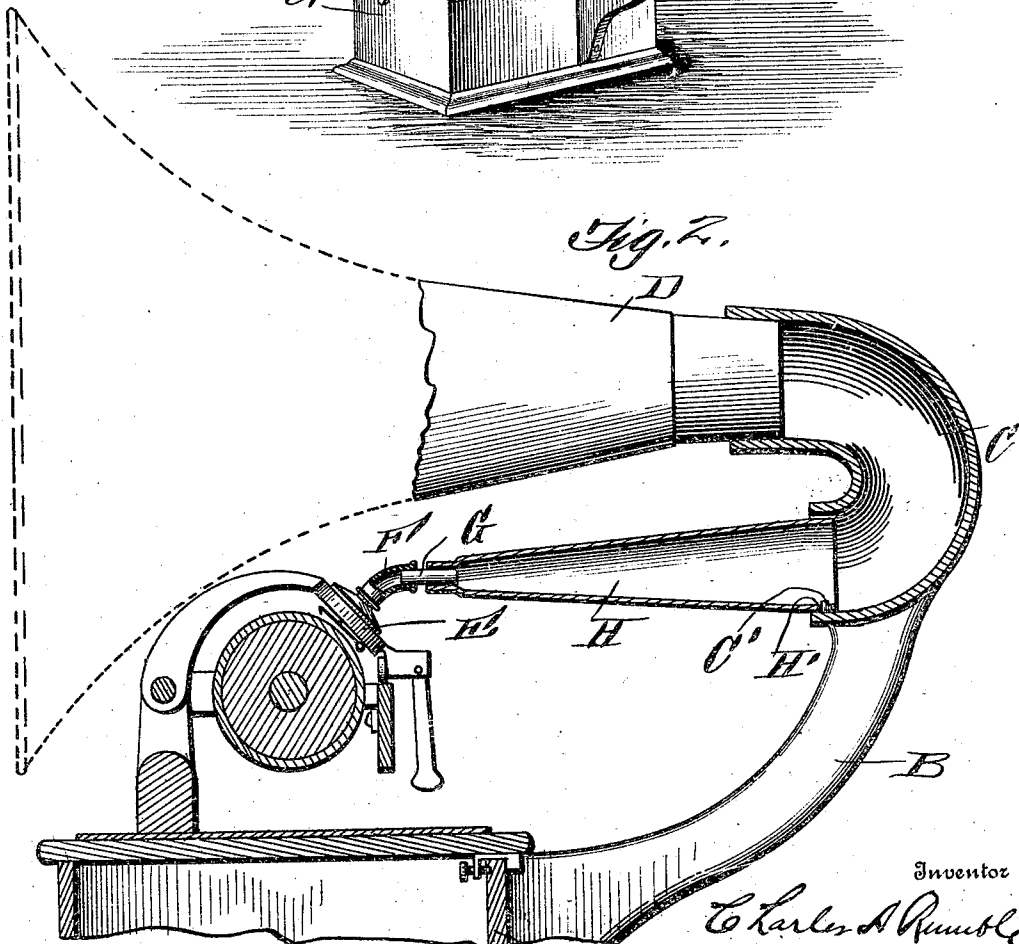
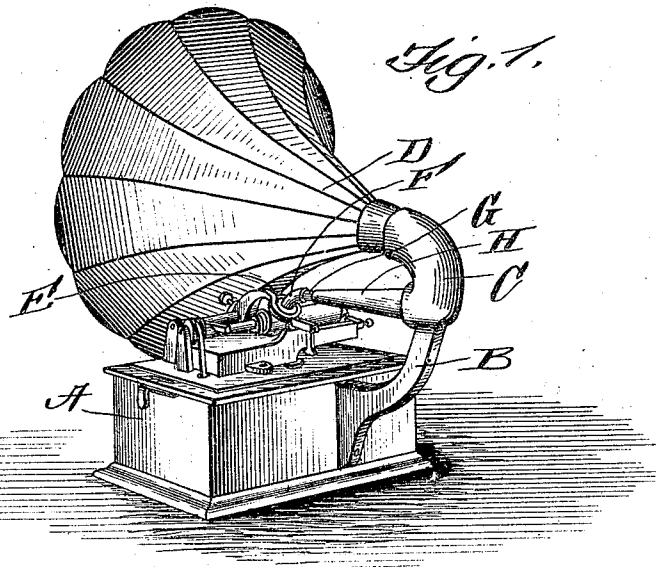


C. A. RUMBLE.
ATTACHMENT FOR PHONOGRAPHS.
APPLICATION FILED SEPT. 11, 1908.

991,090.

Patented May 2, 1911.

2 SHEETS—SHEET 1.



Witnesses

R. B. Brown.
R. A. Fowler

By

A

Inventor

Charles A. Rumble

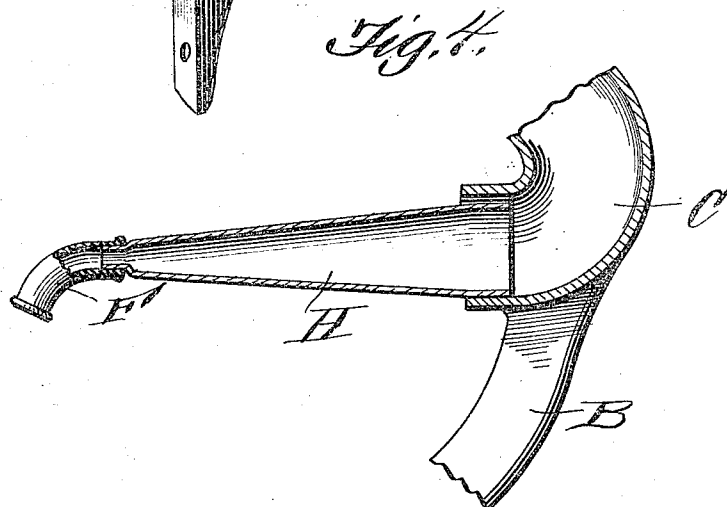
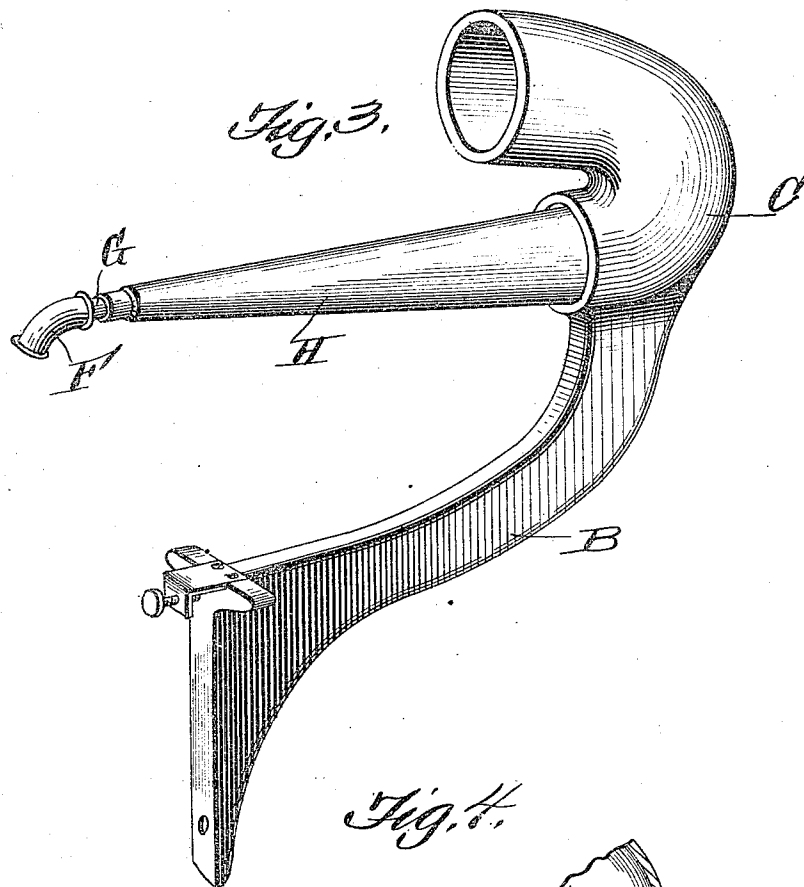
A. & Hough.

Attorney

C. A. RUMBLE.
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991,090.

Patented May 2, 1911.
2 SHEETS—SHEET 2.



Witnesses

R. M. P. P. P.
Adm. R. P. P.

By

Inventor
Charles A. Rumble
A. L. Hough.
Attorney

UNITED STATES PATENT OFFICE.

CHARLES A. RUMBLE, OF LOWVILLE, NEW YORK, ASSIGNOR TO AMERICAN GRAPHOPHONE COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF WEST VIRGINIA.

ATTACHMENT FOR PHONOGRAPHS.

991,090.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed September 11, 1906. Serial No. 334,173.

To all whom it may concern:

Be it known that I, CHARLES A. RUMBLE, a citizen of the United States, residing at Lowville, in the county of Lewis and State of New York, have invented certain new and useful Improvements in Attachments for Phonographs, &c.; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in attachments to phonographs and graphophones, and especially in the provision of a means for connecting the reproducer to the horn, and utilized especially upon cylinder machines, and the object of the invention is to produce a simple and efficient connection between the reproducer and horn holder and so arranged that the connection may have a free movement corresponding to the movement of the reproducer.

My invention comprises various details of construction and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

The inventive idea may be embodied in a variety of mechanical structures, some of which, for the purpose of illustrating the invention, are shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the manner of attachment of my invention to a talking machine. Fig. 2 is a vertical sectional view through the horn supporter and connection between the same and the reproducer. Fig. 3 is a perspective view of the horn support, the flexible tube for connection with the reproducer, and the tapering tone-arm which connects the horn support with the flexible tube, and Fig. 4 is a sectional view showing another form of my invention.

Reference now being had to the details of the drawings by letter, A designates the casing of an ordinary talking machine of the cylinder type, and B is a bracket arm which is fastened to the casing in any suitable manner. The upper portion of said

bracket arm has a curved shell C integral therewith, to the upper end of which a horn D is adapted to be fastened in such a manner that the horn will overhang the top of the case. The reproducer E has connected thereto a flexible pipe F, in the other end of which a tube G is fitted, being held in place by friction intermediate the two contact surfaces, and the opposite end of said tube G has a free movement in the tapering end of the tone-arm H, the large end of which is inserted in the lower end of the shell C.

C' designates a pivot pin projecting from the inner surface of the shell C adjacent to one of the openings therein, and the tone-arm H has a perforation H' adjacent to its enlarged end which enters the shell, which perforation is adapted to receive said pin C' upon which it is adapted to have a universal pivotal movement.

In Fig. 4 of the drawings, I have shown another form of my invention, in which the tube G is dispensed with and the small end of the tone-arm H is fitted within the flexible pipe F and held from movement therein by frictional contact between the two ends; while the enlarged end of the tone-arm H enters the lower opening in the shell and has a free movement therein, thus giving the tone-arm a universal movement incident to the movement of the reproducer and dispensing with the pivotal connection, before described.

From the foregoing, it will be seen that a simple and efficient connection is afforded between the reproducer and the horn-supporting bracket in a machine employing a cylindrical record, the connection being such that the tone-arm may be turned in any direction, while its end nearest the reproducer affords the free movement necessary to compensate for the variation in distance from the reproducer stylus to the point where the tone-arm is connected to the horn. Moreover, by this construction the horn is supported in a position where it will not interfere with the handling of the record to place it on and off the mandrel, nor with the general manipulation of the machine.

What I claim is:—

1. In a talking machine, a bracket-arm secured to the casing of the machine and provided with a hollow shell to receive a horn, a hollow tone-arm connected to said

hollow shell by a pin or lug formed on one of said members and entering a hole or opening in the other, a reproducer and telescopic connections between said reproducer and said tone-arm.

2. In a talking machine, a bracket-arm secured to the casing of the machine and provided with a hollow shell to receive the horn, a lug projecting from the inner wall of the shell adjacent to its lower end, a tapering tone-arm having an aperture in its wall adjacent to one end and adapted to receive said lug, an open-ended tube adapted to telescope with the contracted end of said tapering tone-arm, a reproducer and a flexible pipe connecting the same to said tube.

3. In a talking machine, a bracket-arm secured to the casing of the machine and provided with a hollow shell to receive a horn, a lug projecting from the inner wall of the shell adjacent to its lower end, a tone-arm having an aperture in its wall adjacent to its enlarged end and adapted to receive said lug, thereby affording a universal joint between said tone-arm and said shell, an open-ended tube adapted to be removably held within the contracted end of the tone-arm, a reproducer and flexible connections between the same and said tone-arm.

4. A talking machine comprising a frame,

a mandrel on said frame, a record on said mandrel, a reproducer carriage mounted to move in a right line parallel with the axis of said mandrel, a reproducer supported by said carriage with its stylus in contact with said record, a tubular extension projecting from said reproducer, a fixed support, an amplifying horn mounted at its small end upon said support, and a hollow tone arm swingingly supported by said fixed support, communicating with said horn and having telescopic engagement with said tubular extension projecting from said reproducer.

5. In a talking machine, a sound record, a reproducer in operative engagement therewith, a tubular extension projecting from said reproducer, a fixed support, an amplifying horn mounted at its small end upon said support, a hollow tapering tone-arm swingingly supported by said fixed support at its larger end and communicating with said horn, and having sliding telescopic engagement with said tubular extension projecting from said reproducer.

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

CHARLES A. RUMBLE.

Witnesses:

CHARLES S. MERENESS,

CHARLES S. MERENESS, Jr.