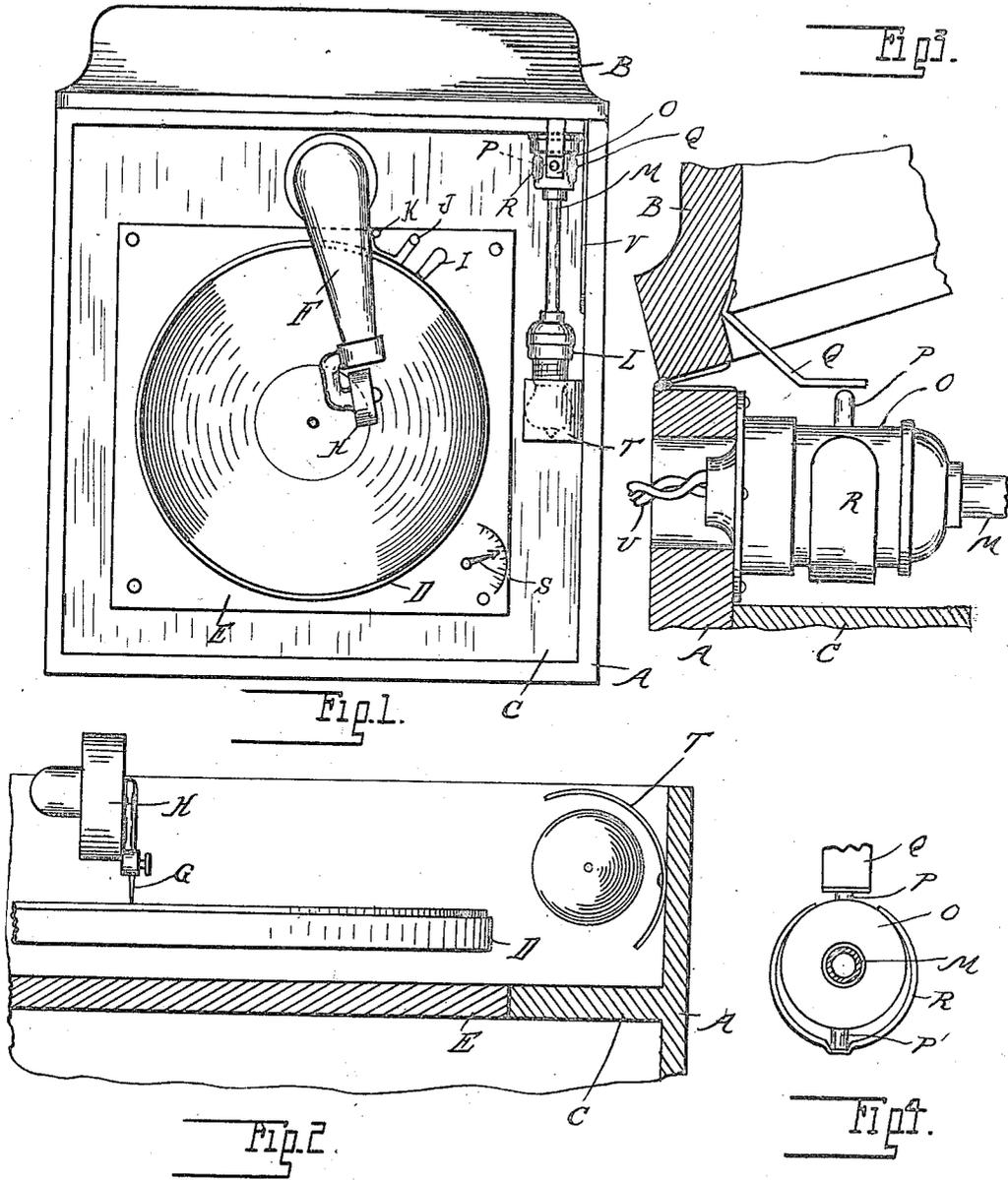


F. B. JOHNSON,
 AUTOMATIC LIGHTING ATTACHMENT FOR PHONOGRAPH CABINETS.
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UNITED STATES PATENT OFFICE.

FRANK B. JOHNSON, OF DETROIT, MICHIGAN.

AUTOMATIC LIGHTING ATTACHMENT FOR PHONOGRAPH-CABINETS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK B. JOHNSON, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Automatic Lighting Attachments for Phonograph-Cabinets, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to phonograph cabinets of that type in which the disk record is placed on a turntable within a casing having a hinged lid, said casing also containing the needle-holder, sound-box and swinging hollow arm for coöperation with the record. In the present state of the art it is usual to provide machines of this type with automatic stops which require a different setting for each individual record. It is also necessary in setting the stop to place the needle at the upper point in the record groove, and this is frequently difficult on account of the poor light. The turntable is usually mounted upon a removable board also carrying the motor, and in certain constructions this board is pivoted so that it may be reversed in position for oiling the motor. Still further these machines are usually provided with a speed adjustment which is mounted upon the same board and is provided with an index needle for setting.

It is the object of the present invention to provide an automatic light, which is turned on only when the lid is raised for the exchange of records and is cut off on the closing of the lid.

It is a further object to so construct and arrange the light and its operating mechanism as to brightly illuminate the portion of the record in which the needle is placed in setting the automatic stop; also to avoid interference with any part of the mechanism within the cabinet by the removal of the turntable and motor; and further to shield the light from the eyes of the operator and to illumine the speed regulator.

With these and other minor objects in view the invention comprises the construction as hereinafter set forth.

In the drawings: Figure 1 is a plan view of the cabinet, showing the lid in raised position; Fig. 2 is a transverse section showing the relation between the lamp and the needle and record in stop setting; Fig. 3 is a section showing the switch and connections

for automatically operating it upon the closing and opening of the lid; and Fig. 4 is a view at right angles to Fig. 3.

A is the cabinet which is provided with the usual hinged lid B and the horizontal shelf or partition C for dividing the space containing the turntable from the sound resonating box (not shown).

D is the turntable mounted upon a removable section E of the shelf C, which section also has mounted thereon the motor (not shown).

F is the hollow, swiveled arm, which conveys the sound from the needle G and diaphragm holder H to the sound box.

In the operation of this machine the arm F travels from the periphery of the record to the point of termination, which latter is at a variable distance from the center. The turntable is started by the release of the brake operated by a finger I, and is stopped by the tripping of this brake.

J is a trip which may be set in coöperation with a pin K on the arm F, so as to set the brake when said arm has reached a predetermined point in its movement.

To provide a light for the setting of this stop which will not interfere with the operating mechanism, I have arranged an electric lamp socket L at one side of the case and so as to clear the removable turntable and motor-holding board E. The electrical connections for this lamp extend to the back of the cabinet, and I preferably carry the socket upon a hollow or tubular arm M, which at its rear end is connected to an electric switch O secured to the rear wall of the cabinet. The switch is preferably of a type in which there are provided oppositely-extending pins or buttons P and P', one for closing the circuit and the other for opening the same. The circuit-opening pin is arranged at the top of the switch and is operated by an arm Q preferably a piece of spring metal secured to the hinged lid so as to press the pin as the lid is closed. To close the circuit, instead of positively actuating the switch by the movement of the lid, I preferably employ a spring R which resiliently presses against the circuit-closing pin P'. This, as shown in Fig. 4, may be formed by a segment of resilient metal embracing the switch casing O and expanded by the downward movement of the pin P' when actuated by the depression of the pin P. Thus when the pressure is relieved from

the pin P the resiliency of the spring segment will press upward the pin P' and close the electric circuit.

In addition to illuminating the automatic stop-setting mechanism, the lamp is arranged to illuminate the speed regulator S, while a shield T which partially surrounds the lamp bulb will intercept the upward directed rays so as not to shine in the eyes of the operator.

The electric circuit may be closed by suitable connections with the cabinet, preferably formed by a flexible connector cord U extending from the rear of the cabinet. The arm M which supports the lamp socket is arranged adjacent to the brace V which automatically holds the lid B in raised position, but clearance is provided so as not to in any way interfere with the operation of this brace.

What I claim as my invention is:—

1. The combination with a phonograph cabinet, of a lamp for illuminating the same, comprising a laterally-extending arm, a lamp socket mounted at the outer end of said arm, a controlling switch secured to the inner end of said arm and attached to the rear wall of the cabinet, electrical connections to said switch and lamp, extending through the rear wall of the cabinet, and a

finger secured to the hinged lid for operating said switch.

2. The combination with a phonograph cabinet, of a lamp for illuminating the same, comprising a laterally extended arm, a lamp socket mounted at the outer end of said arm, a controlling switch secured to the inner end of said arm and attached to the rear wall of the cabinet, electrical connections to said lamp and switch, and means secured to the hinged lid for operating said switch.

3. The combination with a phonograph and a cabinet containing the same, having a hinged lid, of a lamp mounted substantially midway between the front and rear walls of the cabinet to illuminate portions of the phonograph, said lamp being supported from the rear wall of the cabinet, a reflector secured to a side wall of the cabinet to direct the lamp rays to the phonograph, a switch in the cabinet for controlling said lamp, and means carried by the cover for opening and closing said switch according as the lid is lowered or raised.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK B. JOHNSON.

Witnesses:

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