June 22, 1943. J. J. ROJAS 2,322,470

ROTARY BRUSH

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Fig. 1.

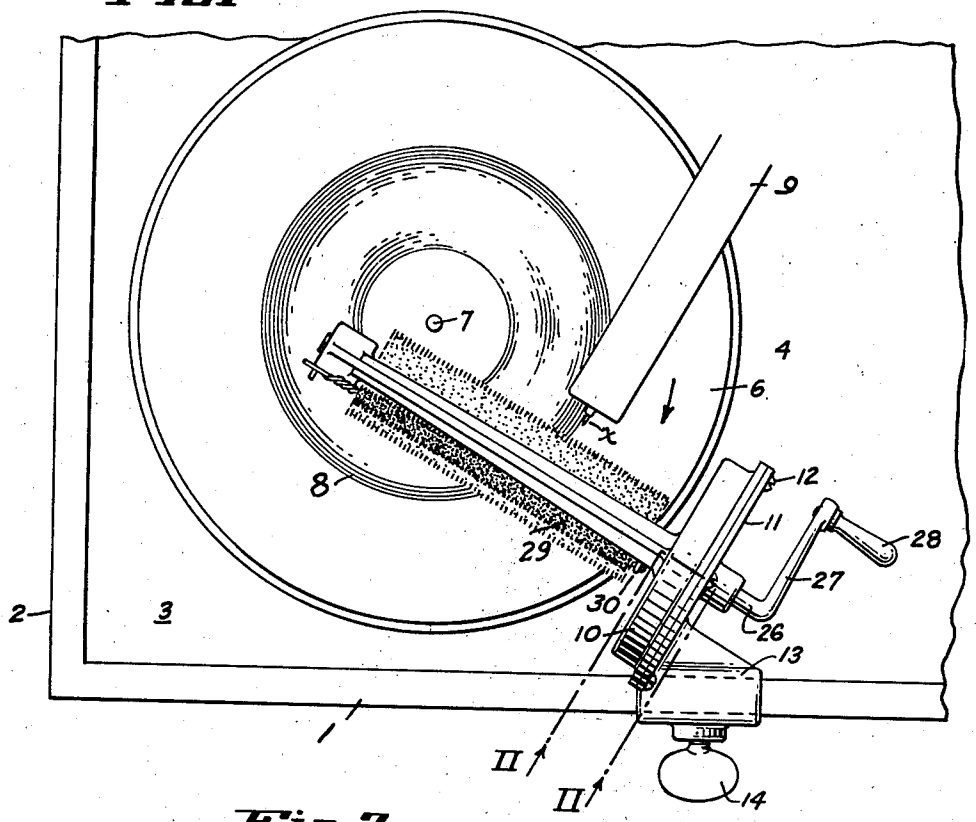
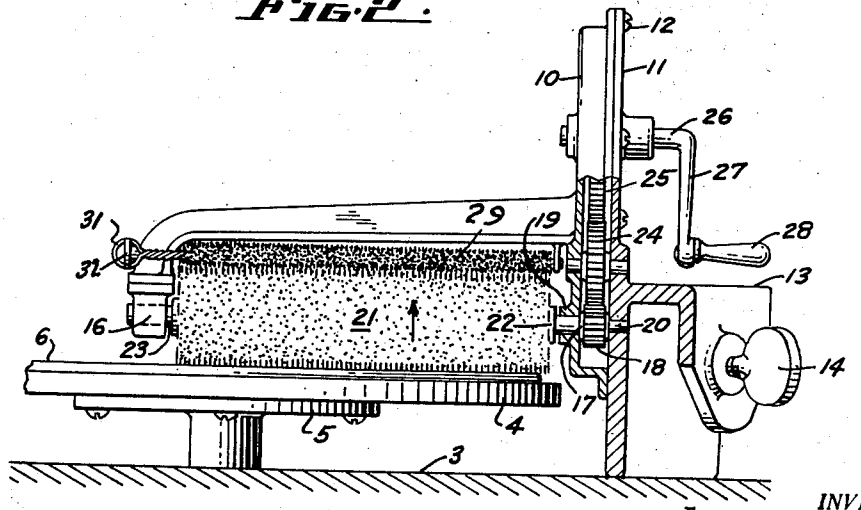


Fig. 2.



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ROTARY BRUSH

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1 Claim. (Cl. 274—47)

This invention relates to improvements in rotary brushes and more particularly to brushes for electrical transcription machines.

Among the objects of the invention is the provision of means for sweeping the face of the wax record free of the hairlike shavings cut by the recording stylus.

Another object is to so design and construct the accessory that it may be attached to the conventional recording machine without interfering with its normal functions.

A further object is the provision of simple means for accumulating and disposing of the shavings while clearing the rotary sweeping brush for more efficient contact with the wax record.

Other objects and advantages will appear as the description progresses.

In this specification and the accompanying drawing the invention is disclosed in its preferred form. But it is to be understood that it is not limited to this form, because it may be embodied in modifications within the spirit of the invention as defined in the claim following the description.

In the one sheet of drawings:

Fig. 1 is a plan view from above of a rotary record sweeping brush constructed and applied in accordance with this invention.

Fig. 2 is a front elevation of the same, partially broken away in vertical section on the line II—II, Fig. 1.

In detail the construction illustrated in the drawing, referring first to Fig. 1, comprises the usual cabinet having the front wall 1, the side wall 2, and the platform 3, set below the top edges of the enclosing walls. The turntable 4 is supported on the head 5 fixed upon the upper end of the vertical drive shaft of the motor means, not shown, see Fig. 2. The wax record disc 6 rests upon and is driven by the turntable and centered on the peg 7. The recording mechanism having a stylus X adapted to cut the record spiral 8 on the disc, is carried in the end of the swing arm 9 that is pivoted on the platform 3, so that the angle of the arm 9 is tangential to the curve of the record 8, see Fig. 1.

Generally speaking the above description covers the conventional form of recording apparatus. The filamentary shaving cut by the stylus flows upward and laterally to the stylus and is carried around by the revolving disc 6. Unless removed this shaving accumulates in hair-like bunches ahead of the stylus and interferes with its finer accuracy in recording the sound impulses impressed upon it. Heretofore it has been the practice to remove the shavings by occasional manual use of a dust brush or wad of cotton or the like.

It is the object of the present invention to provide mechanical means for constantly removing the shaving as fast as it is formed by the stylus. So that a clean top surface of the disc is at all times presented to the stylus, without any retarding or intermittent pressure against the disc.

The structure of the invention is fully disclosed in Fig. 2, and comprises the gear case 10 having the cover 11 attached thereto by the screws 12 threaded into a flange on the gearcase. The gearcase and cover form a standard for supporting the brush mechanism. The cover is provided with the angular clamp 13 adapted to straddle down over the top edge of the front wall 1. The clamp screw 14 is threaded in this clamp and adapted to engage the face of the front wall, to rigidly hold the gearcase in definite relation to the plane of movement of the turntable. The gearcase has the arm 15 extending outward over the turntable at an angle oblique to the diameter thereof, and slightly beyond the center peg 7.

The outer end of this arm has the removable bearing 16 attached thereto, in alinement with the axis of the hub 17 of the pinion 18 journaled in the bearing 19 on the gearcase. This pinion has the trunnion 20 journaled in a bearing, on the cover 11.

The rotary brush 21 has relatively long bristles confined in a central twisted wire axis structure, the inner end of which is fixed in a squared sleeve 22 that engages within the hub 17. The opposite end has the trunnion sleeve 23 journaled in the bearing 16.

The pinion 18 meshes with the intermediate gear 24, driven by the mastergear 25, all of which have transverse shafts journaled in the enclosing gearcase 10 and cover 11, respectively. The master gear is fixed on the shaft 26 of the crank 27 that has the swiveled handle 28 for manually rotating the master gear and the train of gears driven thereby.

The circular scavenging brush 29 is preferably constructed in the conventional manner of securing the bristles in a twisted wire stem. The inner end of this stem engages the bracket 30 on the gear case, see Fig. 1. The other end has the loop 31 forced over the lug 32 on the end of the arm 15 to prevent the brush 29 rotating. The periphery of the stationary brush 29 bears against the periphery of the rotary brush 21.

This invention operates substantially as follows: The turntable, the disc 6, the crank 27, and the brush 21 all rotate clockwise. The gear ratio between the crank 27 and the brush 21 is such that the brush can be driven much faster than the travel of the disc 6 to insure the removal of all shavings from the disc during the recording period. Since the operator has little else to do during the recording, manual turning of the crank 27 is preferable to motorizing, with attendant vibration and noises that might be impressed on the recording mechanism.

When the recording is completed the clamp 14 is released and the brush assembly lifted off or slid along the top of the front wall 1, out of operative position. The shavings picked up by the brush 21 are transferred to the scavenging brush 29 which can be easily removed and shaken free of the accumulated shavings.

Having thus described this invention what is claimed and desired to secure by Letters Patent is:

A disc sweeper for recording machines, comprising a clamp adapted to engage the cabinet of the recording machine and having an arm extending laterally therefrom above the plane of said disc and having a bracket and a lug thereon; manual brush driving means on said clamp; a rotary brush journaled on said arm in contact with said disc and detachably engaging said driving means; a scavenging brush in contact with said rotary brush and detachably mounted on said bracket and lug.

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