

Aug. 21, 1923.

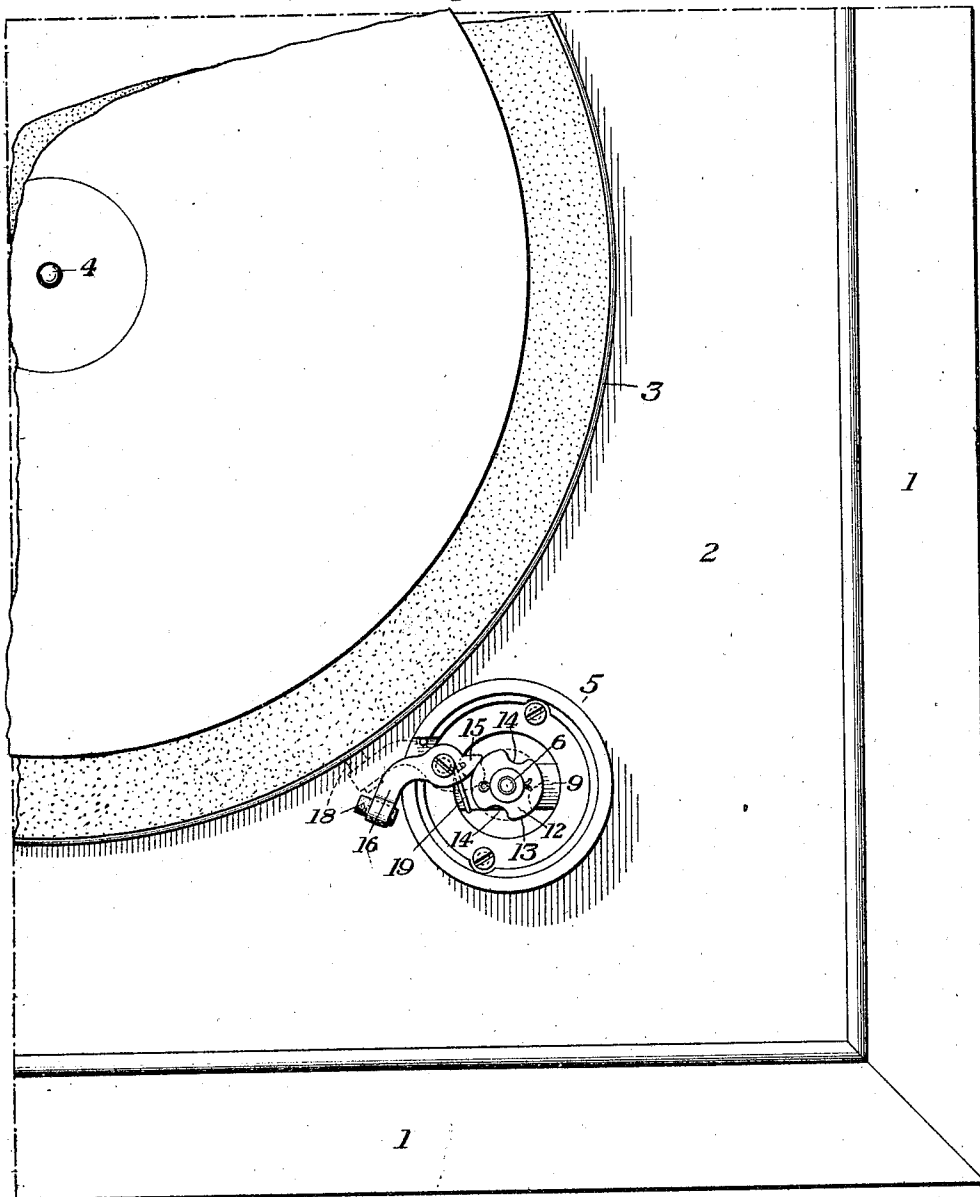
H. N. STROH

PHONOGRAPH

Filed March 5, 1920

2 Sheets-Sheet 1

Fig. 1.



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1,465,880

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Fig. 2.

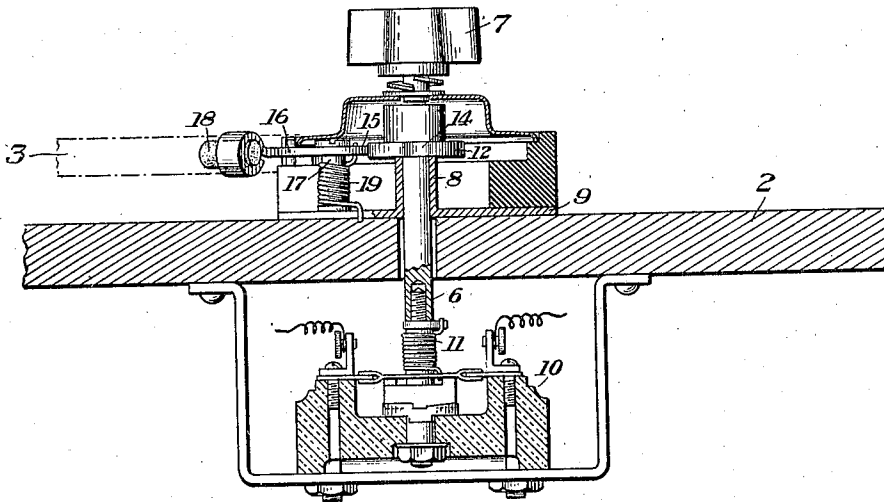


Fig. 3.

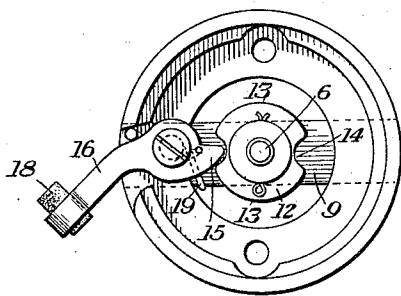


Fig. 4.

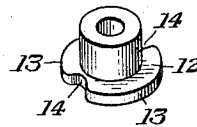
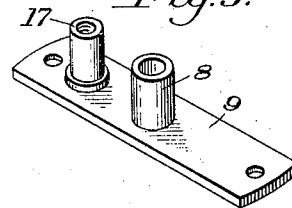


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY N. STROH, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JAMES D. CALLERY AND ONE-HALF TO SAMUEL A. PICKERING, BOTH OF PITTSBURGH, PENNSYLVANIA.

PHONOGRAPH.

Application filed March 5, 1920. Serial No. 363,473.

To all whom it may concern:

Be it known that I, HENRY N. STROH, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Phonographs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view showing one corner of the top of a phonograph.

Figure 2 is a vertical section through the top board of a phonograph showing the electric switch and brake.

Figure 3 is a plan view showing the brake actuating mechanism of the switch.

Figure 4 is a fragmentary view showing the cam on the switch spindle which operates the brake arm, and

Figure 5 is a detail view showing the plate which supports the switch spindle and brake arm bearing.

The present invention relates to phonographs, and more particularly to a combined electric switch and brake therefor.

The present invention is shown in connection with a phonograph of the general type shown in the patent to Russ and Russ, No. 1,259,561 of March 19, 1918, in which the turn table or record carrier is driven by a motor built into the phonograph.

The object of the invention is to provide a mechanism for bringing the turn table to rest immediately upon the switching off of the electric motor current.

Referring to the illustrated embodiment of the invention, reference numeral 1 indicates the phonograph casing having the usual top board 2 above which is carried the turn table 3. The turn table 3 is carried on a rotary spindle 4, which is driven by means of an electric motor concealed below the top board 2, substantially as shown in the Russ and Russ patent. Mounted on the top board 2 in proximity to the edge of the turn table 3, is a combined electric switch and brake, indicated generally by reference numeral 5. The details of its structure are shown in Figures 2 to 5. The combined switch and brake comprise a spindle 6 provided with a handle 7. The spindle 6 is carried in a bearing 8 on a supporting plate 9,

which is screwed to the top board 2 of the phonograph. The lower end of the spindle 6 carries an electric switch 10 of the usual construction, provided with the usual snap spring 11. The upper end of the spindle 6 carries a cam 12 having elevated portions 13 and depressions 14. This cam 12 operates with a projection 15 carried on an arm 16, which is mounted on a bearing 17. The outer end of the arm 16 carries a plug 18 of felt or other material, which, when brought against the edge of the turn table 3, serves as a brake. A spring 19 acts on the arm 16 and tends to turn the friction plug 18 against the edge of the phonograph disk.

When the parts are in the position shown in Figure 3, the electric switch is open and the lug 15 fits into the cam depression 14 and the brake 18 is applied by means of a spring 19. When the phonograph is to be run, the switch is given the usual ninety degrees rotation bringing the parts into the position shown in Figure 1 wherein the projection 15 of the brake arm rides onto the elevated portion 13 of the cam, so that the brake is released and then the current to the motor is turned on. As soon, however, as the switch spindle 6 is given another quarter turn to switch off the motor, the lug 15 of the brake arm falls into the other cam depression 14 and the brake is applied and the turn table immediately brought to rest.

The combined switch and brake insures the stopping of the turn table immediately upon the switching off of the current and thus prevents any accident due to the slipping off of a record or the continued motion of the needle after the current is turned off. Moreover, in alternately driven phonographs there is some tendency for the vibration of the moving parts to be conducted to the phonograph casing and it is of advantage to have the moving parts stopped immediately upon the turning off of the motor. Moreover, the brake serves as a lock to hold the turn table stationary until such time as the current is turned on to again drive the phonograph.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that the invention is not limited to its preferred embodiment but

may be embodied in other structures within the spirit and scope of the appended claims:

I claim:

- 5 1. A phonograph, comprising a record carrier, an electric motor for driving the record carrier, a snap switch for the motor having spring means for opening and closing the switch, and a spring-applied snap
10 brake operated by the switch mechanism and adapted to be applied instantaneously upon the opening of the switch to arrest the record carrier, substantially as described.
- 15 2. A phonograph, comprising a record carrier, an electric motor for driving the record carrier, a step-by-step switch for controlling the circuit to the motor, a brake for arresting the record carrier, a spring for applying the brake, and means for releasing the spring to apply the brake when
20 the switch is opened, substantially as described.
- 25 3. A phonograph, comprising a turn table, a record carrier, an electric motor for driving the turn table, a combined spring actuated motor snap switch and brake mounted adjacent the edge of the turn table and having a brake arm operated by the switch mechanism and adapted to engage the edge
30 of the turn table when the switch is opened, substantially as described.
4. A combined electric switch and brake for a phonograph, comprising a spring actuated step by step snap switch for controlling the motor for driving the moving parts
35 of a phonograph and a brake for arresting said moving parts, and means on the switch mechanism permitting the brake to be applied when the switch is opened, substantially as described.
- 40 5. A combined switch and brake for an electrically driven phonograph, comprising a rotary spindle, a switch carried on the spindle, a cam plate on the spindle, a brake arm having a part cooperating with said
45 cam plate, and a spring tending to hold the brake arm against a moving part of the phonograph, substantially as described.
- 50 6. A phonograph comprising a record carrier, an electric motor for driving the record carrier, a snap switch for the motor, a spring brake for arresting the record carrier, and means operated by the movement of the switch for permitting the instantaneous application of the brake when the
55 switch is opened, said means preventing the application of the brake in case the switch does not open, substantially as described.

In testimony whereof I have hereunto set my hand.

HENRY N. STROH.