is placed and utilize the interior of the cabinet to accommodate a horn and a deflector to distribute the sound. The object of combining these two elements is to economize space and at the same time provide means for utilizing a large horn without projecting it out from the talking-machine, as practiced with machines of this type now in use.

A further object of this invention is to provide a stationary horn in a cabinet with an adjustable exit that the sound may be directed to an audience at any angle.

Other objects and advantages will be hereinafter referred to and be particularly pointed out in the claims.

In the drawings, Figure 1 is a sectional view of the preferred form of my invention. Fig. 2 is a top plan view with the cover removed. Fig. 3 is a detail transverse vertical section of the means employed for supporting the pipe leading from the talking-machine to the horn and the connection between the pipe and horn. Fig. 4 is a vertical sectional view of a modified form of my invention. Fig. 5 is a plan view of the same. Fig. 6 is a vertical section of a different modification. Fig. 7 is a similar view of a further modification. Fig. 8 is a plan view of the modification shown in Fig. 7.

The numeral 1 indicates a cabinet composed of sides 2, top or support 3, and legs 4. The top 3 is cut out to receive a talking-machine 5, which may be of any well-known type, and connected to the sound-box is a tube 5^a, having the outer end 5^b turned down. An opening 6 is formed in the top 3 opposite the talking-machine, and straddling the opening is a yoke 7, fastened in place by screws 8, and provided at about its center with a vertical opening 9, the center of said opening being coincident with the center of the opening 6. A smaller yoke 10 is swiveled to the yoke 7 by a bolt 7^a passing through the opening 9, and at the terminals of the yoke 10 are alined openings 11 11 to receive pointed screws 12 12, which receive lock-nuts 13 13. The points of the screws 12 bind the turned-down end 5^b of the tube 5^a to fasten the latter to the yoke 10. This construction permits the tube to turn horizontally, the screw 7^a being the pivotal connection. A weight 15 is mounted on a rod extending from the tube to counterbalance the tube and the sound-box.

16 indicates a horn made conical, its smaller end 17 fitting in the opening 6 and its larger end or mouth extending to the bottom of the cabinet 1. A suitable packing is interposed between the turned-down end 5^b of the tube 5^a and the upper end 17 of the horn. Obviously the purpose of the packing is to prevent the escape of sound at this point.

Connected to the bottom of the cabinet and communicating with the horn is arranged an adjustable flexible sound-deflector 20. The deflector may be secured to the bottom of the cabinet in any suitable manner, but preferably by a spring-roller 20^a, and at its front end is a bar 21, having connected to it an arm 22, provided with an opening 23. Adjacent the arm is a bracket 24, fastened to the cabinet and formed with an opening 25. A set-screw 26 passes through the openings 23 and 25 to set the mouth of the deflector at a convenient angle. By making the deflector of flexible material it can be rendered adjustable without the necessity of making joints, &c., which would retard the sound-waves.

The spring-roller 20^a is of the usual type and can be used to roll the deflector under the cabinet when not in use.

While I have described one form of means for holding the deflector after it has been ad-

justed, I desire it to be distinctly understood that it is in no wise intended as a limitation.

28 indicates a cover hinged to the cabinet to shield the talking-machine.

In operation the talking-machine is started and the sound passes through the tube 5^a to the horn 16, thence to the deflector, and out to the atmosphere. The sound striking the deflector is thrown out into the atmosphere in a soft blended tone. The "brassy" sound so prevalent with talking-machine horns is almost entirely removed.

By swiveling the tube at one end, as described, the end of said tube and the horn are always retained in alinement.

In the modification shown in Figs. 4 and 5 the horn 16 and its connection with the talking-machine are the same as in Figs. 1 to 3; but the deflector is made in the form of a concavo-convex disk 30, and a space 31 is formed between the bottom of the horn and the disk for the exit of sound. The disk is formed with a central hole which relieves a standard 32, depending from the bottom of the cabinet, the disk being secured to the standard by a set-screw 33, so that the volume of sound emitted through the space 31 can be quickly and conveniently controlled.

In the form of my invention shown in Fig. 6 a concavo-convex disk 35 is located inside the cabinet 1, and the sound passes to the atmosphere through opening 36, covered with net or fine gauze 37. In many instances this construction gives decidedly satisfactory results; but by reason of it not having an adjustable deflector the sound cannot be regulated.

From the foregoing it will be seen that I have provided a simple and neat stand for a talking-machine and have also arranged a convenient means for accommodating the horn. Such a construction, as before stated, absolutely removes the unsightly and awkward appearance of the horn extending from the talking-machine. Furthermore, by providing the adjustable deflector the range, tone, and volume of sound is under perfect control of the operator.

In Figs. 7 and 8 I have provided the horn 39 with four branches 40, 41, 42, and 43, a branch passing through an opening in each side of the cabinet and forming a deflector. The area of the branch tubes about equals the area of one of the big horns shown in Fig. 1, so that the sound produced is equal in volume to the preferred form.

What I claim as new is—

1. In combination, a casing having a support for a talking-machine, legs supporting the casing and forming a space at the bottom of the casing, a horn extending downwardly below the support and terminating to discharge sound in the space, and a deflector at the bottom of the horn, the horn being inclosed by the casing.

2. In combination, a casing having a support for a talking-machine, a horn extending downwardly below the support, a deflector at the bottom of the horn, the horn being inclosed by the casing, a tube adapted to communicate with the talking-machine and the upper end of the horn, and a swiveled connection at the end of the tube which communicates with the horn, said connection comprising a stationary standard, a yoke connected to the tube and swiveled to the standard.

3. In combination, a casing having a support for a talking-machine, legs supporting the casing and forming a space at the bottom of the latter, a horn extending downwardly below the support and terminating to discharge sound in the space, and a deflector at the bottom of the horn and mounted in the space, a tube adapted to communicate with a talking-machine, the tube and horn being inclosed in the casing.

4. In combination, a casing having a support for a talking-machine, a horn inclosed by the casing, and a flexible deflector at the mouth of the horn.

5. In combination, a casing having a support for a talking-machine, a horn inclosed by the casing, a flexible deflector at the mouth of the horn, and means for adjusting the deflector.

6. In combination, a casing having a support for a talking-machine and a space formed below the casing, a horn inclosed by the casing and extending downwardly to the bottom of the casing, and an adjustably-mounted deflector in the space and adjacent the mouth of the horn.

7. In combination, a casing having a talking-machine support, a cover over the support to form a separate compartment for the talking-machine, a horn depending from the support, a tube above the support and adapted to communicate with a talking-machine and the horn, the horn being inclosed within the casing below the support, and a deflector at the mouth of the horn.

8. In combination, a casing, a support in the casing, a horn projecting through an opening in the support, a tube communicating with a talking-machine and the horn, a hanger, a yoke secured to the tube, and swiveled connection between the yoke and hanger, the horn being inclosed in the casing.

9. In combination, a casing, a support for a talking-machine, a horn within the casing, and extending downwardly toward the bottom of the same, a flexible deflector at the bottom of the casing and communicating with the mouth of the horn, and means for adjusting the mouth of the deflector.

10. In combination, a stand for a talking-machine, a horn within the stand, a flexible deflector adjacent the exit of the horn, and means for folding the deflector when not in use.

11. In combination, a stand for a talking-

machine, a horn inclosed within the stand, a flexible deflector at the mouth of the horn, means holding the deflector open, and means for folding the deflector when not in use.

12. In combination, a stand for a talking-machine, a horn inclosed within the stand with its mouth at the bottom of the latter, a flexible deflector under the stand and opposite the mouth of the horn, means holding the deflector open, and spring-actuated means for folding the deflector under the stand.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

HENRY C. MILLER.

Witnesses:
WM. F. PALMER,
ALONZO KNAPPEN.