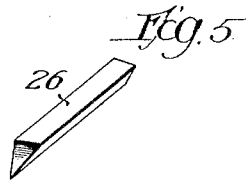
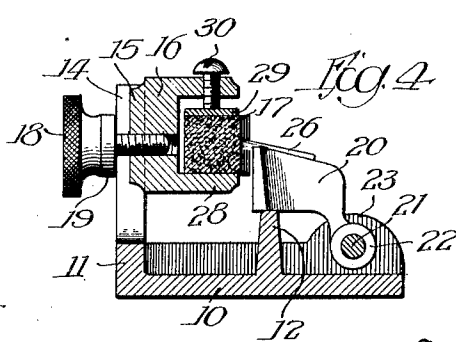
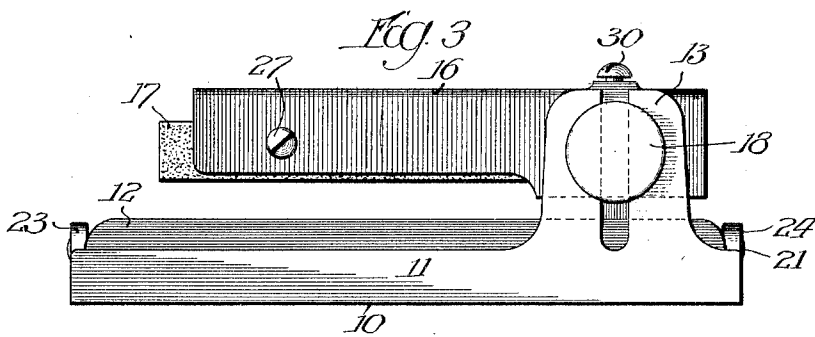
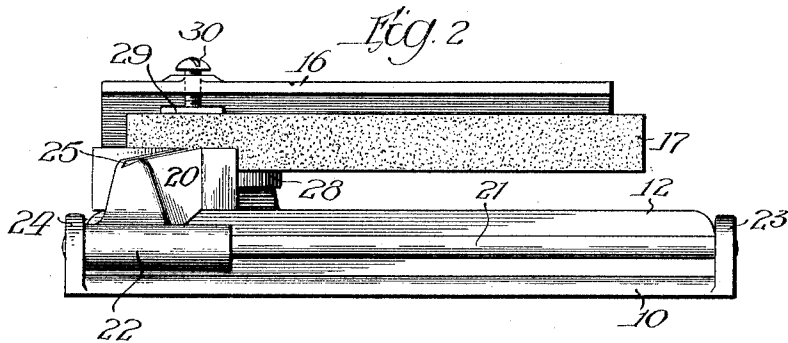
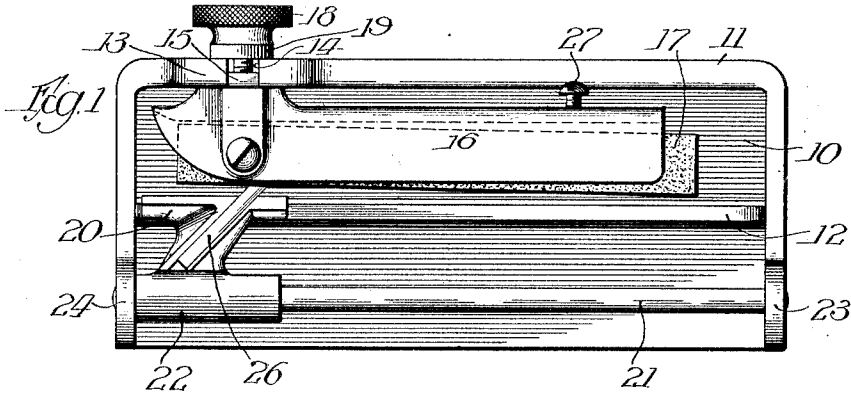


E. P. CHANEY.
SHARPENER FOR TALKING MACHINE NEEDLES.
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Patented Nov. 28, 1911.



Witnesses
Geo. C. Davison.
C. L. Hopkins.

Inventor:
Edward P. Chaney,
by Linthicum, Belt & Fuller.
Attys

UNITED STATES PATENT OFFICE.

EDWARD P. CHANEY, OF MOLINE, ILLINOIS.

SHARPENER FOR TALKING-MACHINE NEEDLES.

1,009,894.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD P. CHANEY, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Sharpeners for Talking-Machine Needles, of which the following is a specification.

The use of fiber needles in the reproduction of sound by means of talking machines is becoming common, and is attended by certain advantages, but a serious disadvantage is the necessity of frequently re-sharpening the needles. These needles are usually made of strips of bamboo fiber or similar material, triangular in cross-sectional form, with the end of the needle cut on an incline so as to form a point. In use this point engages the moving record disk or cylinder.

It is the object of my invention to provide a device by the use of which a satisfactory point may be quickly formed on a fiber talking machine needle with ease and certainty. This object I accomplish by providing an abrading member and a member in which the needle is held with its end directed toward the face of the abrading member at an angle with such face. The abrading member and needle holder are arranged to be reciprocated past each other with an increasing pressure between the needle and the abrading device as the needle travels along the surface of the abrading device in the direction which causes the point to be in advance of the rest of the needle. Preferably the abrading device will be the stationary member and the needle holder the relatively movable member, this holder thus becoming a carrier for the needle.

In the accompanying drawings I have illustrated a satisfactory embodiment of my invention.

In these drawings Figure 1 is a plan view of the device; Fig. 2 is a front elevational view of the same; Fig. 3 is a rear elevational view; Fig. 4 shows a cross-section taken through the device slightly to the left of the adjusting screw for the abrading device, as seen in Fig. 1, the needle carrier being shown in elevation, and Fig. 5 is a perspective view of a sharpened needle.

In the several figures of the drawings 10 is the base of the machine, from which rises a wall 11 which extends around three edges of the base. A partition wall 12 extends longitudinally of the base and pro-

vides, with the wall 11, a chamber or pocket into which falls the material which is ground off the end of the needle. An ear 13 extends upward from the wall 11 and is provided with a vertically extending notch 14 which receives a lug 15 formed on the member 16 which carries the abrading member 17. The latter may consist of a file or a bar of carborundum, preferably the latter. The holder for the abrading device is provided with a clamping screw 18 which extends through the notch 14 into the holder 16 and is formed with a collar 19 which, when the clamping screw is tightened, engages the ear 13 and clamps the holder 16 against vertical movement. The lug 15 guides the holder 16 in its movement when being adjusted vertically, so that the abrading device is always held in longitudinal alinement with the direction of movement of the needle holder. This needle holder is designated 20 and is supported upon a rod 21 and the upper edge of the wall 12. To prevent the needle holder 20 from becoming separated from the rest of the machine the same may be provided with a sleeve 22 through which passes rod 21. This rod is supported at its ends in ears 23, 24 which extend upward from the wall 11.

The upper surface of the needle carrier 20 is formed with a groove 25 which is formed to receive the needle 26 and prevent the latter from turning over. During the operation of sharpening the point of the needle, the carrier 20, with the needle 26 in place therein, is moved from its left hand position or the position in which it is shown in Fig. 1, toward the right until the carrier engages the wall 11 at the right hand end of the machine.

The holder for the abrading device is provided with suitable means, such as the screw 27, for adjusting the right hand end of the abrading device 17 toward and away from the path of travel of the needle holder. By turning the screw 27 in, the right hand end of the abrading device 17 may be moved toward the path of the needle holder. It will be seen that when the device is thus adjusted, if the needle be placed in the needle carrier with its point in contact with the abrading device when the carrier is at its extreme left hand position, and the carrier be then moved to the right, the pressure exerted upon the end of the needle by the abrading device will increase as the carrier travels from one end of the machine to the other.

In practice the needle is held in place in the groove of the carrier by the finger of the person using the machine. The needle is thus permitted to recede or slide back in the carrier if the angle between the surface of the abrading device and the path of travel of the needle holder is excessive. If this angle be properly adjusted, the end of the needle will be ground off just sufficient, when the carrier reaches the limit of its travel, so that the needle is properly pointed. Preferably the abrading device, which ordinarily will consist of a bar of carborundum, as above stated, will be rectangular in cross-sectional form so that all four sides may be used. To hold the abrading bar in place in the holder 16, the latter is provided with a wing 28 which extends below the abrading bar and upon which the latter rests. Upon the upper side of this bar there is laid a flat plate 29 upon which bears the end of a clamping screw 30, by means of which the abrading device is securely held in position.

25 I claim:

1. In a sharpener for talking machine needles, the combination with an abrading device and a holder for the needle arranged to be reciprocated at an angle with respect to each other, whereby the pressure of the abrading device on the end of the needle is varied.

2. In a sharpener for talking machine needles, the combination of an abrading device, a carrier for the needle, and means for guiding said carrier and permitting the same to be reciprocated along the face of the abrading device, the face of said abrading device being inclined to the path of travel of said carrier.

3. A sharpener for talking machine needles comprising an abrading device, a reciprocating carrier for the needle, and means for supporting said abrading device, said means permitting adjustment of said abrading device transversely of the path of said carrier.

4. A sharpener for talking machine needles comprising an abrading device, a holder for the abrading device, a reciprocating carrier for the needle arranged to present the

needle to said abrading device with its end engaging the latter at an acute angle, guides for determining the path of movement of said needle carrier, and means for adjusting the position of said abrading device in its holder with respect to said guides.

5. A sharpener for talking machine needles comprising an abrading device, a reciprocating carrier for the needle arranged to present the needle to the abrading device at an acute angle, and means for supporting said abrading device at an angle with the path of said carrier, said supporting means permitting adjustment of the angle between the abrading device and the carrier.

6. A sharpener for talking machine needles comprising a base, a guide carried by said base, a needle carrier arranged to travel along said guide, a bar of abrading material, a holder for said bar, locking means for adjustably securing said holder in position, and means carried by said holder for adjusting said bar of abrading material in said holder to vary the angle between the face of said bar and the path of said needle holder as determined by said guide.

7. A sharpener for talking machine needles comprising a base, a bar of abrading material supported by said base, a reciprocating carrier, and means for guiding said carrier in a path inclined to said bar, said carrier having a groove to receive the needle, said groove being inclined to the path of said carrier.

8. A sharpener for talking machine needles comprising a base having a portion extending therefrom, a holder, a clamping screw for securing said holder on said portion, a bar of abrading material, means for clamping one end of said bar in said holder, a screw carried by said holder for adjusting the position of the opposite end of said bar, and a reciprocating carrier having a groove to receive the needle, said groove extending at an acute angle with the path of the carrier.

EDWARD P. CHANEY.

Witnesses:

M. N. JOHNSON,

A. C. WOODYATT.