

No. 641,302.

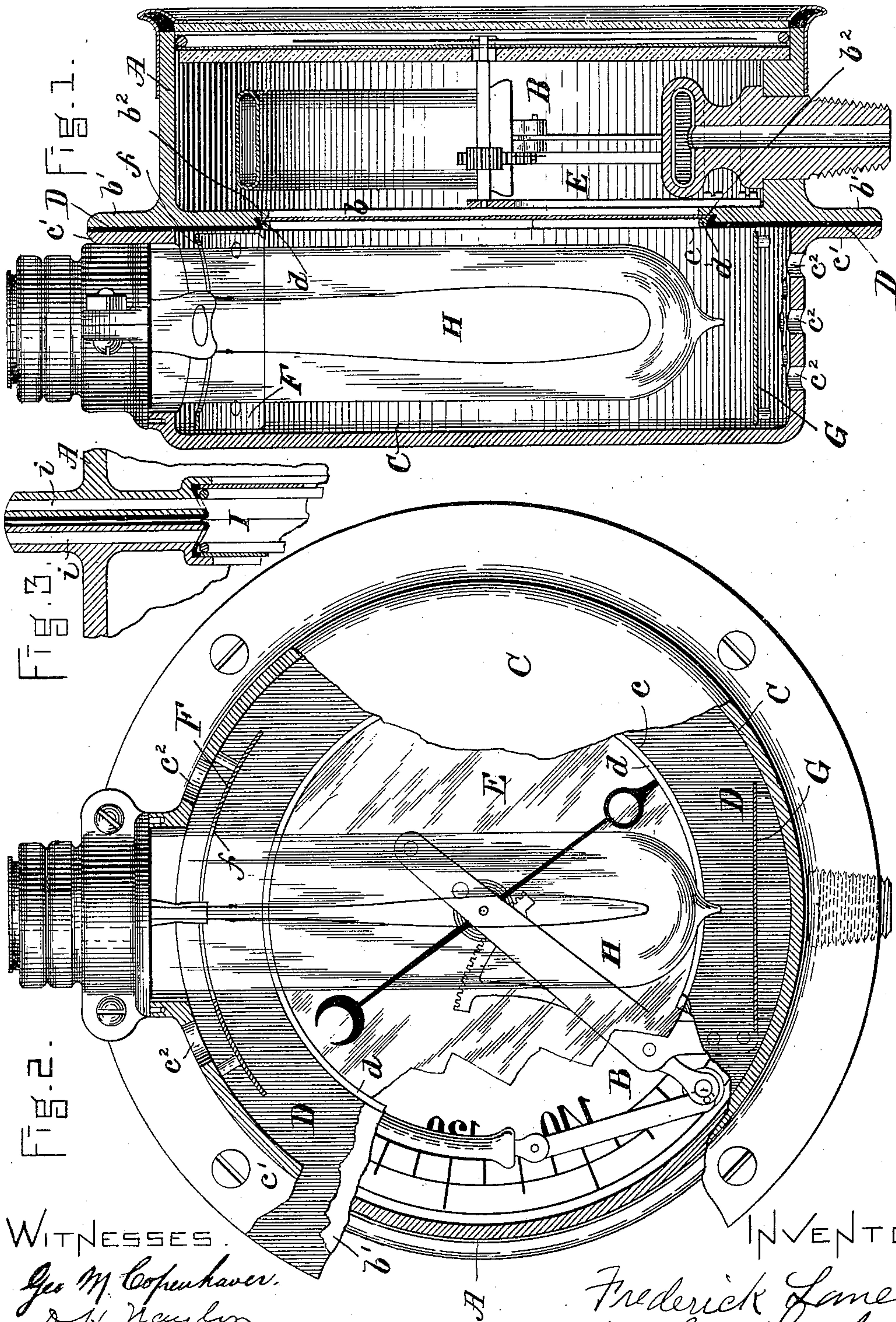
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F. LANE.

ILLUMINATED GAGE.

(Application filed Mar. 3, 1898.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

FREDERICK LANE, OF BROOKLINE, MASSACHUSETTS, ASSIGNOR TO THE CROSBY STEAM GAGE AND VALVE COMPANY, OF BOSTON, MASSACHUSETTS.

ILLUMINATED GAGE.

SPECIFICATION forming part of Letters Patent No. 641,302, dated January 16, 1900.

Application filed March 3, 1898. Serial No. 672,368. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK LANE, a citizen of the United States, residing at Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Illuminated Gages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful improvement in an illuminated gage—that is, a gage of any kind wherein it is desirable that the registration of its operation may be read at night on a dial which is illuminated by artificial means.

In the drawings, Figure 1 represents a transverse diametric section of the device; Fig. 2, a rear view with parts broken away; Fig. 3, a partial detail section of a modification.

In the drawings the letter A represents a gage-case provided in front with a chamber B for containing the usual gage mechanism and at the rear the receptacle C for containing the illuminator, the chamber B having an opening *b* and the receptacle C an opening *c*, the two being placed so that the openings come together, as shown in Fig. 1. The chamber B and receptacle C are secured together at their circumferential flanges *b'* and *c'* by suitable bolts, an annulus D or flat strip of asbestos being interposed between the meeting edges. Surrounding the opening *b* there is a recess or seat *b²*, in which rests the edge of a sheet of mica E. This sheet of mica is held in place in the recess *b²* by a ring *d*. Within, at the top and bottom of receptacle C, are placed reflectors F G, flat or curved, the upper one, F, having an opening *f*, down through which protrudes the electric lamp H or other source of light. In the bottom and top of the receptacle C are made air-holes *c²*.

Instead of the single transparent division dividing the chamber and receptacle there may be two or more such partitions making this division, as seen in Fig. 3. In such construction there is a sheet of mica placed in each of the meeting faces similarly arranged,

as shown in Fig. 1. In this construction there is an air-space I between the chamber and the receptacle and openings *i* at bottom and top, only the top openings being shown, the bottom ones being a duplicate construction.

Illuminated gages are not new *per se*; but, so far as I am aware, such gages have no interposing partition between the artificial light and the transparent dial. Also in gages where the Bourdon tube-spring is used it is necessary that it should be kept cool or in low temperature, so that it shall not expand, and thus incorrectly move in its use whatever may be the fluid acting within it. To prevent the transmission of any heat from the illuminator to the operative parts of the gage, the interposition of a partition of some non-heat-conducting substance sufficiently translucent to permit the passage of the rays of light, so that the face of the dial may be properly inspected, is desirable. Now mica, which is a tough and transparent substance, accomplishes what is desired in this regard. Also asbestos interposed between the flanges prevents the transmission of heat from one case to the other. While glass would subserve the same purpose as mica, still it is not quite so advantageous, as it is liable to be broken by the heat. Again, a double partition will better secure the results than a single partition.

Having described the invention, what I claim is—

As a new article of manufacture, a gage having the chamber, B, for the gage mechanism and the receptacle, C, for an illuminator secured together with an opening between them; a ring of asbestos, D, between the meeting edges of the two; a sheet of mica, closing the opening between the chamber and receptacle; the reflectors, E and F, at top and bottom of the receptacle, C, and a source of light between the two reflectors, as set forth.

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

FREDERICK LANE.

Witnesses:

J. H. MILLETT,
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