Oct. 31, 1933. C. A. MORGAN ET AL 1,932,473

ILLUMINATING TONGUE DEPRESSOR AND NOSE AND EAR SPECULUM

Filed Oct. 14, 1932

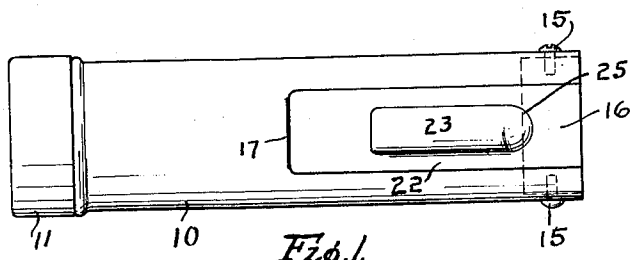


Fig. 1.

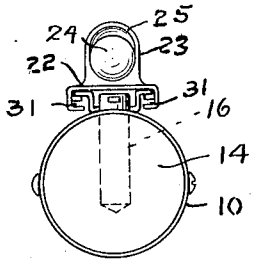


Fig. 2

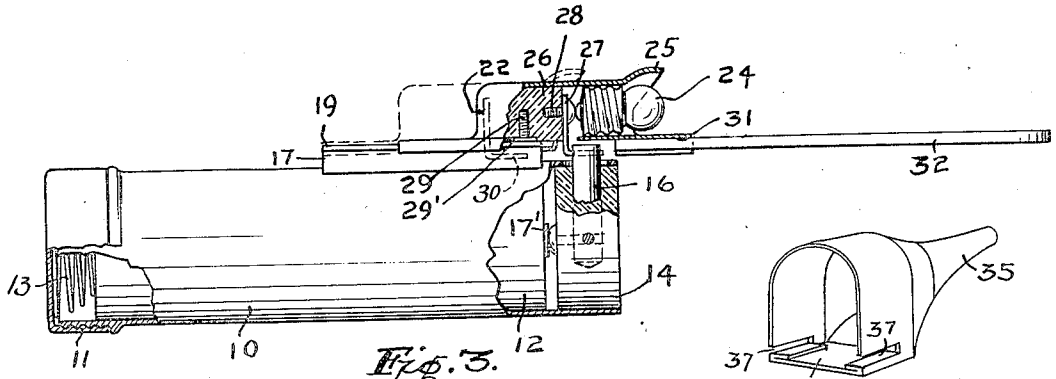


Fig. 3.

Fig. 10.

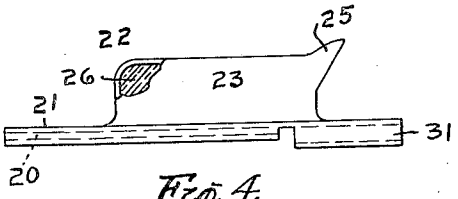


Fig. 4.

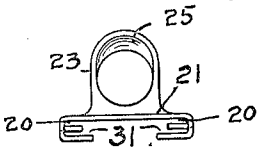


Fig. 5.

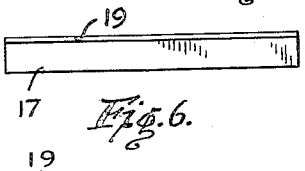


Fig. 6.

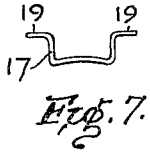


Fig. 7.

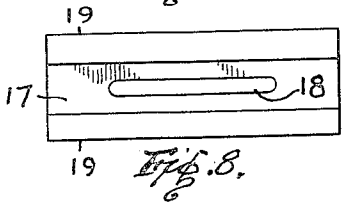


Fig. 8.



Fig. 9.

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Patented Oct. 31, 1933 1,932,473

UNITED STATES PATENT OFFICE

1,932,473

ILLUMINATING TONGUE DEPRESSOR AND NOSE AND EAR SPECULUM

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Application October 14, 1932. Serial No. 637,796

3 Claims. (Cl. 128—16)

Our invention is to adapt an ordinary battery lamp for use with the well known sanitary tongue depressor for examining the throat of a patient.

The primary object is to removably mount the tongue depressor and the lamp on a switch adapted to slide longitudinally of the battery casing toward an adjacent end to close the electric circuit and in a reverse direction to break the circuit, whereby, when the device is set down on the end of the casing opposite the depressor the switch will slide down by gravity and break the circuit.

With these general objects in view, the invention consists of certain novel features of construction and combination of parts, hereinafter more fully described and illustrated in the accompanying drawing in which—

Fig. 1 is a top plan view thereof with the switch at its inner position and without the depressor;

Fig. 2, an end view of same;

Fig. 3, a side elevation of the device with the depressor in working position and with the switch in its outer position closing the circuit, the switch and casing, being broken away in part and sectioned;

Fig. 4, a detail in side elevation of the sliding switch housing removed from its associated parts;

Fig. 5 is an end view of same;

Fig. 6 is a side elevation of the slide track;

Fig. 7, an end view;

Fig. 8, a top plan view of the slide track;

Fig. 9 is a perspective view of the contact member for closing the circuit; and

Fig. 10, a view in rear perspective of a nose and ear speculum.

Like characters of reference indicate like parts in the several views of the drawing.

Referring more in detail to the drawing, 10 is the battery casing of an ordinary pocket flash-light, having a removable cap 11 at one end and containing dry cells 12 which are forced normally away from the cap end by the usual spring 13.

The opposite end of the casing 10 is closed by a disc 14 of bakelite or other insulating material which is retained in the casing by screws 15, 15. Seated in the disc 14 and extending diametrically from past the center to a distance beyond the wall of the casing 10 is an electric conductor and contact post 16. A screw 17' has its head on the inner side of the disc 14 making electric contact with a battery cell as shown in Fig. 3, and passing through the post 16 is seated in the disc.

Placed longitudinally on the outside of the casing 10, inwardly from the post 16, is a slide track 17, which is substantially U-shape in cross section as shown in end view in Fig. 7. The member between the legs of the U is bowed inwardly to the curvature of the casing and has a longitudinal slot 18 (Fig. 8) to aid in retaining solder by which the track is attached to the casing. Each leg of the U-shaped track has an outside longitudinal flange 19, 19. These flanges are embraced by corresponding channels 20 in the base 21 of a switch slide 22, as best seen in Figs. 5 and 2. Supported by and located above the base 21 is a housing 23, which is internally threaded near its open front end to receive a lamp 24, under a canopy reflector extension 25 from that end of the housing. Located in the closed rear end of the housing is a block of insulation 26 such as bakelite, which has a metal plate 29' secured to it by a screw 29. The ends of the plate are soldered to the base 21 of the slide to retain the insulation in fixed position in the housing. Seated in the front end of the insulation block 26 is a contact plate 27 which is retained by a screw 28, the head of which screw is in electrical contact with the lamp 24 (see Fig. 3). The plate 27 has a tapering tongue-extension 30 extending forwardly at right angles. This tongue 30 enters a hole formed through the end of post 16 for that purpose, and by continued advancement the edges of the tongue 30 make electrical contact with the post thereby closing the circuit between the battery and the lamp. The return circuit from the lamp to the battery is through the switch slide 22, casing 10 and associated metals in the usual manner.

Formed under the front end of the base 21 are channels 31, here shown as wider than channels 20. The channels 31 are holders for a removable thin blade or depressor 32. This depressor is usually made of wood, to be thrown away for sanitary reasons after each use.

In the operation of our device, with the depressor in place and the slide in its inner position shown in Fig. 1, the casing is grasped in the right or left hand and the slide moved out until arrested by contact of the tongue 30 with post 16, which closes the switch and lights the lamp. The depressor is manipulated with either hand, leaving the other hand free for use with other instruments.

When the examination or operation is completed or when at any time the lamp is set down, the lamp is placed on the cap-end 11, which will cause the switch-slide 22 to move down by gravity thereby automatically breaking the circuit and saving the battery. The downward movement of the switch slide is arrested by contact of channel wall ends 31 with the slide track 17.

A speculum 35, Fig. 10, here shown in a form

adapted for the nose and ear, may be employed in place of the depressor 32. The speculum is formed to have a tongue 36 of a width and thickness to fit within the channels 31 so that the large end of the speculum may be brought up over the lamp 24 and there supported in position as indicated by the dash lines in Fig. 3. The tongue 36 is here shown as comprising the underside of the speculum, with lips cut from the side walls to leave slots therein for clearance over the channels, the lips being bent over and down against the underside or base to give the required thickness to provide a snug sliding fit within the channels.

While we have described our invention and illustrated it in the one particular design, we do not desire to be limited thereto as it is evident that the details may be varied in many ways within the scope of the claims.

We claim:

1. A device of the class described comprising a casing held substantially horizontal in use, electric generating cells within the casing, a member mounted to slide longitudinally of the casing, a removable surgical instrument carried by said sliding member longitudinally of the casing, an electric lamp carried by the sliding member and an electric switch means in circuit with the battery and lamp to make the circuit in one position of the sliding member and to break the circuit in another position of said member resulting from gravity when the casing is turned from a horizontal to a vertical position.

2. A device of the class described comprising a casing, electric generating cells within the casing, a current conducting post in circuit with the battery and extending outside of the casing, a member on the casing movable toward and away from the post, a second member carried by the sliding member into and out of electric contact with the post by the movement of the sliding member, a surgical instrument carried by the sliding member and a lamp in conducting connection with the contact member also carried by the sliding member to illuminate the surgical instrument when the circuit is closed by an appropriate movement of the sliding member.

3. A device of the class described comprising, a casing, a storage battery housed therein, a contact member in circuit with the battery and terminating outside of the casing, a member sliding longitudinally on the outside of the casing, a surgical instrument carried by the sliding member, a lamp carried by the sliding member and a second contact member in conducting connection with the lamp and carried by the sliding member into sliding contact with the contact member and breaking said last contact by the action of gravity when the end of the device opposite the lamp end is held down.

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