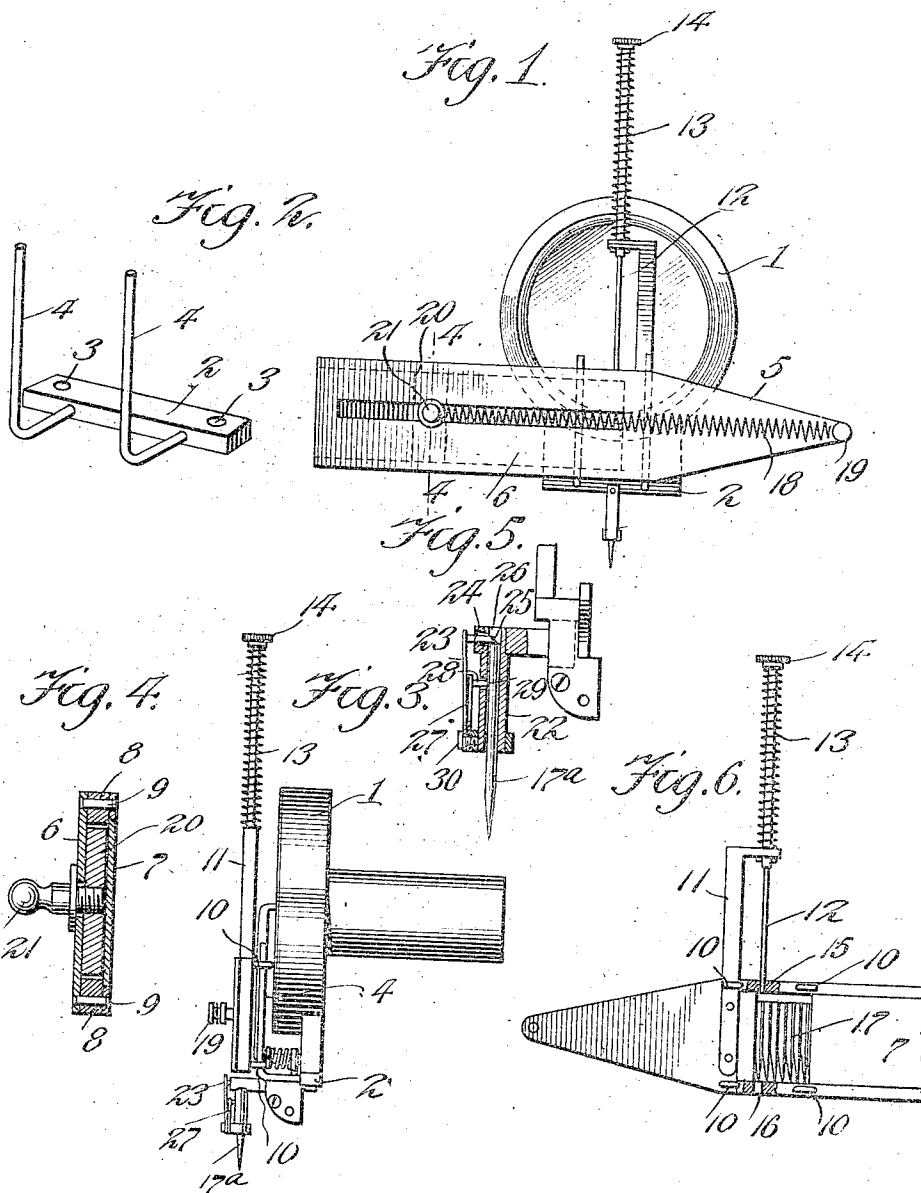


W. S. RODENBERGER.
 GRAPHOPHONE ATTACHMENT.
 APPLICATION FILED JUNE 28, 1907.

904,453.

Patented Nov. 17, 1908.



Witnesses

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WINFIELD S. RODENBERGER, OF LINTON, INDIANA.

GRAPHOPHONE ATTACHMENT.

No. 904,453.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WINFIELD S. RODENBERGER, a citizen of the United States of America, residing at Linton, in the county of Greene and State of Indiana, have invented new and useful Improvements in Graphophone Attachments, of which the following is a specification.

This invention relates to graphophone attachments; and one of the principal objects of the same is to provide simple, reliable and efficient means for feeding needles to the sound box.

Another object of the invention is to provide a magazine containing needles and to provide means whereby said needles may be quickly inserted in the stylus holder of the sound box, and at the same time drive out the old needle.

In the use of graphophones it becomes necessary to insert a new needle after one or two reproductions, and these needles being small, it is quite difficult to feed them in place properly by hand.

My invention has for its object to provide means for quickly removing the old needle and inserting a new one in its place.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:

Figure 1 is a front elevation of a graphophone sound box or reproducer having my attachment connected thereto. Fig. 2 is a perspective view of the supporting bracket for the needle magazine. Fig. 3 is a side elevation of my attachment. Fig. 4 is a vertical section on the line 4-4 of Fig. 1. Fig. 5 is a sectional view of the stylus holder. Fig. 6 is a detail rear side elevation of the magazine and the plunger.

Referring to the drawing for a more particular description of my invention, the numeral 1 designates the sound box or reproducer of a graphophone of ordinary construction, and 2 is a bracket secured to the sound box by means of screws passed through the openings 3 in said bracket. Supporting arms 4 extend outward and upward from said bracket 2. It will be understood, of course, that other means may be utilized for supporting the magazine upon the sound box or reproducer, depending upon the shape and manner of attachment of said reproducer.

The magazine 5 may consist of a front plate 6, a sliding back plate 7 and spacing

strips 8 through which suitable fasteners 9 are passed to hold the parts in relative position. Suitable loops 10 are provided upon the back of the magazine in proper position to receive the arms 4 on the bracket 2 to support the magazine in proper position. A plunger support 11 is connected to the magazine and a plunger rod 12 passes through a hole in said support and is provided with an encircling spring 13 which holds the plunger up in the position shown in Fig. 6. The plunger 12 is provided with a suitable head or button 14. The end of the plunger extends through an opening 15 in the upper edge of the magazine in line with the feed openings 16 at the lower edge of the magazine. A series of needles 17 are placed in the magazine and are fed toward the feed opening 16 by means of a spring 18 connected at one end to a stud 19 while the opposite end is connected to a block 20 fitted to slide in the magazine. Connected to the block 20 is a knob 21 by means of which the block 20 may be moved backward whenever it is required to refill the magazine.

The stylus or needle holder 22 is provided with a detent consisting of a spring 23 and a pin 24 having a beveled end 25 which will permit the plunger 12 to move past it or the needle 17 to be driven through the opening 26 to drive out the needle 17^a. The pin 24 prevents the upward movement of the needle 17^a and said needle is prevented from moving downwardly by means of a spring 27 provided with a stud 28 which passes through an opening 29 in the needle holder and bears with sufficient friction against the needle to prevent it from dropping out. The springs 23 and 27 are held in place by a pin 30.

The operation of my invention may be briefly described as follows: Whenever it is desired to force out the old needle and to replace it by a new one, the plunger 12 is pushed downward which pushes one of the needles 17 through the opening 26 against the needle 17^a to push the same out of the needle holder, while the new needle 17 takes its place, and is held in the same position as was the needle 17^a. After each needle has been inserted the spring 18 moves the sliding block 20 and the column of needles into position so that one needle always occupies a position immediately above the feed opening 16, as will be understood.

From the foregoing it will be obvious that

an attachment made in accordance with my invention is comparatively simple in construction; can be attached to any form of reproducer without material change in the form of bracket; that the needles can be fed instantly without requiring exact fitting as would be the case by hand, and that the attachment, as a whole, can be produced at slight cost.

10 Having thus described the invention, what I claim is:

15 The combination of a graphophone reproducer provided with a bracket having upwardly extending supporting arms, a magazine for stylus needles provided with loops or eyes upon its rear surface to engage said arms, a guideway in said magazine to support a column of needles, a block fitted to

slide in the guideway, a spring connected to said block at one end and to a stud on the magazine at the opposite end, a plunger for forcing one needle at a time out of the magazine into the needle holder of the reproducer, a spring detent having a beveled end disposed within the throat of the needle holder, and a spring having an inwardly projecting stud to bear against the needle to prevent it dropping out until forced home by the plunger.

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

WINFIELD S. RODENBERGER.

Witnesses:

J. S. WHITLEY,
CUMMING BENNIE.