Nov. 26, 1940. LE ROY V. PORTER 2,222,879

DETACHABLE AND ADJUSTABLE REFLECTING ELEMENT FOR USE WITH A FLASHLIGHT

Filed Jan. 23, 1939

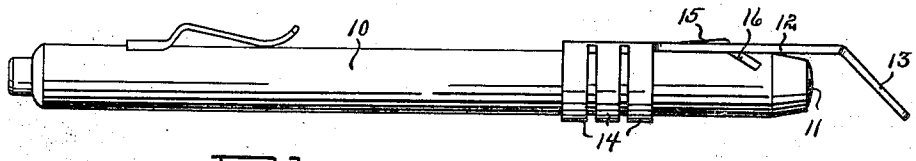


Fig. 1.

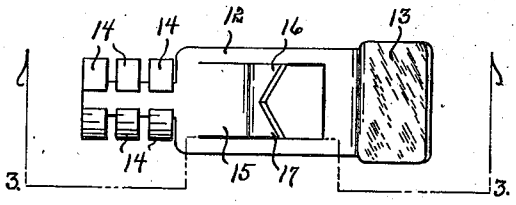


Fig. 2.

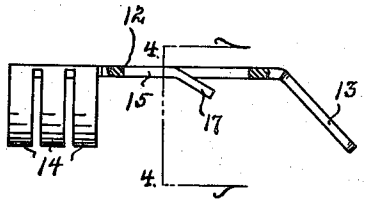


Fig. 3.

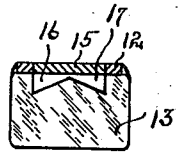


Fig. 4.

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DETACHABLE AND ADJUSTABLE REFLECTING ELEMENT FOR USE WITH A FLASHLIGHT

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Application January 23, 1939, Serial No. 252,350

1 Claim. (Cl. 240—2.18)

The principal object of my invention is to provide a bracket member having a reflecting surface that may be quickly attached to or detached from a small "pencil" type flashlight.

A further object of my invention is to provide a reflecting element in combination with a small electric flashlight and which is particularly desirable for dental observation.

A still further object of this invention is to provide a reflecting element capable of being slidably connected to a small electric flashlight, that is economical in manufacture and durable in use.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claim and illustrated in the accompanying drawing, in which:

Fig. 1 is a side view of my device slidably, detachably and adjustably secured to an ordinary small "pencil" type electric flashlight, and Fig. 2 is a top plan view of my device detached from a flashlight.

Fig. 3 is a side sectional view of my device taken on lines 3—3 of Fig. 2, and Fig. 4 is a cross sectional view of my device taken on line 4—4 of Fig. 3.

Small handled mirrors for dental observation are in general usage. However, the average person, not having additional equipment and facilities, is tremendously handicapped when attempting to use equipment, for the reason that he does not have any efficient light source for illuminating the tooth or teeth to be observed. Obviously, in view of the position of certain of the teeth, it is necessary for the light illumination to be directed on the rear side of the tooth. I have overcome such problems by providing a reflecting element that is slidably secured to a small electric flashlight and with the flashlight itself acting as the handle to a single unit device. If my device is to be used by an individual, he will turn the flashlight on and by standing before a large mirror, and with my device in proper position in his mouth, will be able to easily and quickly inspect each and every part of all of his teeth. If a dentist or other person used my device in inspecting the teeth or tooth of another, obviously a large mirror is not used.

Referring to the drawing, I have used the numeral 10 to designate an ordinary "pencil" electric flashlight. Such flashlights are usually of tubular construction and the approximate size of a fountain pen. The numeral 11 designates the lens in the front end of the flashlight. It is to such a flashlight that I secure my reflecting element, and which I will now describe. I have used the numeral 12 to designate the flat base portion of my device. The numeral 13 designates a reflector element or mirror on the forward end portion of the member 12 and extending at an angle to the member 12 as shown in Fig. 1. This portion 13 may be of polished metal capable of accurate reflection or it may be in the form of a glass mirror capable of reflecting characteristics. The numeral 14 designates a plurality of curved spring fingers formed on the rear end portion of the member 12 and extending transversely to the longitudinal axis of the portion 12 as shown in Fig. 2. When my device is placed on a flashlight 10, these spring fingers 14 embrace and extend around the body of the flashlight 10 as shown in Fig. 1. Obviously these fingers frictionally engage the body of the flashlight by permitting the manual sliding of the device longitudinally on the flashlight. The numeral 15 designates a longitudinal tongue portion cut in the base portion 12 and extending forwardly relative to the base 12. A notch is formed in the forward end of the tongue 15 to provide the two projections 16 and 17 on the forward end of the tongue 15. These portions 16 and 17 of the tongue 17 are bent inwardly and forwardly as shown in Fig. 3, to frictionally engage the forward end portion of the flashlight. This tongue 15 with the member 12 is of spring steel and thereby exerts a spring tension on the flashlight 10 as shown in Fig. 1. Due to the construction of the projections 16 and 17, these projections extend slightly to each side of the body of the flashlight and slightly embrace thereby a portion of the curvature of the flashlight, thereby properly holding the flashlight body in alignment with the base 12 and in cooperation with the spring fingers 14. By the tongue 15 exerting an inward pressure on the forward end of the flashlight, the flashlight will be tightened against looseness within the spring fingers 14. The tongue and projections 16 and 17 also may aid in acting as a stop for the flashlight.

To place my device on a flashlight, it is merely necessary to insert the forward end of the flashlight through the fingers 14 and onto the projection points 16 and 17 as shown in Fig. 1 with the lens of the flashlight extending toward the reflector portion 13. Obviously different lighting effects may be easily obtained by ad-

justing the position of my device along the length of the flashlight. The portion 13 may be manually bent at various angles relative to the base portion 12. To use my device it is merely necessary for one to stand before a mirror, light the flashlight and place the reflecting element 13 in such position that it will reflect the desired portion of the tooth to be observed, onto the mirror. The portion 13, when in use, not only acts as a reflecting element, but may be used to hold the tongue or sections of the cheek away from the tooth to be observed. Obviously with my device, an individual may carefully and accurately inspect his teeth inasmuch as the flashlight and reflecting element 13 furnishes the necessary light at the strategic point for observation and the reflector element 13 will be in such position as to reflect that part of the tooth to be observed either directly to the eye of another person or to an auxiliary mirror in front of the user.

When not in use, my device may be easily and quickly removed from the flashlight and the flashlight used for other purposes. My device may be made from one piece of material as shown in Fig. 2 and may be easily kept in a clean and satisfactory condition. From the foregoing, it will readily be seen that I have provided a highly desirable device for use with flashlights for the inspection and observation of non-accessible objects, such as back teeth and the sides nad rear sides of front teeth. Although I have described my device as particularly adapted for dental observation, it is obvious that it may be used for many other varied purposes where such a device is needed.

Some changes may be made in the construction and arrangement of my improved detachable and adjustable reflecting element for use with a flashlight without departing from the real spirit and purpose of my invention and it is my intention to cover by my claim any modified forms of structure, or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

In a device of the class described, a tubular member designed to hold a battery and an incandescent light bulb in one of its ends, a base member, a reflecting member on the forward end of said base member, a split ring member on the rear end portion of said base member frictionally embracing said tubular member, a tongue member cut in and bent in from said base member, and a notch formed in the forward end of said tongue member frictionally engaging said tubular member.

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