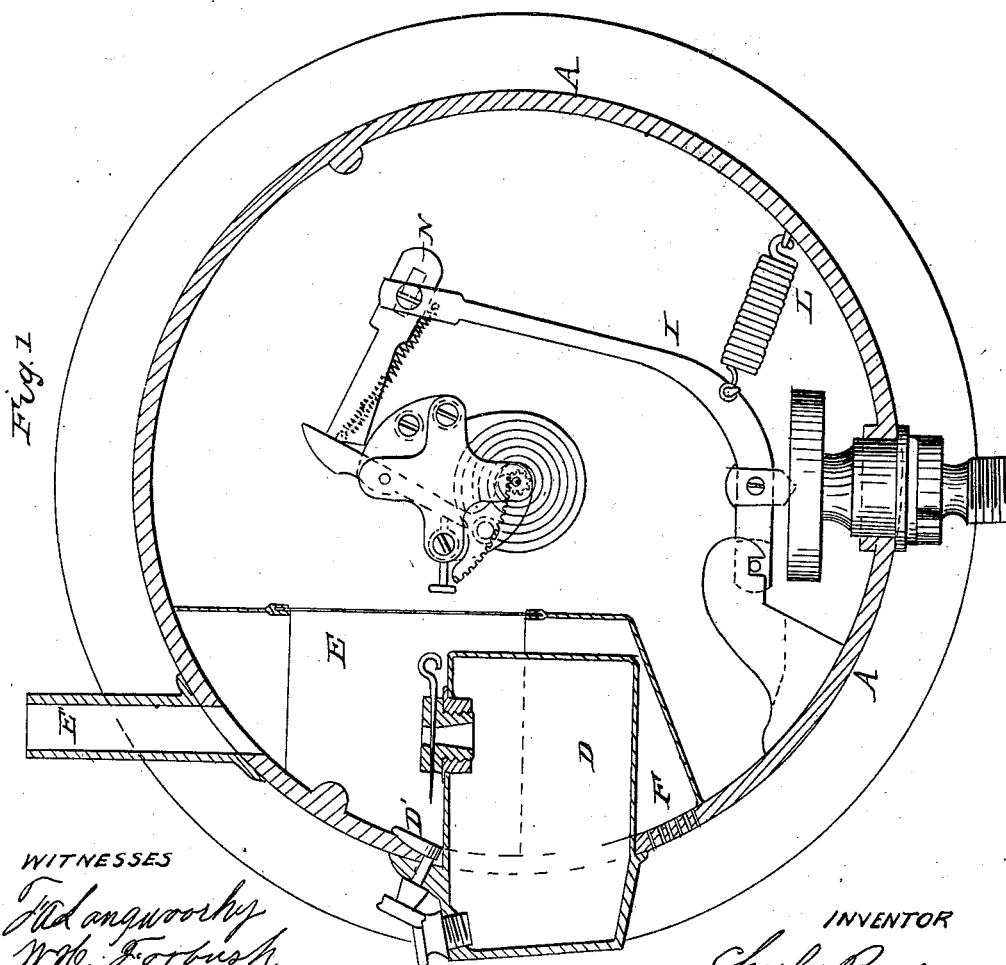
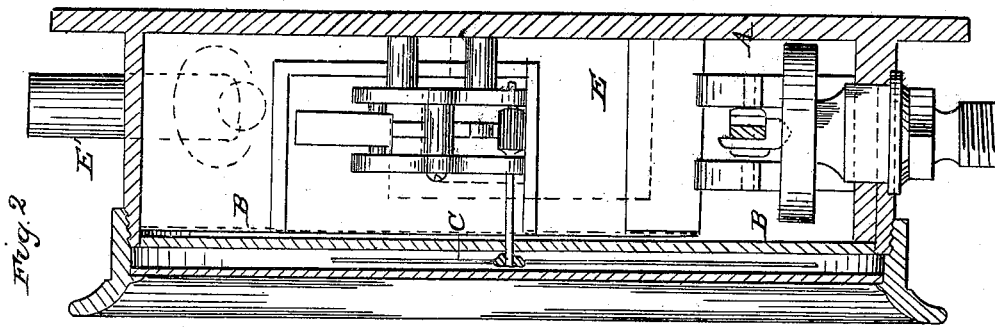


C. BOURGEOIS.

Steam Gage.

No. 52,380.

Patented Feb. 6, 1866.



WITNESSES

*Edg. Angwoorby*  
*W. H. Forbush*

INVENTOR

*Charles Bourgeois*

# UNITED STATES PATENT OFFICE.

CHARLES BOURGEOIS, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN STEAM-GAGES.

Specification forming part of Letters Patent No. 52,380, dated February 6, 1866.

*To all whom it may concern:*

Be it known that I, CHARLES BOURGEOIS, of the city of Buffalo, county of Erie, and State of New York, have invented an Illuminated Steam-Gage or Combined Lamp and Steam-Gage; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a front sectional elevation thereof, and Fig. II is a side sectional elevation.

The nature of this invention consists in the combination of a lamp with a steam-gage, so placed within the gage-case and behind the index-plate, made of transparent material, as to light up the index-plate and the divisions and figures thereon and enable the engineer to perceive the position of the index-hand without the assistance of other light than that furnished within the gage itself.

Like letters represent like parts in each of the figures.

A represents the gage-case, containing works of any common or well-known construction.

B represents the index-plate, which is made of glass, either clear or ground, or of any other sufficiently-transparent material, the usual divisions or figures being painted or otherwise marked thereon.

C represents the index-hand.

D represents a lamp of any convenient construction, projected into the gage-case behind the index-plate through an opening in the side of the gage-case made for that purpose, the lamp, when in place, closing said opening, and being held therein by a button, D', it may be readily removed for filling or trimming.

E represents a lamp-chamber partitioned off in the gage-case, one side and the front parti-

tion of said chamber being formed of isinglass, so that the light may shine through and illuminate the glass index-plate. All oil-drippings or dirt from the lamp are caught in this chamber and prevented from getting into or affecting the working parts of the gage.

The chamber has a ventilating or draft chimney, E', at its top and perforations F near its bottom, below the lamp, to admit air for combustion.

The position of lamp and chamber may be changed as required to suit gages of different construction.

The index-plate being lighted up or illuminated by the light of the lamp, the index-hand and its position thereon may be seen by the engineer at a glance without the necessity of close inspection or the aid of an extra lamp. The divisions and figures should be as opaque as possible to make them appear clear and distinct on the illuminated surface of the gage-plate.

This improvement is particularly applicable to the steam-gages of locomotives and marine-engines, and, it is believed, will be found very convenient and desirable. It is very simple, and does not interfere with the working of the gage in any respect.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the lamp D with a steam-gage and transparent index-plate B, and thereby internally light the gage and make the figures of the index-plate visible, substantially in the manner and for the purpose set forth.

CHARLES BOURGEOIS.

Witnesses:

GEO. W. WALLACE,  
F. A. LANGWORTHY.