

A. JUNGHANS.
ILLUMINATING INDICATOR.
APPLICATION FILED APR. 13, 1910.

1,036,256.

Patented Aug. 20, 1912.

Fig. 1.

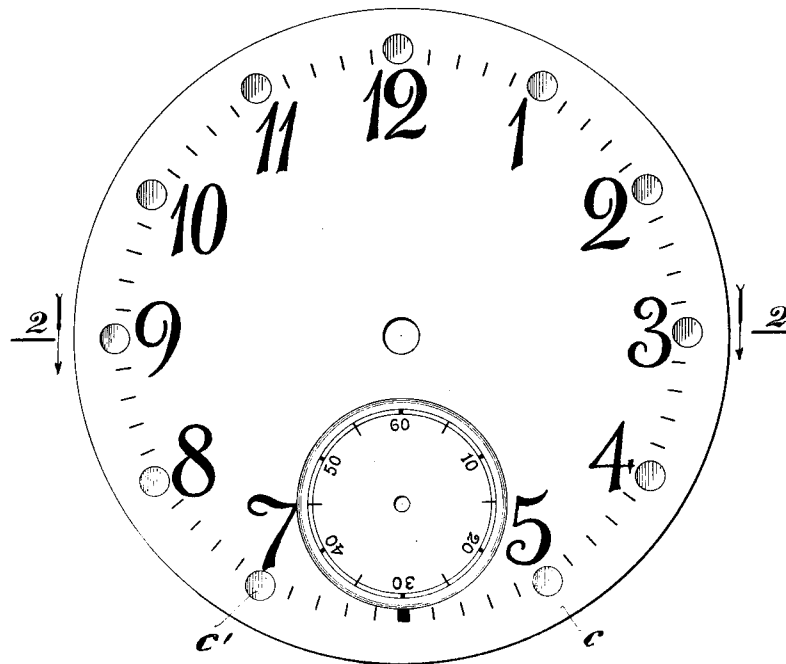


Fig. 2.

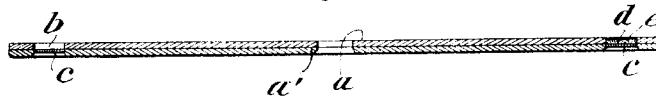


Fig. 3.

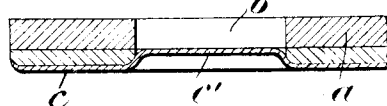
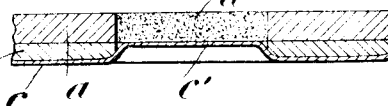


Fig. 4.



Inventor

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UNITED STATES PATENT OFFICE.

ARTHUR JUNGHANS, OF SCHRAMBERG, GERMANY.

ILLUMINATING-INDICATOR.

1,036,256.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed April 13, 1910. Serial No. 555,297.

To all whom it may concern:

Be it known that I, ARTHUR JUNGHANS, privy commercial councillor, a subject of the King of Wurttemberg, residing at Schramberg, in the Kingdom of Wurttemberg, Germany, have invented certain new and useful Illuminating-Indicators, of which the following is a full, clear, and exact description.

The present invention has for its object a method for fixing the illuminating medium employed for the indicating parts such as dials and hands of clocks, scales or the like in the form of dots, etc., whereby the said medium is prevented from injury and from falling off.

Heretofore the illuminating medium has been arranged upon the indicating parts, for example on an enameled dial, generally in the form of points or dots for example by boring the dial above the figures to a certain depth, then coating the bottom of the bore with adhesive material upon which the illuminating medium was placed, a thin sheet of celluloid was then stuck upon the dial over this illuminating material in order to prevent it from falling out as a result of shocks. A similar procedure was adopted in applying such illuminating medium to the hands or the like. This method presents the defect that the consumption of illuminating material was very irregular, while in addition this material and the covering mutually influenced and colored each other, thereby weakening the luminosity and finally the protecting coverings, on the dial, particularly impaired the appearance necessarily resulting in rendering the sale of such clocks more difficult. These defects are obviated by means of the present method which consists in the first place in providing the indicating parts to which the illuminating mass is to be applied with a through bore or perforation, then arranging a covering of glass, enamel or the like over one side of this part and finally introducing into the bore thus covered on one side an adhesive material and then sprinkling the illuminating material thereon.

By way of example a dial embodying the invention is illustrated in the accompanying drawing in which:

Figure 1 shows the dial in elevation and Fig. 2 is a cross section on line 2—2 of Fig. 1, looking in the direction of the arrows, one

of the perforations being presented without the illuminating mass but with the covering, and the other with both the illuminating mass and cover. Fig. 3 is an enlarged sectional view of the left hand portion of Fig. 2. Fig. 4 is an enlarged sectional view of the right hand portion of Fig. 2.

In accordance with the invention the dial comprising the metal back or foundation, *a*, and the enamel covering *a'*, which are both provided with perforations *b* extending throughout its entire thickness, thereupon the dial is provided in the furnace with a covering of glass, enamel or the like so that a transparent mass *c* is provided above the perforations which forms windows *c'*, and these perforations are therefore closed in front. Instead of providing this covering, the perforations *b* might be closed by fusing in circular glass disks. The windows *c'* are then either coated with adhesive material from behind and the illuminating mass *d* arranged thereon, or elements such as pieces of paper or cardboard are coated with adhesive material, the illuminating mass sprinkled thereon, whereupon small disks or the like are stamped out in correspondence with the perforations or other recesses, these disks being inserted in the perforations from behind with the illuminating material against the window. In the case of other indicating parts such as hands or the like a similar method is adopted for fixing and securing the illuminating material. In order to facilitate the operation the indicating parts such as the clock hands are made of copper. The bores and cavities on the indicating parts can be given any desired form and size, and they can be arranged in any convenient manner.

What I claim as my invention and desire to secure by Letters Patent is:

1. A self-illuminating device comprising in combination, a foundation body provided with a plurality of openings extending therethrough, a transparent mass fused on one side of said body and extending across said openings to close the same on one side of said body, and elements having an illuminating material adhered thereto and inserted into the openings behind the transparent mass.

2. A self illuminating clock dial comprising in combination, a back portion having

an enamel like covering and openings or
perforations extending through the back
portion and covering, transparent mass ex-
tending across said openings, and self illu-
minating material disposed in said openings
5 from behind said back portion.

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

ARTHUR JUNGHANS.

Witnesses:

ERNEST ENTENMANN,
FRIDA KLAIBES.