

T. R. TIMBY.

BAROMETER.

No. 18,560.

Patented Nov. 3, 1857.

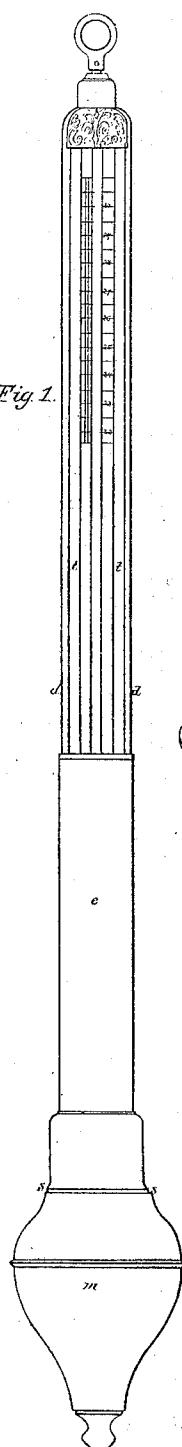


Fig. 1.

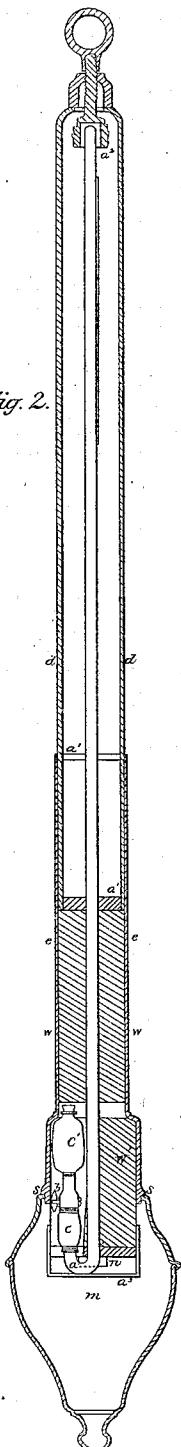


Fig. 2.

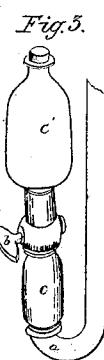


Fig. 5.

UNITED STATES PATENT OFFICE.

THEODORE R. TIMBY, OF MEDINA, NEW YORK.

BAROMETER.

Specification of Letters Patent No. 18,560, dated November 3, 1857.

To all whom it may concern:

Be it known that I, THEODORE R. TIMBY, of Medina, in the county of Orleans and State of New York, have invented an Improvement in Barometers, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the annexed drawings, of which—

Figures 1 and 2 exhibit elevations of the barometer in two views and Fig. 3 a detached portion of the barometer tube shown enlarged.

My invention consists in a mode of constructing barometers whereby the liability to be broken from expansion of the mercury during transportation is entirely prevented; also in suspending the barometer tube in the axis of a cylindrical case having a central hook, so as to save the necessity of leveling or plumbing the instrument.

When a filled barometer is laid down horizontally the mercury entirely fills the tube and it is usual to stop the open end by closing the stop cock and it not infrequently happens that the expansion of the mercury by heat breaks the tube. If the tube is not filled, the surging of the mercury may also break the tube. To remedy this evil I insert between the lower end *a* of the barometer tube and the stop cock *b*, an elastic tube *c* made of rubber, so that when the mercury expands the yielding of said tube may prevent the strain upon the glass tube and thus render its transportation perfectly safe. (The elastic tube may be made of any known elastic material.) In the ordinary construction of barometer cases the point of suspension is not in a line with the tube and it requires some care to plumb the tube, but with my barometer case, which of itself is shaped like a plumb-bob, no care is requisite, as it finds and keeps its vertical posi-

tion, and on board ship will not only be always in its proper position but will save the constant surging of the mercury which takes place where the common case is hung against a wall. The upper portion *d* of the case is of glass and the lower portion *e* of brass. The bowl *m* of the case is fitted to the brass tube *e* by screwing, at the joint *s*. Upon the top of the glass tube is a metallic cap, connected with which are two bracing rods *t* which pass through the glass tube and the brass tube *e*. A piece of wood *w* is fitted within the brass tube and the rods pass down through this wood and when the glass tube is inserted within the brass tube as seen at *a'* the nuts *n* on the lower end of the rods are screwed and hold the whole firmly together. The wooden piece *w* is also perforated in its axis to admit and support the barometer tube.

When the tube is filled with mercury and ready for use it is passed up through the wooden piece and the upper end of the tube is inserted into the central socket *a'*, which is lined with some soft material, and the bent portion *a*, *b*, *c*, is received within a recess purposely made in the wooden piece *w'*. The tube is then held up in place by a metallic cap *a* fitting over the wooden piece *w'* and the bowl *m* screwed on in place.

What I claim as my improvement in barometers is—

1. The elastic tube between the stop cock and barometer tube as set forth. 80
2. I claim the mechanical arrangement for supporting the barometer tube within the suspension glass case the same consisting of the bracing rods *t*, *t*, passing through the glass and brass tubes *d* and *e* and the wooden block *w*, the inner cap *a'* the blocks *w*, *w'* the lower cap *a* and the screw joint *s* all arranged and coöperating as set forth. 85

THEODORE R. TIMBY.

Witnesses:

CHAS. G. PAGE,
R. T. CAMPBELL.