

(No Model.)

O. MÖLLER.
HOLOSTERIC BAROMETER.

No. 459,977.

Patented Sept. 22, 1891

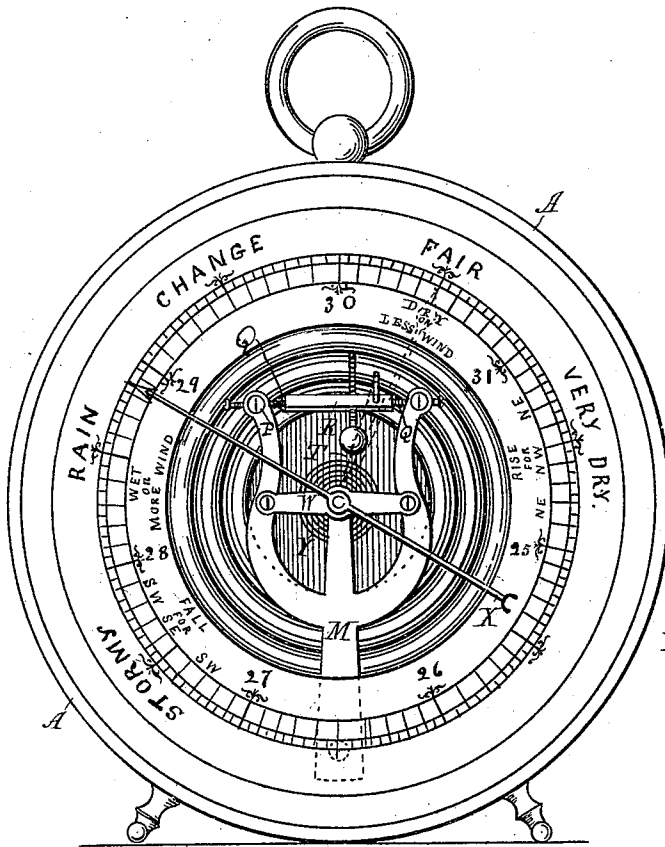


Fig. I.

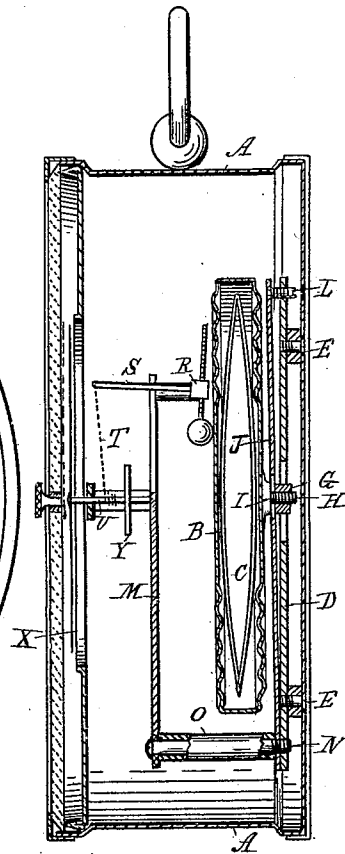


Fig. II.

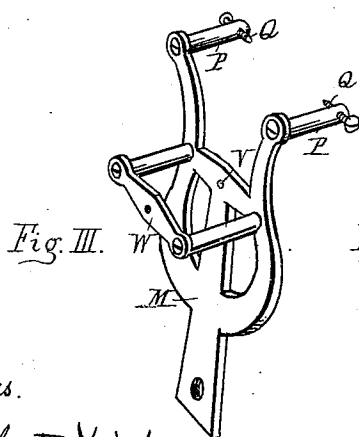
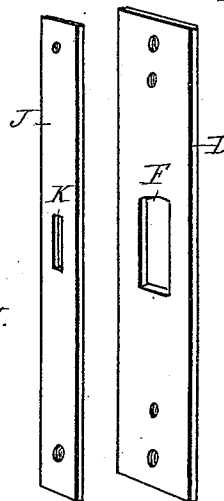


Fig. III.

Fig. IV.



Witnesses.

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UNITED STATES PATENT OFFICE.

OSCAR MÖLLER, OF HAMBURG, GERMANY.

HOLOSTERIC BAROMETER.

SPECIFICATION forming part of Letters Patent No. 459,977, dated September 22, 1891.

Application filed March 25, 1891. Serial No. 386,333. (No model.)

To all whom it may concern:

Be it known that I, OSCAR MÖLLER, of Hamburg, in Germany, have invented a new and useful Improvement in Holosteric Barometers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure I is a front elevation of my improved holosteric barometer; Fig. II, a central vertical section of the same; Fig. III, a detail view of the supporting-frame, and Fig. IV a detail view of the base-plate and the adjoining plate upon which the vacuum-chamber is adjusted.

My invention relates to improvements in holosteric barometers, and its object is to provide a simple, economical, and reliable device designed to obviate the various defects which limit the usefulness of instruments of this class as heretofore constructed.

In this invention the action is peculiarly sensitive, and the slightest variations of atmospheric pressure are promptly transferred to the indicator by a positive movement without the intervention of complicated levers or other unnecessary appliances, which are easily deranged and rendered uncertain in their operation by lost motion or an excess of friction.

Referring to the accompanying drawings, A designates the case; B, the vacuum-chamber, composed of concentrically-corrugated metallic plates which are hermetically united at the outer edges. The interior of the chamber is provided with an elliptic spring C to counteract the inward pressure of the air. In order to avoid incidental disadvantages which might ensue if the air-chamber should be attached directly to the case A, and furthermore to provide means whereby the barometer may be readily adjusted to various altitudes and localities, I employ a base-plate D, which is attached at two points to the rear wall of the case by screws E. This plate has a central slot F to provide space for the movement of a nut G, which engages a screw H, projecting from a boss I, which is attached to the rear side of the chamber. A plate J, the lower end of which is fastened to the base-plate, has a central slot K to admit the

screw H. The upper end of the plate is adjusted by a set-screw L, which is accessible from the rear side of the case. It will be seen that the pressure upon the chamber is regulated by the set-screw L, and the desired adjustment for various altitudes may be easily ascertained by observing the indicator while the set-screw is being manipulated. The vertical position of the chamber may also be regulated by shifting it up or down on the plate J and fastening it in the desired position by the nut G.

The supporting-frame M is firmly secured to the base-plate and the plate K by a screw N, which passes longitudinally through a hollow post O. The bifurcated ends of the frame carry dependent arms P, provided with screw points or bearings Q, which engage the spindle R of the angle-lever S. The short arm of this lever is threaded, so that its length may be regulated as desired. Its lower end being ball-shaped, it may be turned in any position and still preserve a uniform contact with the chamber. One end of a chain T is attached to the long arm of the angle-lever, and the other end wound around the indicator-spindle U, which is journaled at V in the supporting-frame and in the bridge W. Reciprocal movement of the indicator X is effected by a hair-spring Y, which encircles the spindle.

It will be observed that when the barometer is adjusted the rear side of the chamber bears on the plate J and the front side on the short arm of the angle-lever. A constant contact is thus insured, and, there being no lost motion, the action of the instrument is uninterrupted and every change in the pressure of the atmosphere is indicated by a positive movement.

What I claim as new is—

1. In a holosteric barometer, the vacuum-chamber provided interiorly with a spring to counteract the pressure of the external atmosphere, the vertical plate upon which the chamber is adjusted, the angle-lever having an adjustable short arm, and a ball on the end of said arm, substantially as herein set forth.

2. In a holosteric barometer, the herein-de-

scribed vacuum-chamber, the vertical plate upon which the chamber is adjusted, the angle-lever and its adjuncts, in combination with the base-plate D, the supporting-frame
5 M, the indicator-spindle U, and the indicator X, substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 7th day of January, 1891, in the presence of witnesses.

OSCAR MÖLLER.

Witnesses:

EWD. POUSEN.

GUSTAV A. BECKER.