

C. L. DICKERSON.
GAGE GLASS.
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940,860.

Patented Nov. 23, 1909.

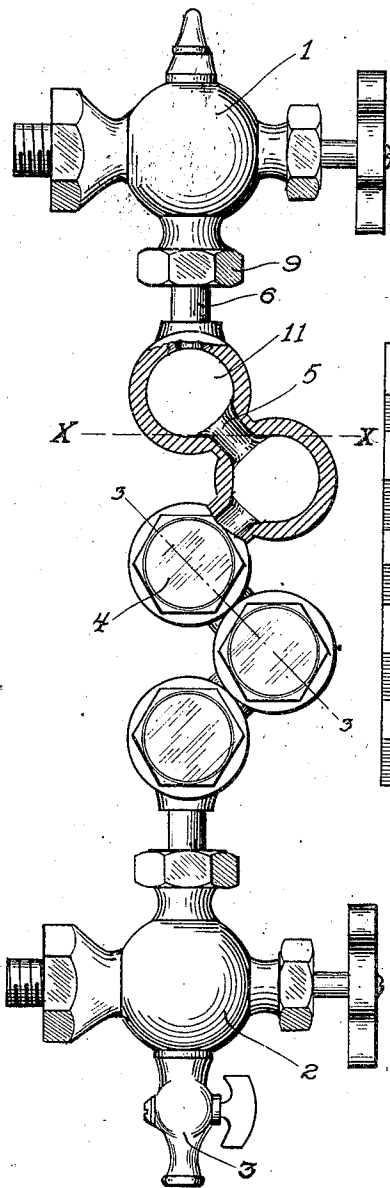


Fig. 1.

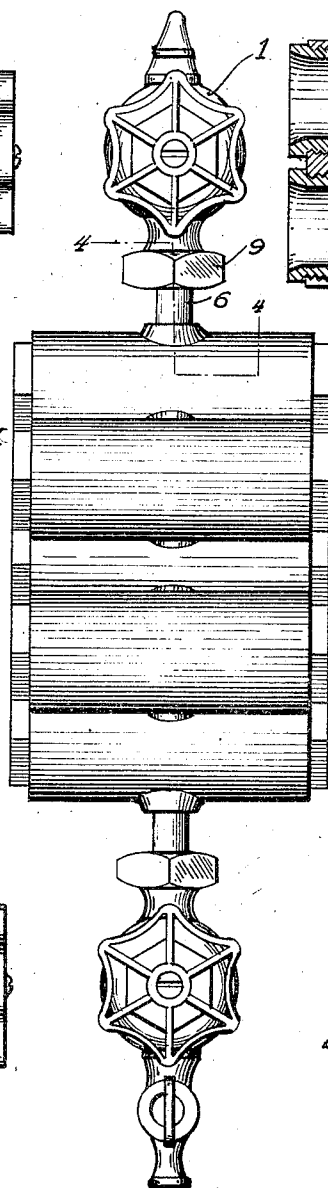


Fig. 2.

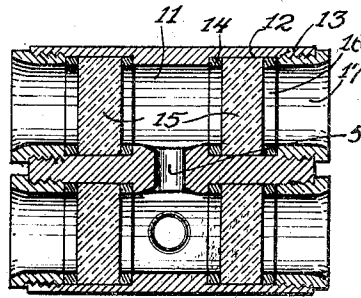


Fig. 3.

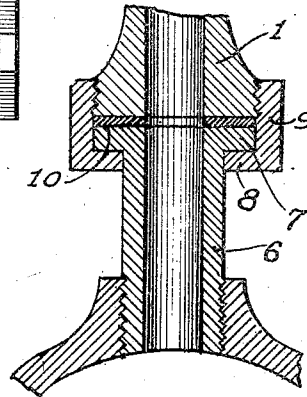


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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GAGE-GLASS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES L. DICKERSON, a citizen of the United States, residing at Clinton, in the county of Dewitt and State of Illinois, have invented certain new and useful Improvements in Gage-Glasses, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to gage-glasses, and has for its object the production of a gage-glass, which comprises a plurality of tubular portions arranged in zigzag relation to the vertical axis of the gage and which will
15 allow the liquid carried therein to be viewed at any height.

Another object of this invention is the production of a gage-glass, which will allow the height of the liquid to be determined
20 from one side of the same thereby obviating the necessity of viewing the glass from both sides in order to determine the actual height of the liquid therein.

A further object of this invention is the production of a gage-glass, which will allow the removal of the glass for cleaning and polishing the same when the same has become frosted in appearance, as often happens in the ordinary gage-glass now in use.

30 With these and other objects in view this invention consists of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described and claimed.

35 In the drawings: Figure 1 is a side view of the gage, showing the relation of the barrel portions to each other and showing two of the same in section; Fig. 2 is a front view of the same; Fig. 3 is a section taken on line 3—3 of Fig. 1; Fig. 4 is a fragmentary view of the upper connection of the valve to the gage-glass.

Referring to the drawings by numerals, 1 designates the upper valve and 2 the lower valve, which are adapted to be secured to the boiler or other receptacle. To the lower valve 2 is secured an additional valve 3 for allowing the gage-glass to be drained of its contents after the valves 1 and 2 have
50 been closed.

The gage-glass proper comprises a plurality of barrel-portions 4, which are positioned in zigzag relation, relative to the vertical axis of the gage, so as to have the top of
55 one barrel on the level with the bottom of the other barrel, positioned above the last-

mentioned barrel-portion, as shown in Fig. 1 and indicated by the line $x-x$. It will be obvious that when the liquid in the barrel-portions 4 rises to such an extent as to overflow one barrel-portion that as soon as the liquid has reached the top of said barrel-portion the liquid will immediately begin to flow in the barrel-portion positioned directly above the last-mentioned barrel-portion, as is clearly shown in Fig. 1. The barrel-portions 4 are integrally connected and are provided with a communicating passage way 5, which allows the liquid to readily flow from one barrel-portion to the other, thereby allowing the level of the liquid to be readily determined, when viewing the gage from one side.

The barrel-portions 4 are connected to the valves 1 and 2 by means of communicating pipe 6, which is screw-threaded into the extremital barrel-portions, as shown in Fig. 1, and in detail in Fig. 4. The communicating pipe 6 is provided, at one end, with a flanged portion 7, which overhangs the flange 8 of the nut 9, and is firmly held in engagement with the valve portion 1. The nut 9 is threaded upon the lower portion of the valve portion 1 and the washer 10 is positioned intermediate the valve portions and the flanged portion 7 of the communicating pipe 6, thereby forming a tight joint.

The barrel-portions 4 comprise a cylindrical hollow body portion 11, which are provided with socketed outer ends 12, which outer ends are screw-threaded, as at 13. A packing ring or gasket 14 is positioned upon the inner end of the socket portion 12 and a glass 15 is positioned against said gasket 14, and an additional gasket 16 is positioned against the outer edge of the glass 15. A nut 17 is threaded into the screw-threaded end of the tubular body portion 11 and engages, at its inner end, the gasket 16, thereby firmly clamping the glass 15 within the sockets. It will be obvious that any pressure upon the inside of the glass will not break or crack the same for the glass will bear against the yieldable packing ring or gasket 16. However, the nut 17 is threaded into the threaded end of the tubular body portion 11 of the barrel-portion 4 and firmly clamps the glass in the sockets 12.

From the foregoing description, it will be readily seen that I have provided an improved gage-glass, which will allow the level of the liquid in the receptacle to which the

glass is attached to be readily determined by viewing the same from one side, and I have also provided a glass, which can be readily repaired, if any part thereof is broken, without removing the entire gage and replacing a new one therefor.

It will also be obvious, as stated above, that by having the tubular portions arranged as clearly shown in section in Fig. 1 that the liquid will, as soon as one of the barrel-portions is overflowed, flow into the barrel-portion next above said last-mentioned barrel-portion, through the ports or openings 5.

What I claim is:

1. A gage of the class described comprising a plurality of barrel-portions positioned zigzag with respect to the vertical axis of the gage, and arranged so that the top of the inner portion of one barrel will be on the level with the bottom of the barrel just above

2. A gage of the class described comprising a plurality of barrel-portions positioned in a staggered relation in reference to the vertical axis of the same.

3. A gage of the class described comprising a plurality of hollow barrel portions, transparent means positioned in each end of said barrel-portions, said barrel-portions positioned in staggered relation and having the top of the inner bore of one barrel-portion on a level with the bottom of the inner bore of the other barrel-portion for readily allowing the liquid contained therein to be viewed from either side thereof.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CHARLES L. DICKERSON.

Witnesses:

ELMER METZ,

C. W. SAMUELS.