O. W. BAYLEY.

Steam-Pressure Gage.

No. 199,953. Patented Feb. 5, 1878.

Fig. 1.

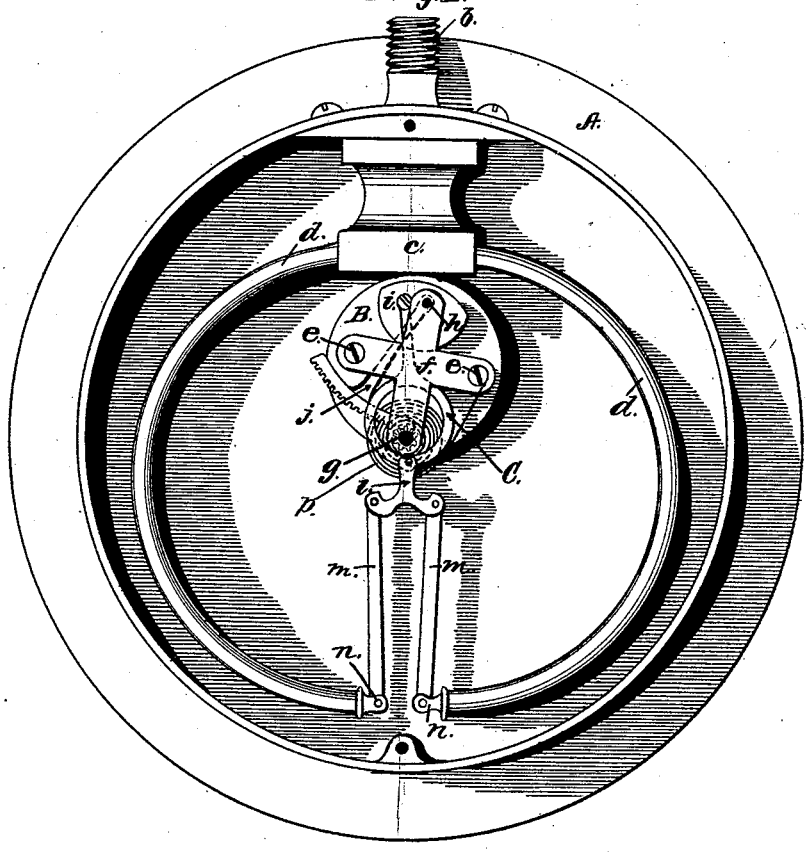
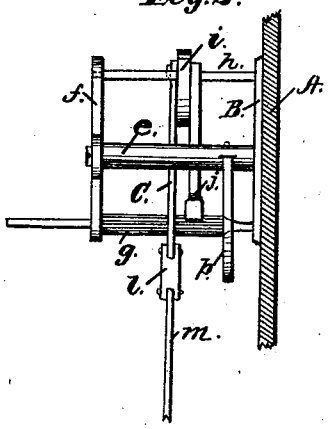


Fig. 2.



Witnesses;
Chas. M. Peck
P. A. Lancaster

Inventor;
Oliver W. Bayley
by his Attys
Peck & Ritchie

UNITED STATES PATENT OFFICE.

OLIVER W. BAYLEY, OF DAYTON, OHIO.

IMPROVEMENT IN STEAM-PRESSURE GAGES.

Specification forming part of Letters Patent No. **199,953,** dated February 5, 1878; application filed December 12, 1877.

To all whom it may concern:

Be it known that I, OLIVER W. BAYLEY, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Steam-Pressure Gages; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of my invention is to produce a duplicate tube pressure-gage, which shall be simple in its construction and yet delicate and reliable in its registration.

The novelty consists in the construction and arrangement of the registering mechanism, as will be herewith set forth.

In the accompanying drawing, Figure 1 is a front elevation of my improved gage with the dial-plate removed. Fig. 2 is a side elevation of the registering mechanism.

A represents the ordinary casing, through the periphery of which passes the steam-pipe *b* into a box, *c*. From this latter, as indicated, extend on opposite sides two semicircular flat or oval tubes, *d*, closed at their free or lower ends. The bearing-frame consists of a flat disk, B, attached to the inner side of the back of the casing, and supporting two standards, *e*, upon the outer end of which is fastened the cross-shaped head *f*, as shown. Through the head *f*, and in the disk B, at the center of the casing A, is journaled a pinion-shaft, *g*, on which the index-hand is fastened. A second small shaft, *h*, is likewise journaled in the head *f* and disk B, above the pinion-shaft, as shown. Upon this shaft are keyed a segmental disk, *i*, and also a segmental rack-arm, *j*, which engages with the pinion-shaft *g*. C is a link-arm, of the shape shown in Fig. 1 by the dotted lines, having its upper end pivoted upon the face of the disk *i*, and having pivoted to its lower end the bifurcated bracket *l*. From this latter the arms *m* depend, and are pivoted, respectively, at their lower ends to ears *n* upon the ends of the tubes *d*, as shown. Now, as the pressure of the steam in the tubes *d* causes them to expand, the arms C, *m*, and *j*, through their connections, cause the pinion-shaft carrying the index to be turned, and the degrees of pressure to be registered upon the dial.

This arrangement of the levers and their connections insures great delicacy in the registration of the gage.

To aid in bringing the index back as the pressure relaxes, I employ the usual coiled spring *p*, secured by one end to the shaft *g*, and by the other to the support *e*, as shown.

I am aware that a steam-pressure gage, consisting of a fixed steam-tube, communicating with two semicircular tubes having their free ends connected by means of links with a lever having fixed on its axis a toothed sector working into a pinion on the axis of the index is old, and such I do not desire to claim, broadly, as my invention; but

Having thus fully described my invention, I claim—

In a steam-pressure gage, the combination with the tubes *d* and arms *m*, of the bifurcated bracket *l*, link-arm C, disk *i*, segmental rack-arm *j*, shaft *h*, pinion-shaft *g*, and spring *p*, the several parts constructed and relatively arranged to operate as specified.

Witness my hand this 25th day of November, A. D. 1877.

OLIVER W. BAYLEY.

Witnesses:
P. H. GUNCKEL,
CHAS. M. PECK.