

J. ANNIN.

Dials for Pressure Gages.

No. 140,867.

Patented July 15, 1873.

Fig:1.

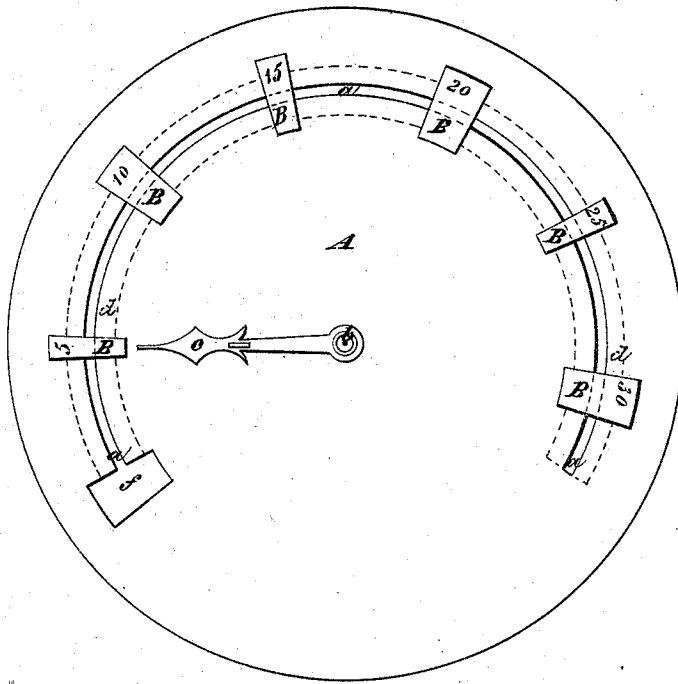
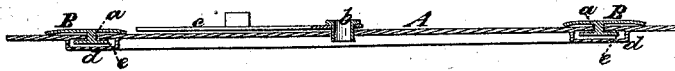


Fig:2.



Witnesses:

Fred Haynes
David Hill

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN DIALS FOR PRESSURE-GAGES.

Specification forming part of Letters Patent No. **140,867**, dated July 15, 1873; application filed September 16, 1872.

To all whom it may concern:

Be it known that I, JOSEPH ANNIN, of the city, county, and State of New York, have invented an Improvement in the Dials of Pressure-Gages and other instruments, of which the following is a specification:

Spring or diaphragm pressure-gages after having been for some time in use are liable to become defective in their indication, by reason of the change of the form of their diaphragms or from other causes; and the only method heretofore practiced of correcting them has been by the removal of the dial and its replacement by a new one, and the graduation of the latter according to the position of the index by comparison with the indications of a test-gage.

The object of this invention is to provide an easier method of correction; and to this end it consists in providing the dial with movable figures or numerals, or other movable graduations.

Figure 1 in the accompanying drawing is a face view of the dial of a pressure-gage constructed according to my invention. Fig. 2 is an axial section of the same.

Similar letters of reference indicate corresponding parts in both figures.

A is the dial-plate, constructed with a slot, *a*, concentric with the spindle *b* of the index *c*, the said slot extending the whole distance occupied by the graduations of the dial. To the back of the plate, behind the slot *a*, is soldered or otherwise secured a bridge-plate, *d*, which straddles the said slot, and corresponds in its longitudinal form therewith, the object of the said bridge-plate being to give the necessary stiffness to the plate near the slot *a*. B B are small movable metal plates, upon each of which is inscribed one of the numerals or figures constituting the graduations of the gage. These plates, which straddle across the front of the slot *a*, have attached to their backs studs *e e*, the necks of which pass freely through the slot *a*, and the heads of which lap over the edges of the said slot within the

bridge-plate *d*. The graduated plates B B are slightly arched, as shown in Fig. 2, so that their ends press upon the face of the dial A, and by reason of the elasticity of the said plates produce friction enough to hold the latter firmly enough against the dial to prevent accidental displacement, though permitting them to be adjusted in the direction of the movement of the index and of the length of the slot *a*. At one end of the slot *a* is an opening, *f*, large enough to admit the heads of the studs *e e* to permit the introduction of the latter one after another into the slot.

When the parts of the gage have been put together in the manufacture, and the graduated plates B inserted into the slot of the dial, and the gage is applied to a pressure apparatus to which a test-gage is attached, the plates B B are adjusted to make the index give a proper indication by comparison with the test-gage. When after use the indication becomes defective, the gage is again attached to the pressure apparatus, and the plates B B, or as many of them as necessary, are adjusted by moving them along the slot in either direction, as may be shown requisite by comparison of the index with the test-gage.

For locomotive-gages the plates B B may be furnished with small set-screws to secure their adjustment, and prevent their displacement by the jarring to which such gages are subject.

What I claim as my invention is—

1. The independently-adjustable plate B, showing figures, numerals, words, or letters, in combination with the dial A of the gage, for operation substantially as herein set forth.

2. The dial A, constructed with a curvilinear slot, *a*, and bridge-piece *d*, in combination with the adjustable plates B provided with studs *e*, substantially as shown and described, for the purpose specified.

JOSEPH ANNIN.

Witnesses:

A. ANNIN,
G. McVAY.