R. W. ERDLE.

SELF LUMINOUS INDEX HAND.

APPLICATION FILED MAY 16, 1918.

1,330,180. Patented Feb. 10, 1920.

Fig. 1

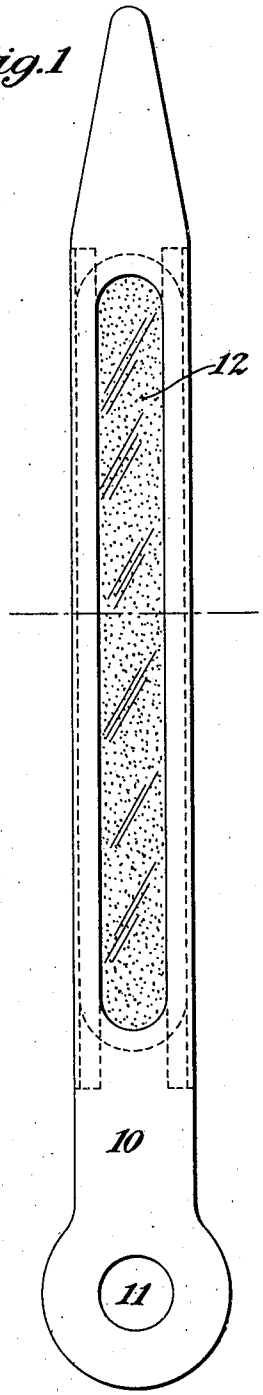


Fig. 2

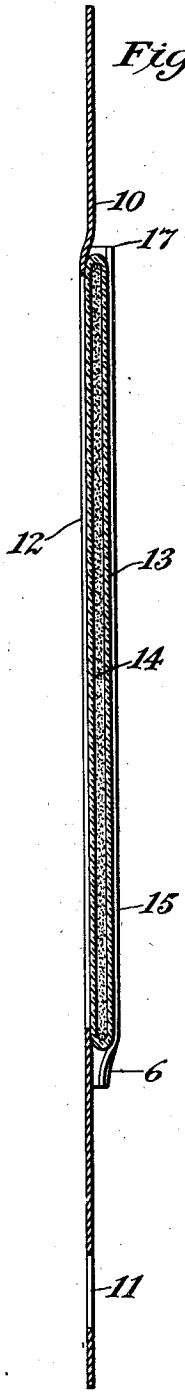
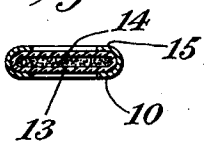


Fig. 3



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SELF-LUMINOUS INDEX-HAND.

1,330,180. Specification of Letters Patent. Patented Feb. 10, 1920.

Application filed May 16, 1918. Serial No. 234,850.

To all whom it may concern:

Be it known that I, REINER W. ERDLE, a subject of the Emperor of Germany, who have declared my intention of becoming a citizen of the United States, and now residing in Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Self-Luminous Index-Hands, set forth in the following specification and illustrated in the accompanying drawings.

My present invention relates to self-luminous index hands or pointers for use in connection with indicators of all kinds, whereby readings may be made in the dark, as well as to a novel form of self-luminous element adapted to be readily applied to index hands for the purpose above-named. My invention supplies an efficient, convenient and inexpensive means whereby the advantages of any self-luminous substance can be made available, without danger of deterioration of such substance by contact with the air and without danger of the same rubbing off through ordinary wear and tear or by accidental contact. My device will be found especially useful with indicators used in connection with gasolene or ammonia tanks and the like, where the index hands are liable to be soiled by spilling or splashing of the contents of the tanks.

My device is illustrated in a preferred form in the accompanying drawings wherein Figure 1 is a face view of the same in elevation, Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 is a cross sectional view thereof.

Broadly speaking, my invention comprises an index hand or pointer of any convenient form and construction to which is attached a self-luminous element comprising an elongated transparent receptacle containing a luminous substance. This container preferably takes the form of a flattened glass tube securely closed to prevent access of air to the contents.

In the specific form illustrated the pointer comprises a suitably shaped metal plate 10, having an opening 11 to permit of its application to a suitable support; which in the case of a clock, for instance, would be the hour or minute arbor or shaft.

Extending along the pointer 10 I provide a slot or opening 12, behind which is secured the self-luminous element, so that it can be seen through the slot. This element is preferably composed of a flattened glass tube 13 filled with self-luminous substance 14, preferably in powdered form. While this element may be attached in any convenient manner, without departing from my invention, I prefer, for this purpose, to provide the plate of which the pointer is composed with side extensions or wings 15 which are bent over to form channels which receive the sides of the element 13. These channels are narrowed at one end, as at 16, to prevent escape of the element 13 at that end. The element is then slid into place from the opposite end 17, at which the wings may be pinched inward if desired, after such insertion, in order the better to secure the element in place.

The filling of the element 13 is preferably accomplished in the following manner: A glass tube of relatively large diameter is heated and flattened in the middle. While thus softened it is quickly stretched so as to form a long flat tube of the required reduced diameter provided with relatively large funnel-shaped ends. The small tube is then severed, either near one end or near the middle and the severed end is sealed. The self-luminous substance is then introduced through the funnel-shaped end in sufficient quantity to provide one entire element, which, when filled, is separated from the unfilled portion, after which the severed end is sealed and the element is complete. If the tube originally produced be long enough, a number of elements can be successively produced from it in this manner.

What I claim is—

1. An index hand or pointer and a self-luminous element attached thereto comprising a flattened tube of transparent material laid flat against said pointer in a longitudinal position, and a self-luminous substance within said tube.

2. An index hand or pointer having a longitudinal opening and a self-luminous element attached thereto behind said opening and comprising a transparent tube containing a self-luminous substance.

3. An index hand or pointer comprising a suitably shaped plate having a longitudinal opening and having its sides extended and bent over to form channels, in combination with a flat transparent tube adapted to be slid into place behind said opening in said

channels, and a self-luminous substance in said tube.

4. In combination in a self luminous device a pointer comprising a plate having an opening therein and sides bent over to form a channel, a translucent tube in the channel, a luminous material in the tube, the luminous material being visible through the opening and the tube being positioned in the channel by said bent over sides.

In testimony whereof, I have affixed my signature to this specification.

REINER W. ERDLE.