No. 705,192. Patented July 22, 1902.

F. M. ASHLEY.

WATER GAGE.

(Application filed Apr. 20, 1899.)

(No Model.)

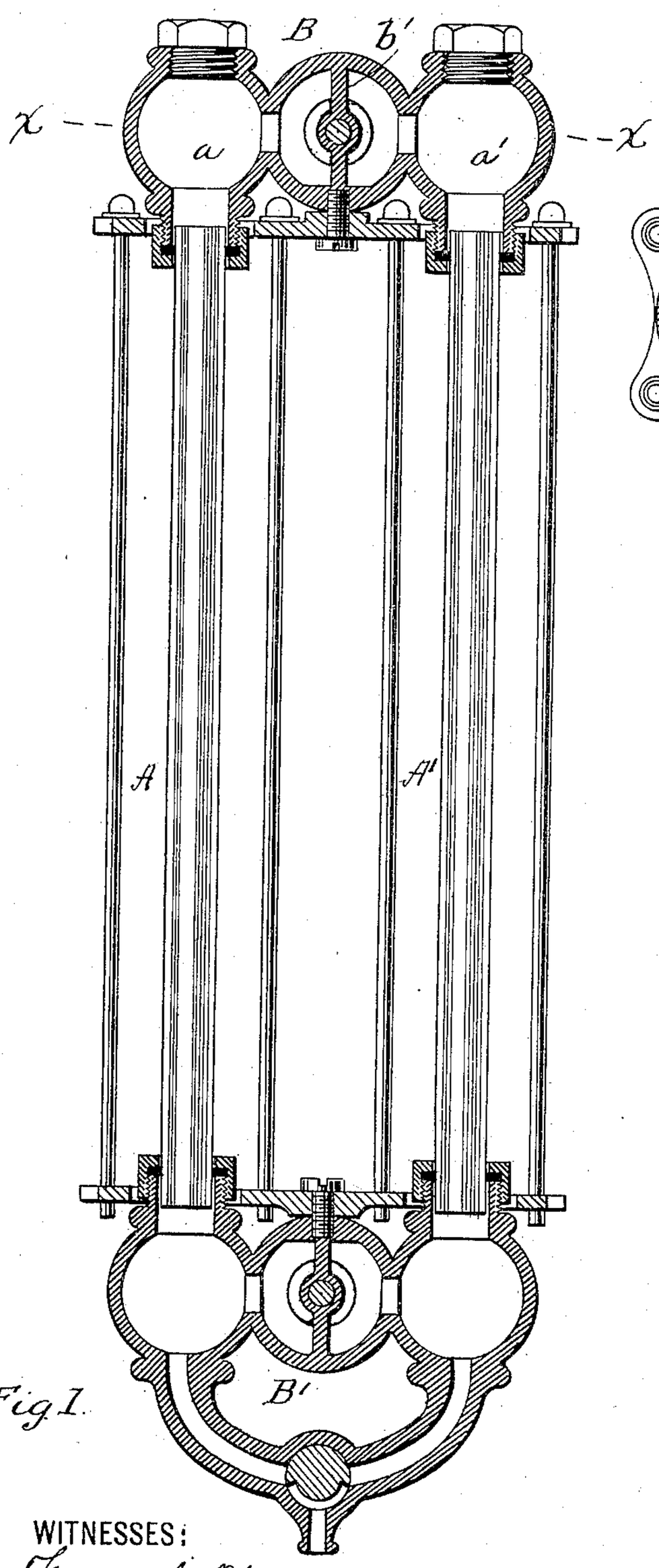

Fig 1.

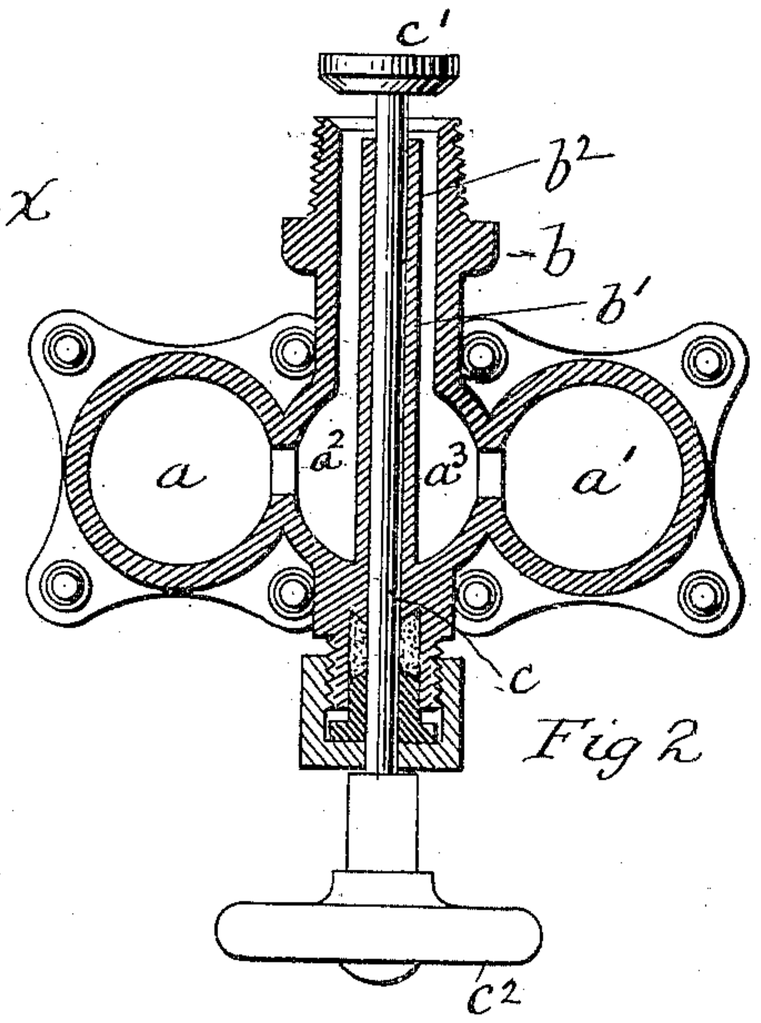

Fig 2.

WITNESSES:

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FRANK M. ASHLEY, OF BROOKLYN, NEW YORK.

WATER-GAGE.

SPECIFICATION forming part of Letters Patent No. 705,192, dated July 22, 1902.

Application filed April 20, 1899. Serial No. 713,812. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. ASHLEY, a citizen of the United States, residing at the city of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Water-Gages, of which the following is a full, clear, and exact description.

My invention relates to water-gages for steam-boilers and similar apparatus, and has special reference to double gages in which there are two glasses communicating with the boiler through independent passages in two conduits one above and the other below, whereby the boiler need be tapped in but two places to accommodate the two gages. The general object of such device is to insure a correct indication of the level of the water in the boiler. The passage leading to one of the glasses may become plugged up by sediment, as is sometimes the case in single-glass gages; but it is quite unlikely that the independent passages leading to both glasses will ever become plugged at the same time. Thus if it is ever noticed that the water stands at different levels in the two glasses it is an indication that one of the glasses is plugged, and the obstruction may be removed by blowing out the gage. So long as the water is at the same level in both glasses it is reasonable to suppose that such level is a correct indication of the level of water in the boiler.

The present invention is a means for automatically shutting off the steam from the gage whenever by accident or otherwise one of the glasses is broken or removed. It also comprehends means for putting the uninjured glass into operative condition for use while the broken or injured glass is being removed.

In the accompanying drawings, Figure 1 is a front elevation of a double gage with the upper and lower fittings shown in section. Fig. 2 is a section taken on line $x\,x$ of Fig. 1.

Referring to the drawings by letter, A A′ indicate the two gage-glasses, supported between an upper fitting B and a lower fitting B′. These two fittings each have a pipe or conduit b tapped into the boiler. The glass A communicates with the chamber a, while the glass A′ communicates with the chamber a', said chambers leading, respectively, into independent passages a^2 and a^3, extending through the pipe b, said independent passages being formed by a fixed partition b'. This partition extends throughout the length of the pipe b and is provided with an axial longitudinal enlargement b^2, through which a valve-stem c passes and has its bearing. The valve c' on the inner end of this stem is located inside of the boiler and is adapted to seat against the end of the pipe b and close both of the passages a^2 and a^3. At its outer end the valve-stem is fitted with a handle or wheel c^2, by which the stem can be reciprocated and turned. This arrangement of passages and valve occurs both at the upper and lower ends of the gage. The function of this valve is to stop the escape of steam or water when a glass breaks or is removed. If the glass breaks, the rush of steam will drive the valve against the end of the pipe and close off the passages and prevent more than a momentary escape. By pulling and turning on the wheel c^2 at the same time the valve may be ground to its seat.

Having described my invention, I claim—

1. In a double gage a fitting provided with a single pipe leading to the boiler and having two independent passages through it communicating respectively with the two gage-glasses, in combination with a single valve adapted to close automatically when a gage-glass breaks, and shut off the steam from both glasses and having a stem bearing in the partition separating the passages.

2. In a double gage a fitting provided with a single pipe leading to the boiler and having two independent passages through it communicating respectively with the two gage-glasses, in combination with a valve adapted to close automatically when a gage-glass breaks, and shut off the steam from both glasses, said valve being located at the inner end of said pipe, and having a stem bearing in the partition separating the passages, substantially as described.

In witness whereof I subscribe my signature in presence of two witnesses.

FRANK M. ASHLEY.

Witnesses:
WM. A. ROSENBAUM,
FRANK S. OBER.