

(No Model.)

L. M. FLEET.  
GAGE TUBE.

No. 265,312.

Patented Oct. 3, 1882.

Fig.1.

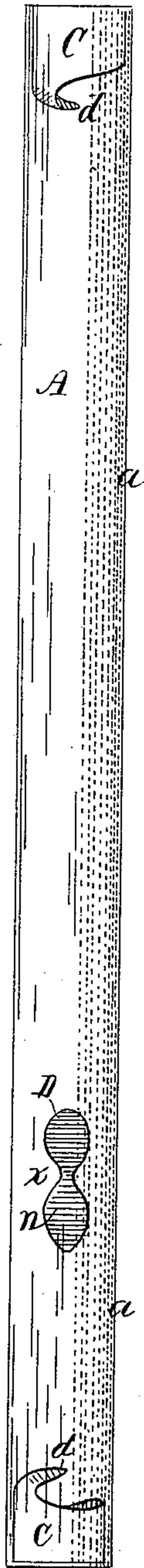


Fig.2.

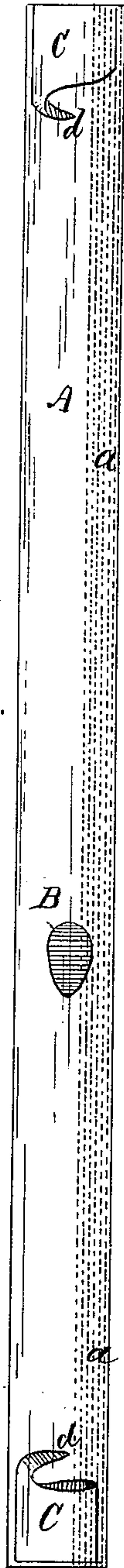


Fig.3.

Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## GAGE-TUBE.

SPECIFICATION forming part of Letters Patent No. 265,312, dated October 3, 1882.

Application filed May 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, LINDLEY M. FLEET, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Gage-Tubes, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figures 1 and 2 are side elevations, and Fig. 3 a top view or plan.

Like letters indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of gage-tubes which are employed in the gages of steam-boilers for indicating the height of the water; and it consist in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

The extreme simplicity of my improvement renders an elaborate description unnecessary.

In the drawings, A represents the body of the tube; B, the float, and C C the guards or retainers.

The tube is composed of glass, which may be of the usual length, diameter, and thickness, and has one-half of its exterior surface ground, as shown at *a a*, to form a background for enabling the column of water in the gage to be seen more distinctly. The tube is provided with a hollow ball or float, B, preferably composed of colored glass, and pear-shaped in form, as seen in Fig. 2; but the float may be

round, or may be composed of other materials than glass, and have two bulbs, *m m*, as seen at D in Fig. 1, if preferred, the object of the float being to enable the height of the water in the tube to be instantly determined, even at a considerable distance from the gage.

The guards C C are composed of thin sheet metal and provided with inwardly-projecting flanges *d d* for preventing the float from passing out of the tube into the fittings of the gage when the water is very high or very low in the same. The body of the guard is bent on such a curve laterally that when it is inserted in the tube it will be sustained in position by its spring or expansive action against the inner surface of the tube, the projecting flange or finger *d* striking the float and preventing it from passing through the guard.

When the double float D is used, as shown in Fig. 1, it should be so constructed or weighted as to bring the line of emersion or water-line at the neck *x*, or narrow part of the float, the upper bulb, *n*, being entirely out of water, thus better serving the purposes of a signal.

It will be obvious that the ground back *a* may be omitted, if desired, without departing from the spirit of my invention, and I therefore do not confine myself to its use.

Having thus explained my improvement, what I claim is—

The gage-tube A, provided with the float B and guard C, substantially as set forth and specified.

LINDLEY M. FLEET.

Witnesses:

JAMES M. PALMER,  
C. A. SHAW.