

J. JETTER.
NEEDLE HOLDER FOR TALKING MACHINES.
APPLICATION FILED MAY 5, 1911.

1,034,387.

Patented July 30, 1912.

Fig. 1.

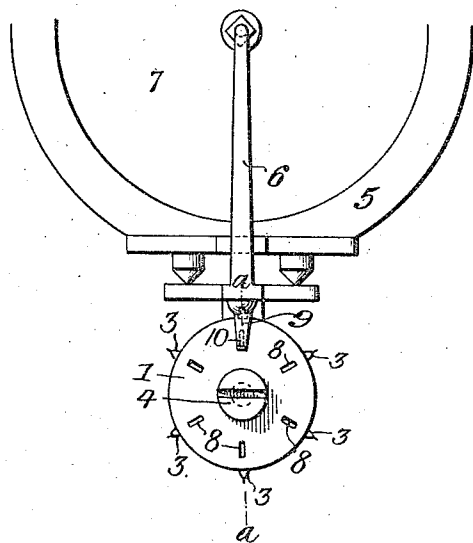


Fig. 2.

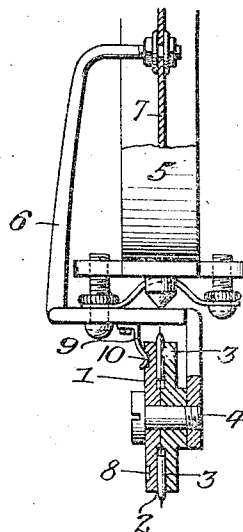


Fig. 3.

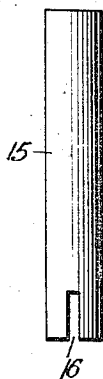


Fig. 4.

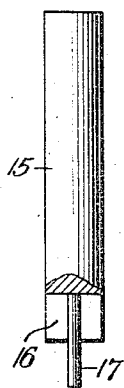


Fig. 5.

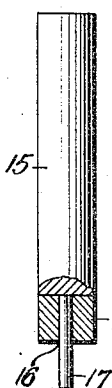


Fig. 6.

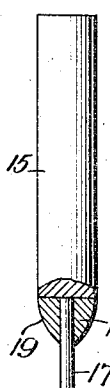


Fig. 7.

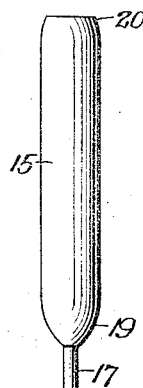


Fig. 8.

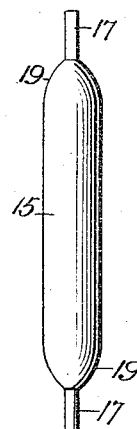


Fig. 9.

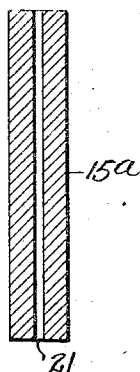
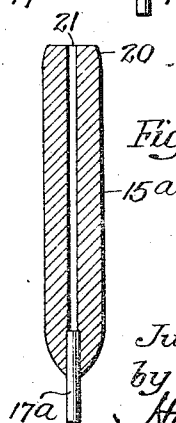


Fig. 10.



Witnesses—

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UNITED STATES PATENT OFFICE.

JULIUS JETTER, OF CAMDEN, NEW JERSEY.

NEEDLE-HOLDER FOR TALKING-MACHINES.

1,034,387.

Specification of Letters Patent.

Patented July 30, 1912.

Original application filed December 16, 1908, Serial No. 467,821. Divided and this application filed May 5, 1911. Serial No. 625,227.

To all whom it may concern:

Be it known that I, JULIUS JETTER, a citizen of the United States, and a resident of Camden, Camden county, New Jersey, have invented certain Improvements in Needle-Holders for Talking-Machines, (being a division of my application for patent for a needle for sound recording and reproducing machines, filed December 16, 1908, Serial No. 467,821,) of which the following is a specification.

My invention relates to machines of the character known as "talking machines", more particularly those employing disk records; and the object of my invention is to provide a multiple needle holder which may be mounted upon a suitable supporting arm whereby attachment may be made to the recording or reproducing element of the talking machine.

The needles ordinarily employed when reproducing talking machine records wear out very rapidly, and it is the present practice to supply a fresh needle for every record. Attempts have been made to produce a needle capable of use for a number of records, but they have not proved very satisfactory, and in general the high cost of production has usually prevented their adoption.

The multiple structure forming the subject of my invention is rotatable and operates in such a way as to permit the needles carried thereby to be used consecutively and afterward removed at one time and others set in their places, and it may be made of any suitable material, preferably metal.

These and other features of my invention are more fully referred to hereinafter, reference being had to the accompanying drawings, in which:

Figure 1 is an elevation of a multiple needle holder embodying my invention; Fig. 2, is a side elevation of the same, partly in section, on the line *a-a*, and Figs. 3, 4, 5, 6, 7, 8, 9 and 10, are views illustrating forms of needles which may be mounted for use in the structure embodying my invention shown in Figs. 1 and 2.

My invention comprises certain improvements in needles, and in carriers therefor adapted to receive a plurality of needles, which needles may be of the usual type now employed in the reproduction of talking

machine records, or they may be of the special type forming part of my invention.

In Figs. 1 and 2, of the drawings, 1 represents a circular duplex member internally grooved so as to present a series of openings 2 in its periphery or rim into which needles 3 may be placed and retained by any suitable means, such as a screw 4, which also serves to secure the holder to the sound-box. This holder is held to the sound-box 5 at the usual point in line with the arm 6 connected to the diaphragm 7, with the points of the needles preferably in the same plane as the diaphragm. To maintain the holder in the position of use with any desired needle in position for engagement with a record, the face of the holder may be recessed at the points 8 in line with the needles carried thereby, and a spring finger 9 supported by the sound-box 5 may be provided, having an end 10 arranged to rest in said recesses. By these or any other suitable means any needle point when brought to the position of use by turning the holder may be firmly held in such position for proper engagement and coaction with a record.

Any ordinary needle used for reproduction in connection with disk records may be employed with or carried by my improved holder. I may also employ a special needle forming part of my invention.

In Figs. 3 to 8, both inclusive, 15 represents a section of wire, preferably of iron or soft steel. This wire may be notched or slotted at 16 by any suitable means, and in this slot I place a short section of hard wire, preferably piano wire, of a suitable gage; care being taken that the slot formed shall just be large enough to receive the wire. The hard wire is preferably centered in the slotted end of its carrier, and is preferably held with solder, as indicated at 18. After this has been done, the end of the wire carrier may be beveled at 19 in the form of the usual needles, and the opposite end of the carrier will also be slightly beveled, as indicated at 20, so as to readily fit into the holder of a sound-box, or the multiple holder shown in Figs. 1 and 2. When the compound needle is finished in the desired manner, the whole may be nicked or silvered so as to provide a coating that will cover the soldered joint and

the slot or notch into which the hardened point has been fitted. In Fig. 8, I have shown a double pointed needle made in precisely the same way as the single pointed needle.

In lieu of slotting or notching the ends of a short section of wire to form a carrier, I may take a tubular or hollow wire section 15^a, for instance, and form a carrier therefrom as shown in Figs. 9 and 10; insert a section 17^a of hardened wire in the opening 21 of said tube, and then secure said wire in place. This may be done by compressing the tube around the wire, as indicated. Finished needles or styli thus made present the appearance of ordinary one-piece needles, and are capable of considerable use; individual samples produced by me having been used with more than two hundred records.

By having a multiple holder such as proposed containing a half-dozen or more needles, means are provided for taking care of a very large number of records without renewal.

I claim:

1. A needle element for sound recording and reproducing machines comprising a plurality of disks revolubly mounted upon a central axis, removable needles adapted to be confined radially between said disks, and means for securing said disks together.

2. A needle element for sound recording and reproducing machines comprising a plurality of disks revolubly mounted upon a central axis, removable needles adapted to be confined radially between said disks, and means for preventing movement of said element when a needle carried thereby is in engagement with a record.

3. A needle element for sound recording and reproducing machines comprising a plurality of disks revolubly mounted upon a central axis, the meeting face of one of said disks being grooved, removable needles adapted to be confined radially between said disks and fitting said grooves, and means for securing said disks together.

4. A needle element for sound recording and reproducing machines comprising a plurality of disks mounted upon a central axis, the meeting faces of said disks being grooved, removable needles adapted to be confined between said disks and fitting the grooves of the same, and means for securing said disks together.

5. A device of the class recited, comprising a fixed support, a rotatable disk-like

member equipped with a plurality of radially disposed detachable needles, means for clamping said needles with respect to the said member, and means for preventing movement of said member when a needle carried thereby is in engagement with a record.

6. A device of the class recited, comprising a fixed support, a disk-like member provided with a plurality of radially extending grooves mounted with respect to said support, needles for said grooves, means for clamping said needles within said grooves, and means for preventing movement of said member when a needle carried thereby is in engagement with a record.

7. A device of the class recited, comprising a fixed support, a disk-like member provided with a plurality of radially disposed grooves rotatably mounted with respect to said support, a needle within each groove, a removable plate for preventing the escape of the needles, means for clamping the plate in place, and means for preventing movement of said member when a needle carried thereby is in engagement with a record.

8. A device of the class recited comprising a fixed support, a rotatable disk-like member equipped with a plurality of radially disposed detachable needles, means for clamping said needles with respect to the said member and means for preventing retrograde movement of said member.

9. A device of the class recited comprising a fixed support, a disk-like member provided with a plurality of radially extending grooves rotatably mounted with respect to said support, needles for said grooves, means for clamping said needles within said grooves, and means for preventing retrograde movement of said member.

10. A device of the class recited comprising a fixed support, a disk-like member provided with a plurality of radially disposed grooves rotatably mounted with respect to said support a needle within each groove, a removable plate for preventing the escape of the needles, means for clamping the plate to place and means for preventing retrograde movement of said member.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JULIUS JETTER.

Witnesses:

MURRAY C. BOYER,
WM. A. BARR.