

No. 794,054.

PATENTED JULY 4, 1905.

G. SPENCER.
PRESSURE GAGE.
APPLICATION FILED APR. 18, 1904.

Fig. 1.

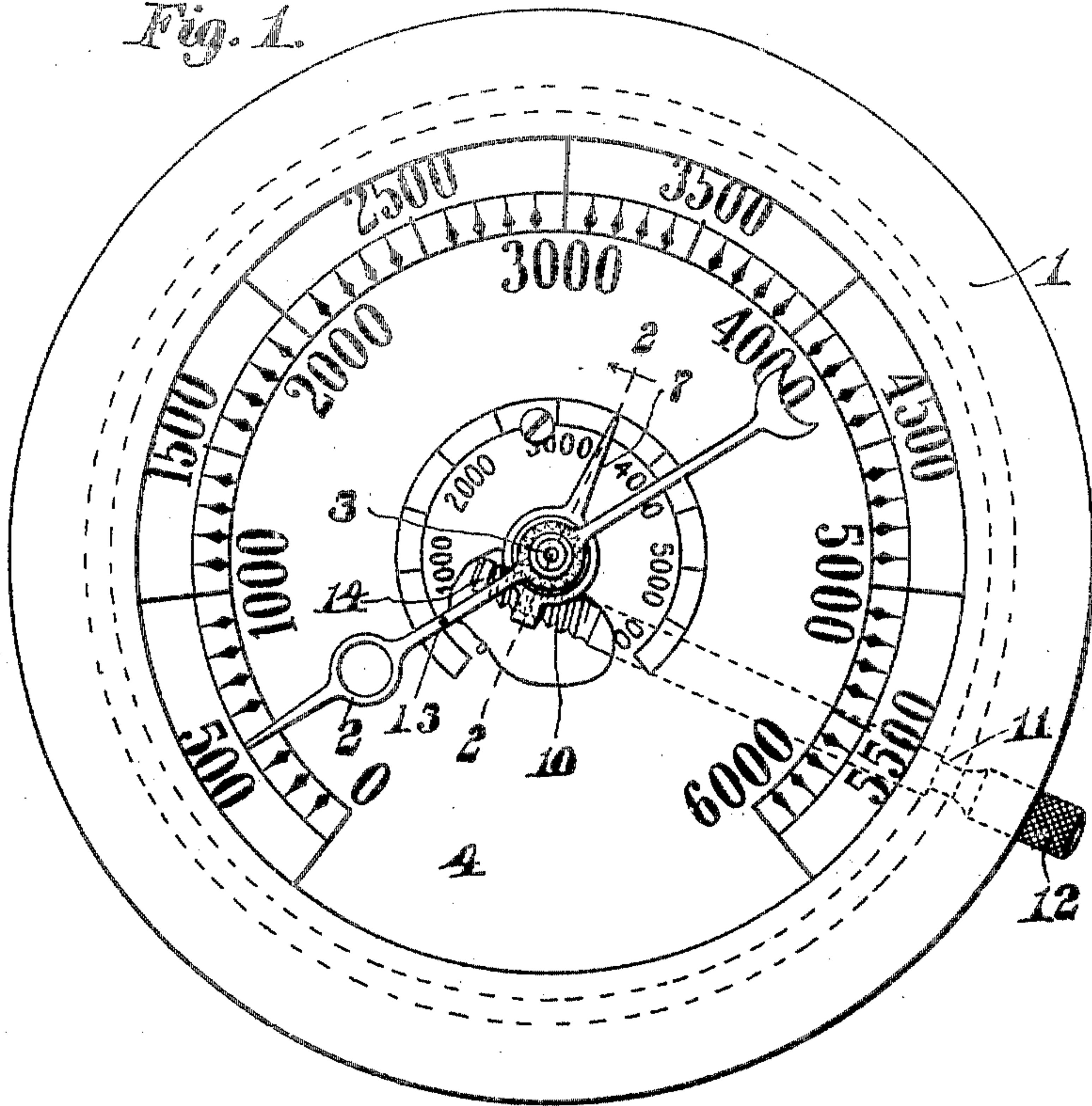


Fig. 2.

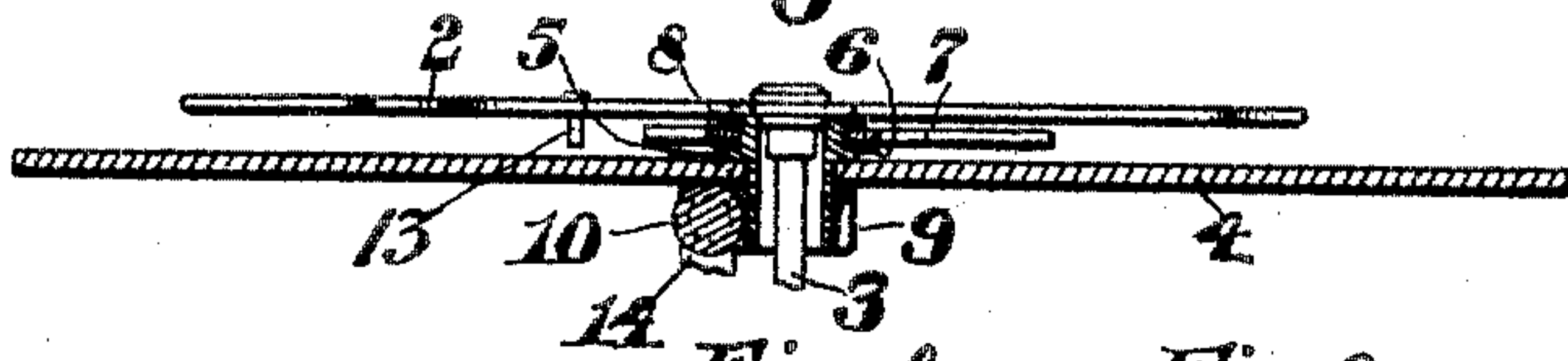


Fig. 6.

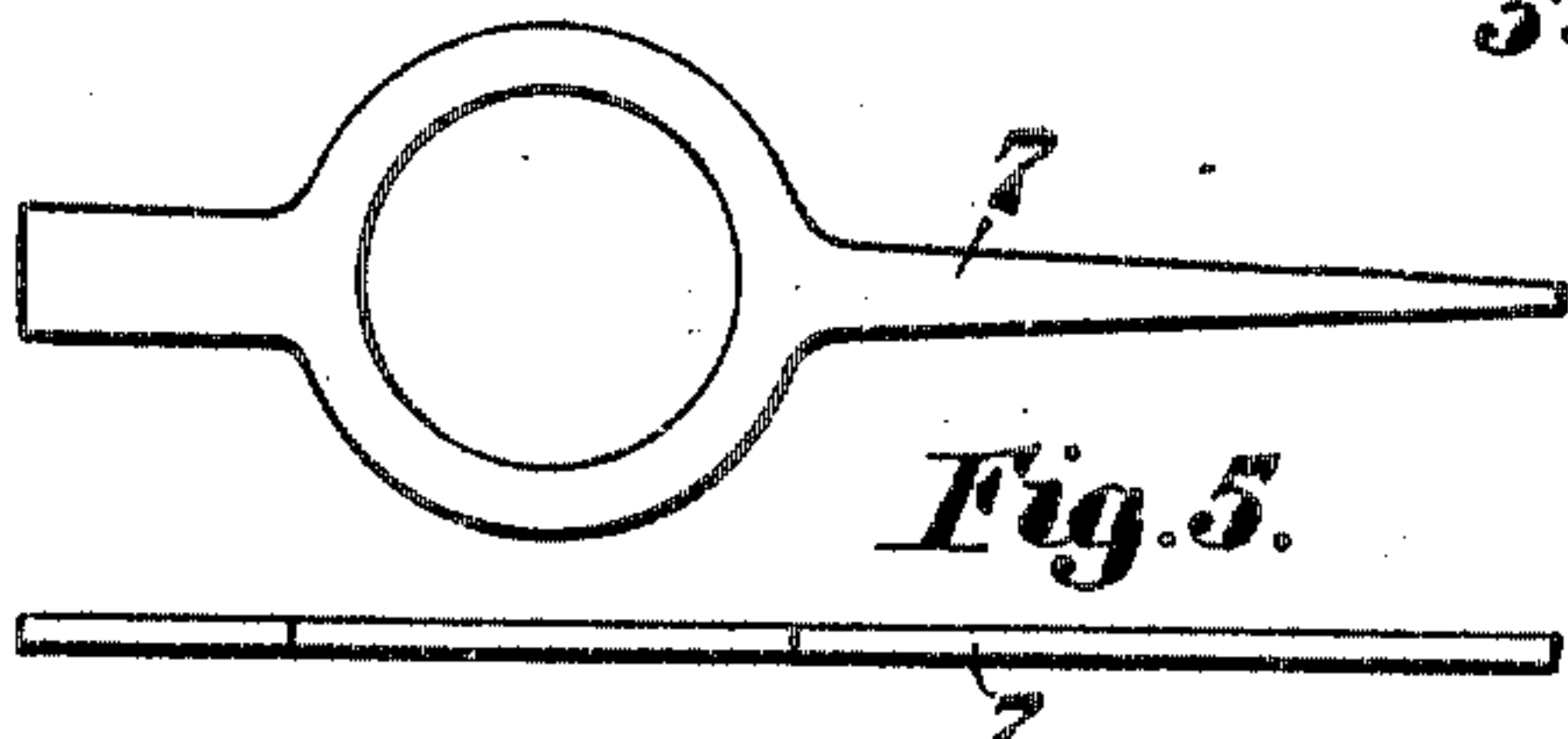


Fig. 5.

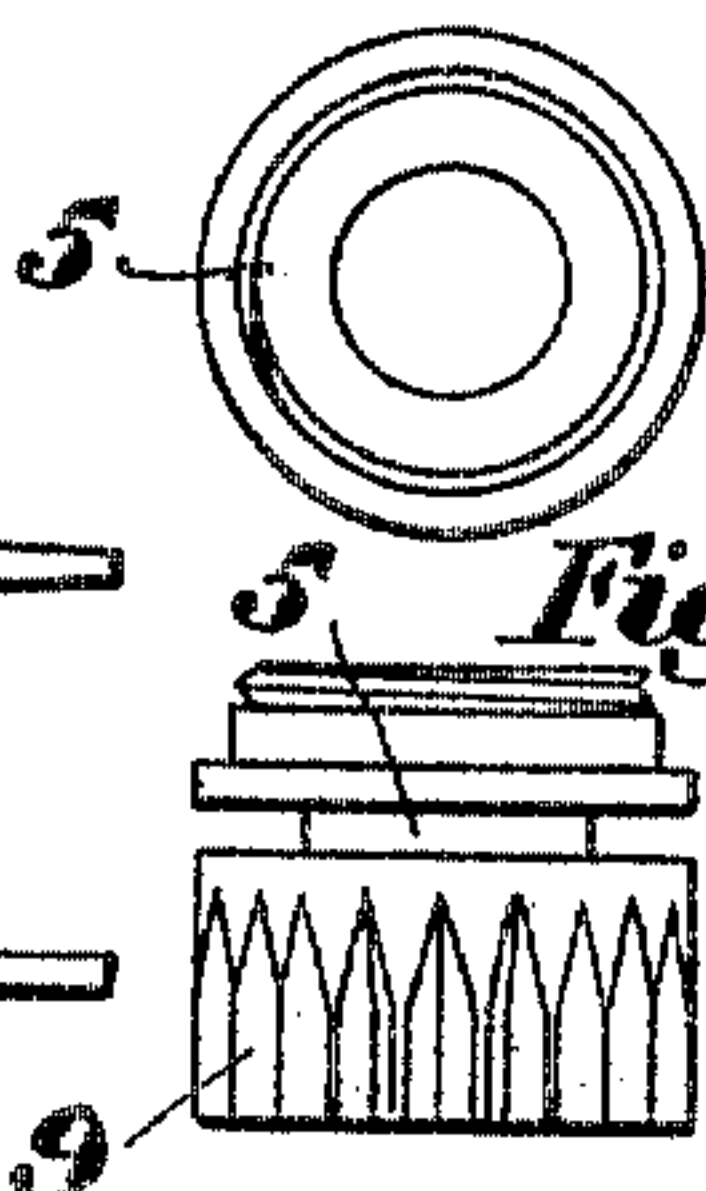


Fig. 4.

Fig. 8.

Fig. 10.

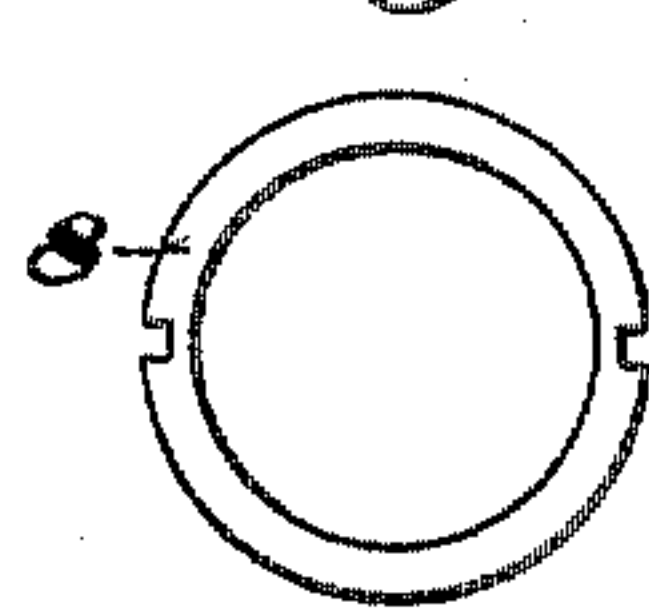
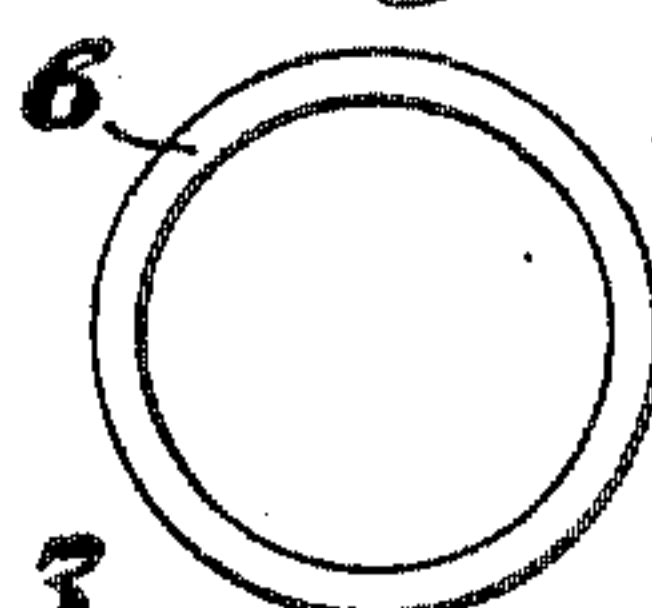


Fig. 7.

Fig. 9.



Witnesses:

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Inventor:

by G. Spencer
Ralph W. Allen Atty.

UNITED STATES PATENT OFFICE.

GEORGE SPENCER, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO
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PRESSURE-GAGE.

SPECIFICATION forming part of Letters Patent No. 794,054, dated July 4, 1905.

Application filed April 18, 1904. Serial No. 203,785.

To all whom it may concern:

Be it known that I, GEORGE SPENCER, a citizen of the United States, and a resident of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Pressure-Gages, of which the following is a specification.

My invention relates to pressure-gages furnished with what is called a "maximum-pressure hand;" and its object is to provide means for mechanically moving said hand from the outside of the gage-case.

The invention is illustrated by the accompanying drawings, in which—

Figure 1 is an elevation showing a pressure-gage equipped with my device and with the dial partly cut away. Fig. 2 is a central section through the line 2 2, Fig. 1. Figs. 3, 4, 5, 6, 7, 8, 9, 10 are enlarged detail views of the several parts.

Similar numbers refer to similar parts throughout the several drawings.

1 is a hydraulic gage with its index-hand 2 mounted on the arbor (pinion-shaft) 3 and having a dial 4. Through the central opening in the dial extends the bushing 5 in loose contact therewith and rotatable therein and having on its upper end a shoulder. On the lower end of the bushing is mounted and rigidly held by frictional contact the toothed ring 9, resting when in position loosely against the under side of dial 4. This toothed ring 9 is adapted to engage the worm-gear 10, whose shaft extends through the gage-case, engaging said case by the groove 11 and furnished on its outer end with the knurled portion 12 for convenience in turning it and journaled at its inner end in post 14. On the shoulder of the bushing 5 which rests against the upper side of dial 2 is mounted the annular spring 6, over which is placed the maximum-pressure hand 7, which is held in place by the threaded nut 8. The index-hand 2 is furnished with the tooth 13, adapted to rest against the maximum-pressure hand 7.

Normally (when no pressure is applied) the index-hand 2 points to zero on the dial and the maximum-pressure hand rests against the

upper side of tooth 13 on said index-hand. When pressure is applied, the index-hand moves around the dial, carrying the maximum-pressure hand with it. As the pressure is removed the index-hand returns to zero, leaving the maximum-pressure hand at the highest point reached. Before pressure is again applied this maximum-pressure hand must be returned to zero, and heretofore this has been accomplished by removing the cover of the case, called the "ring," or raising it and moving the maximum-pressure hand with one's hand, thereby soiling, disfiguring, and injuring the dial and its markings, as well as the maximum-pressure hand and the index-hand and their bearings. To obviate these difficulties, I have invented the device described, which is adapted to move the maximum-pressure hand in either direction by simply turning the worm-gear shaft forward or backward, as the case may be. By means of the annular spring 6 and the nut 8 the frictional bearing of the maximum-pressure hand is so adjusted as to enable it to be easily carried around by the index-hand with scarcely any perceptible friction and of course without any movement of the worm-gear and to be returned by the worm-gear, as described.

It is perfectly apparent that the device is applicable when it is desired to indicate the minimum pressure by simply placing the maximum-pressure hand against the tooth and below instead of above it. The hand may properly then be called the "minimum-pressure hand."

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pressure-gage the combination; with the gage-case and gage mechanism including the dial and index-hand; of a bushing rotatably mounted in the dial; a maximum-pressure hand arranged on the upper end of said bushing; a toothed ring rigidly fixed to the lower end of said bushing; and a worm-gear arranged within said case to engage said toothed ring and having a shaft extending through said case; said index-hand being furnished with means for engaging and moving

said maximum-pressure hand; substantially as described.

2. In a pressure-gage the combination; with the gage-case and gage mechanism including
5 the dial; of the index-hand 2 having the tooth 13; the bushing 5 rotatably mounted in said dial; the spring 6, the maximum-pressure hand 7 and the nut 8 arranged on the upper end of said bushing; the toothed ring 9 rigidly fixed
10 to the lower end of said bushing; and the

worm-gear 10 mounted within said case and having a shaft extending through said case; substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE SPENCER.

Witnesses:

RALPH W. FOSTER,

ADOLPH L. AGATHMARY.