PUBLISHED
MAY 25, 1943.
BY A. P. C.

M. MARZETTI
PICK-UPS AND CIRCUITS THEREFOR
Filed July 18, 1939

Serial No.
285,165

Fig. 1

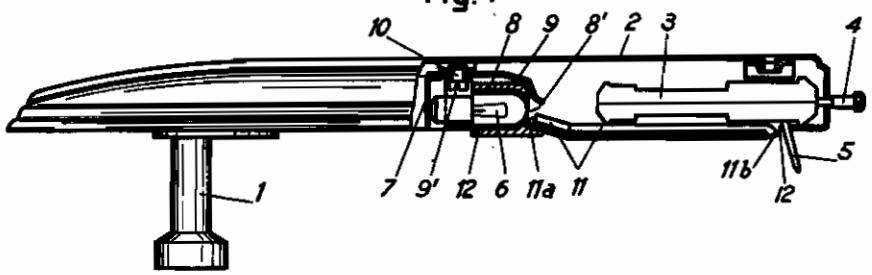
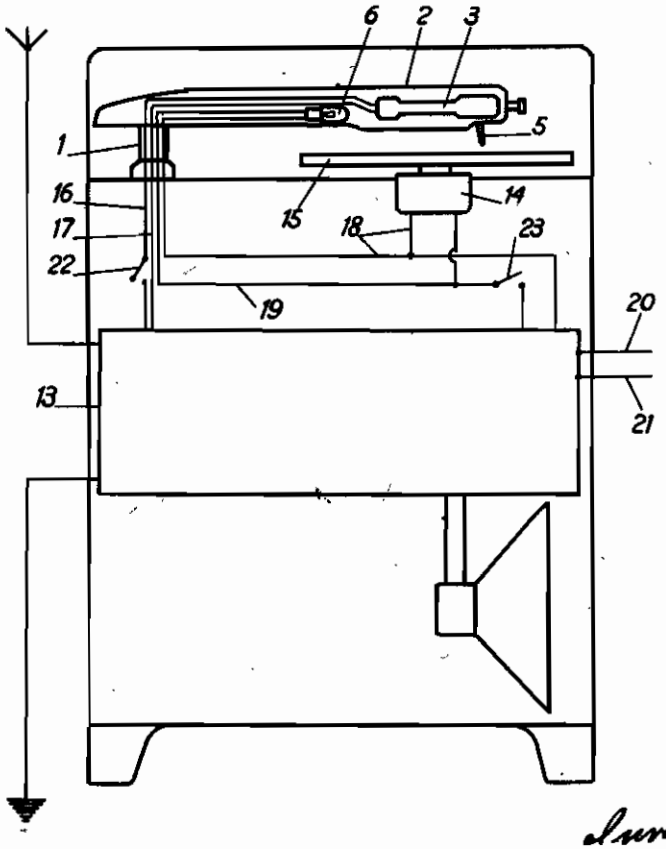


Fig. 2



Inventor:
M. Marzetti
By E. F. Woodcock
Atty

Published May 25, 1943

Serial No. 285,165

ALIEN PROPERTY CUSTODIAN

PICK-UPS AND CIRCUITS THEREFOR

Manlio Marzetti, Milan, Italy; vested in the Alien Property Custodian

Application filed July 18, 1939

This invention relates to pick-ups for talking machines which are provided with a source of light enclosed within them for illuminating the region around the pick-up needle and has for its object a pick-up of the above stated class having means adapted to illuminate said needle in connection with pick-ups in which due to their organisation the light source cannot be located in the pick-up casing at proximity to the needle or, generally, in conditions for direct illumination of the needle.

This invention also discloses an embodiment of the circuit for the supply of electric current to the pick-up light source.

On the annexed drawing:

Figure 1 shows a pick-up having needle illuminating means in accordance with this invention said pick-up being shown partly in section;

Fig. 2 is a diagram showing the connections according to this invention for the cooperation of a pick-up with a radio-receiver set and with power supply means.

In Figure 1, 1 denotes a stand on which a pick up 2 is mounted to rotate around said stand and to oscillate about an axis perpendicular to the same stand, to scan a rotating sound record not shown.

The pick-up transducer intended to convert the needle vibrations into variations of electric voltage is shown at 3 and is provided with a set screw 4 to clamp therein a scanning needle 5 which is intended to be fast in the pick-up transducer 3 to extend therefrom, to engage and scan a sound record.

The light source 6 is located within the casing 2 of the pick-up at a distance from the needle 5 which depends upon the longitudinal extent of the transducer 3; said source consists of an electric lamp or bulb 6 which is suitably supported and inserted in a supply circuit including a current source not shown having one terminal connected with a contact spring 7 by a lead extending through the stand 1 and the arm casing 2, said supply circuit being assumed to close through earth.

The bulb 6 is encircled by a light impervious sleeve 8 having a front mouth 8' which opens towards the pick-up needle 5; the sleeve 8 and the bulb 6 are held in position in the casing 2 by means of a spring 9 which is fast therein by a set screw 10 and provides a clip 9' embracing and supporting the base of the bulb 6.

A glass rod 11 extends intermediate the mouth 8' of the sleeve 8 and the bottom orifice 12 of the pick-up casing 2 through which the needle is intended to extend; said rod 11 has such a transverse or cross section shape and a longitudinal configuration as to surround the pick-up parts, as the transducer 3, which are positioned intermediate the light source 6 and the region to be illuminated thereby.

A transverse end face 11*a* of said rod 11 is located opposite the light source 6 while the other end transverse face 11*b* of said rod is located in front of the needle 5 that is of the region to be illuminated.

It is useful that the face 11*b* of the glass rod 11 opposite the region to be illuminated is ground so as to provide for a more even and uniform diffusion of the light in the region to be illuminated.

By the described arrangement, as an effect of a well known phenomenon occurring in the light propagation through elongated translucent bodies, the light emanating from the light source 6 and falling on the face 11*a* of the rod 11 flows along said rod 11 and issues from its opposite end face 11*b* in conditions proper for illuminating the desired region.

It is thus possible to illuminate the region of the needle 5 in pick-ups wherein the light source must forcibly be located at a material distance with respect to the region to be illuminated and obstructions exist to a direct projection of light from said source to the region to be illuminated.

In the embodiment of a light source of the described class in pick-ups belonging to talking machines combined with radio-receivers, an advantage is found in arranging the circuit feeding the light source and the switch controlling it at the outside of the radioreceiver, to prevent noises and troubles in reproduction.

For such a purpose the circuit feeding the light source is controlled by means of a switch which is distinct with respect to the switch embodied in the radio-receiver and intended to control the circuit of the pick-up transducer. More particularly, the switch of the circuit feeding the electric lamp of the pick-up is combined with advantage with the circuit of the electromotor intended to drive the turn-table carrying the sound record to be scanned, and thus it is obtained that the said lamp is fed only at the time the said motor and turn table are operative.

An arrangement of the above described class is shown in Fig. 2 where the parts illustrated in Fig. 1 are identified by same references. In Fig. 2, 13 denotes a radio-receiver set, 14 is a motor intended to drive a sound record turn-plate 15; 16 and 17 are leads connecting the transducer

3 with the amplifying and sound generating means embodied in the set 13; 18 and 19 are leads feeding the bulb 6 and the motor 14 and supplied as usually by a transformer (not shown) embodied in the set which in turn is fed by supply leads 20, 21 connecting the set with electric current feeding mains, not shown.

As shown a switch 22 is embodied in the lead 16 to control the operation of the transducer 3 and a separate switch 23 is inserted in the lead 19; by the manipulation of the switch 22 the pick-up transducer 3 may be put on or out separately from the control of the pick-up light source 6 and of the turn plate motor 14 which may be put on or out by the manipulation of the switch 23.

MANLIO MARZETTI.