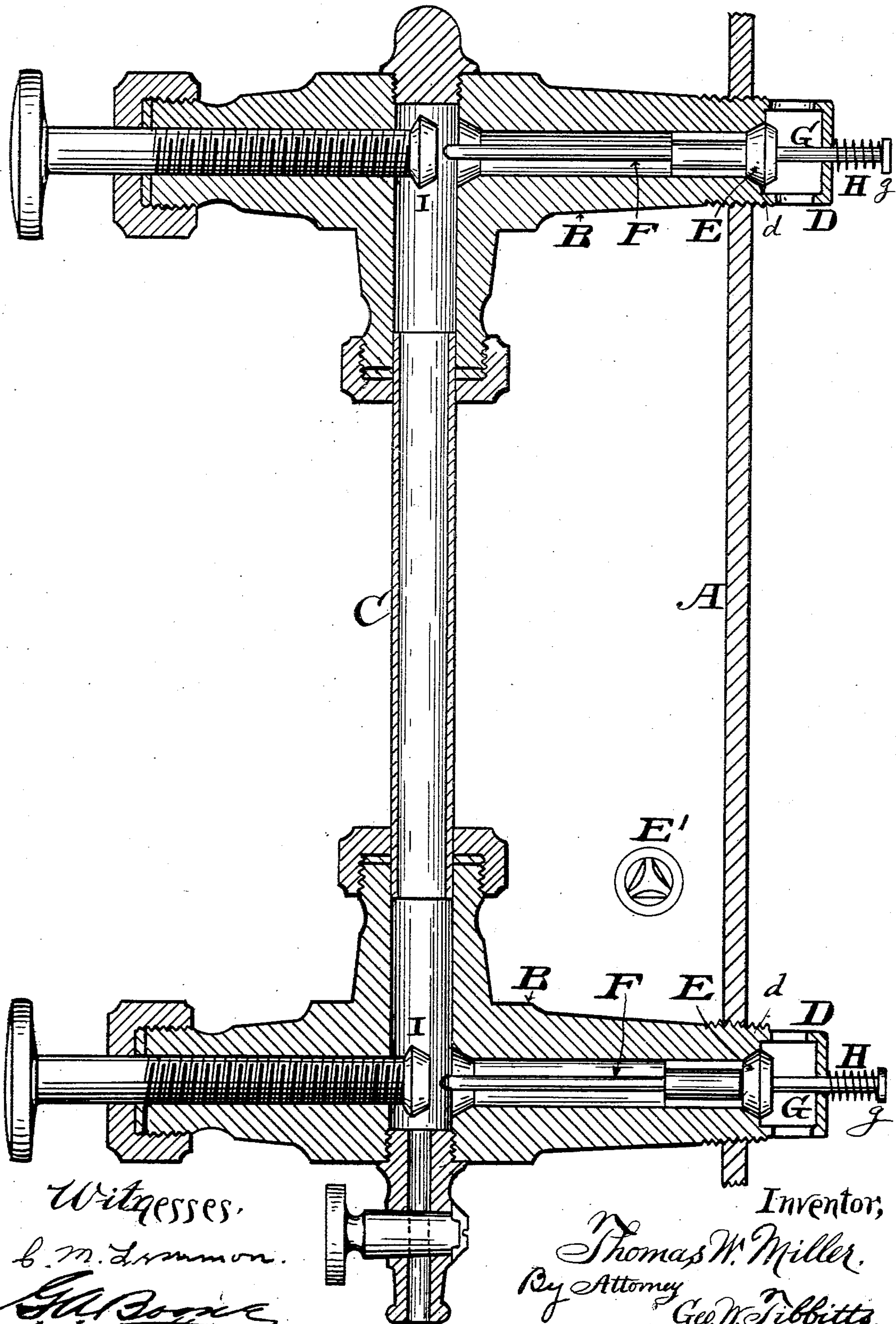


(No Model.)

T. W. MILLER.
WATER GAGE.

No. 504,694.

Patented Sept. 5, 1893.



Witnesses,
C. M. L. L. L. L.
G. H. B. B. B.

Inventor,
Thomas W. Miller.
By Attorney Geo. W. Tibbitts.

UNITED STATES PATENT OFFICE.

THOMAS W. MILLER, OF CLEVELAND, OHIO.

WATER-GAGE.

SPECIFICATION forming part of Letters Patent No. 504,694, dated September 5, 1893.

Application filed December 19, 1892. Serial No. 455,730. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. MILLER, a citizen of the United States, and a resident of the city of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Safety Attachments for Water-Gages for Steam-Boilers, of which the following is a specification.

10 This invention relates to water gages for steam boilers and has for its object to provide against danger by the breaking of the glass tube, and consists in the combination of an auxiliary valve, on the inner ends of the body
15 of the gage cocks, within the boiler, whereby the inner ends of said cock will be immediately closed, in case of breakage of the glass tube, by the pressure in the boiler, and thereby prevent the escape of steam or hot water.

20 In the accompanying drawing the figure represents a vertical section of a glass water gage having my improvement attached.

A represents the boiler sheet, and B B, are gages having a glass tube C connecting them.
25 These are of the usual well-known construction. To these my improvement is attached.

On the inner ends of the cock bodies is made an open thimble or boil D, and in the end of body is made a valve seat *d*.

30 E is a valve having an inner stem F, and an outer stem G, which protrudes through the end of the thimble or boil, and has a head *g*.

H is a spring on said stem bearing against the head *g* and thimble or boil D. The body
35 or valve E, which plays in the base of the

body B of cock, is made triangular as seen at E². The inner valve stem extends inward to near the main valve I, and may be pushed by said valve when the same is nearly or quite closed.

The working of this device is as follows:—
The normal position of valve E is open, being held open by the spring, it having sufficient strength to hold while the water glass tube is whole or in perfect order, but should the glass
45 tube become broken, so that steam could escape, then the condition being changed, the force of steam through the cocks would be such as to force the valve E shut, the spring being of feeble tension, would yield to the escaping steam pressure, and thus prevent further escape of steam.

Having described my invention, I claim—
The combination with the gage-cock, provided with an apertured thimble inclosing its
55 inlet port and with a valve-seat within said thimble, of the valve E, inclosed in said thimble and adapted to fit said valve-seat, said valve having oppositely arranged stems, one of which is arranged in the path of the valve
60 of the cock, the other of said stems projecting through said thimble and being provided with a head, and a spring, arranged between said head and the outer face of said thimble, substantially as set forth.

THOMAS W. MILLER.

Witnesses:

GEO. W. TIBBITTS,
ANTON FORSTER.