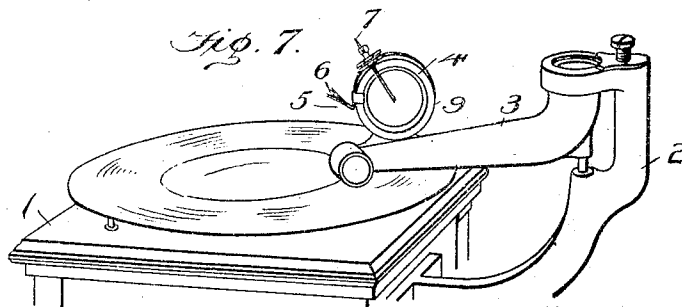
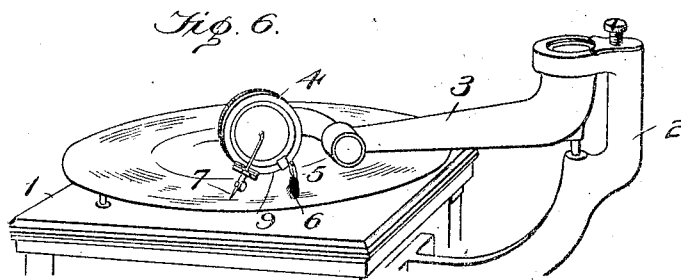
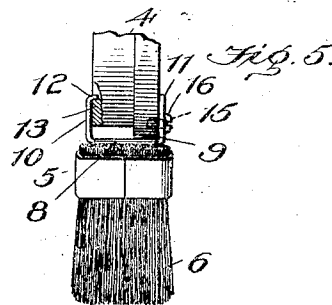
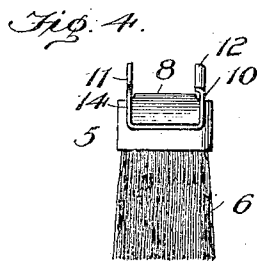
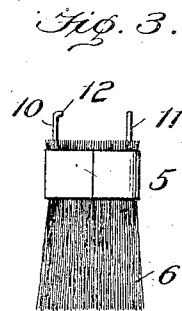
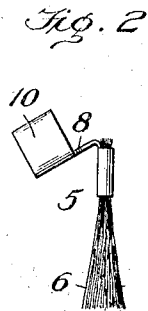
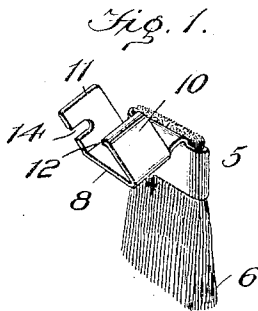


No. 865,674.

PATENTED SEPT. 10, 1907.

J. N. BLACKMAN.
CLEANING ATTACHMENT FOR SOUND RECORDS.
APPLICATION FILED AUG. 22, 1906.



Witnesses

Edwin L. Bradford
H. H. Byrne

Inventor

Joseph Newcomb Blackman

By Meyers, Cushman & Rea
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH NEWCOMB BLACKMAN, OF EAST ORANGE, NEW JERSEY.

CLEANING ATTACHMENT FOR SOUND-RECORDS.

No. 865,674.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed August 22, 1906. Serial No. 331,578.

To all whom it may concern:

Be it known that JOSEPH NEWCOMB BLACKMAN, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, has invented new and useful Improvements in Cleaning Attachments for Records of Sound-Reproducing Instruments, of which the following is a specification.

My invention relates to means for cleaning the records of sound-reproducing instruments, such as phonographs, graphophones, and the like, and is more especially adapted for disk-record machines.

It has for its purpose to provide a cleaning-implement adapted to this type of instrument, having means whereby it may be easily assembled in operative relation to the record-disk and removed therefrom when desired. In the practical use of such disk-record, sound-reproducing instruments objection exists that the reproduction is clouded; that is, it is not as clear and distinct as it should be, and this difficulty arises because of the fact that the sound grooves are not perfectly clean, small dust particles collecting therein. Very slight particles of dust in the grooves detract materially from the clearness of the sound reproduction, and so far as I am aware this difficulty has never heretofore been taken care of in disk-record instruments.

My invention consists in a cleaner adapted to be supported in operative relation to the record disk, as hereinafter described.

That which I regard as new will be set forth in the clauses of claim appended to the description.

In the accompanying drawing illustrating that which I regard as the best known embodiment my invention—Figure 1 is a perspective view of the cleaning implement; Fig. 2 a side elevation thereof; Fig. 3 a front elevation thereof; Fig. 4 a rear elevation; Fig. 5 illustrates the same connected to the sound-box of the instrument; Fig. 6 a perspective of a disk-record, sound reproducing apparatus with the cleaning-implement in operative relation to the record; and Fig. 7 a similar view showing the sound-box and the cleaning-implement attached thereto shifted to inoperative position.

In said drawing the reference numeral 1 designates the record-support; 2 a standard in which is mounted the swinging sound-box carrier-arm 3, which is adapted to be swung over the disk-record to support the sound-box and the needle carried thereby in operative relation to the disk-record when the instrument is in use, and to be swung away therefrom to permit the insertion and removal of records. The sound-box 4 has a pivotal connection with the supporter-arm 3 whereby it may be swung to the position shown in Fig. 7 prior

to swinging the supporter-arm away to permit the introduction or removal of a record, so that in the swinging movement the needle will not traverse the record and whereby it may be swung down to the position shown in Fig. 6 when the instrument is in operation.

Supported by the sound-box is the cleaning instrument 5 which, preferably, consists of a camel-hair brush 6, provided with means of attachment to the sound-box, although the actual material of the cleaner may be various, such as felt or other suitable material. As shown, the cleaning-implement is attached to the sound-box and moves in sweeping contact with the record disk in advance of the reproducing needle 7 and serves to effectually clean out the sound grooves so that the needle has perfect contact and a clear and distinct sound reproduction is secured.

The cleaning brush or implement is provided, as stated, with means whereby it may be secured in operative position to the sound-box. This means, as shown, consists of a base-member 8 extending laterally from the top of the brush to bear against the circumferential face 9 of the rim of the sound-box and arms 10, 11 at the opposite ends of the base-member which embrace the sound-box rim, one of which arms is provided with an inwardly turned finger 12 to take over the annular flange 13 of the rim, and the other arm is provided with a recess 14 to take over the stem of one of the screws 15 which pass through the sound-box and the head 16 of which, when screwed home, engages the said arm 11, thus confining the cleaning-implement securely in place.

The device may be readily attached by simply loosening-up the screw 15 and fitting the intumed end 12 of the arm 10 over the annular rim-flange 13 of the sound-box and then slipping the slot in the arm 11 over the screw 15 and turning the screw home. For removal the operation described is reversed.

It will thus be seen that the cleaning-implement is provided with a very simple means whereby it may be connected to the sound-box in operative relation to the disk-record.

The cleaning-implement of my invention serves to thoroughly clean the grooves and a clear and distinct reproduction is secured. The device is a simple one and easily attachable and detachable.

Having thus described the invention, what I claim is—

1. In a sound-reproducing instrument, a cleaning-implement comprising cleaning-material and attaching means consisting of arms adapted to embrace the sound-box, one of such arms having an intumed end and the other a slot.

2. In a sound reproducing instrument, a cleaning-implement comprising cleaning-material and attaching means consisting of arms adapted to embrace the sound-box, one of such arms having an intumed end and the other a slot; and a base extending between said arms and adapted to bear against the sound-box.
3. A cleaning-implement for the records of sound-reproducing instruments comprising cleaning-material and attaching means consisting of arms adapted to embrace the

sound-box, one of such arms having an intumed end and the other a slot, and a base extending between said arms and adapted to bear against the sound-box.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH NEWCOMB BLACKMAN.

Witnesses:

R. B. CALDWELL,
FRANK ROBERTS.