

No. 625,724.

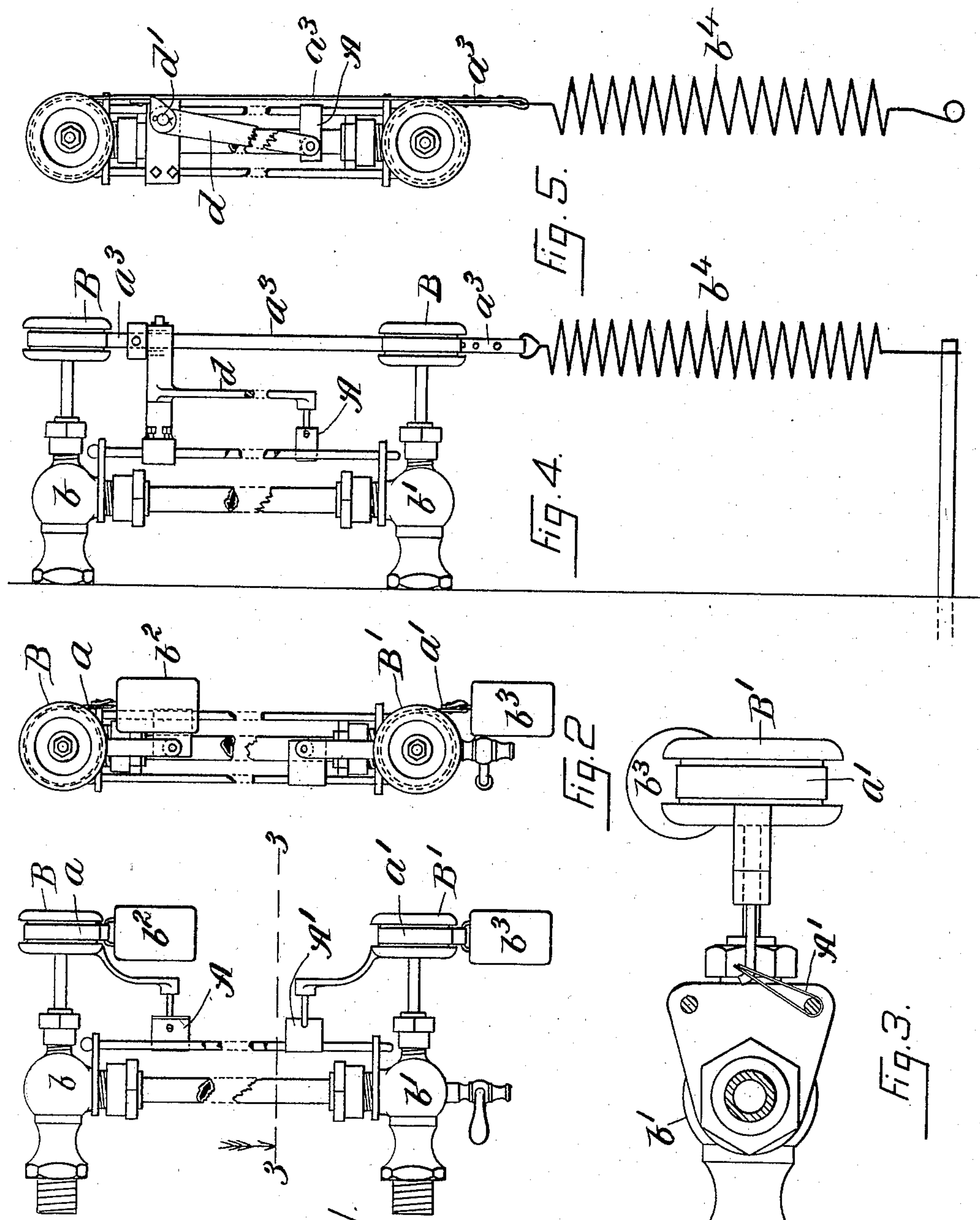
Patented May 23, 1899.

M. GOUDREAU.

WATER GAGE.

(Application filed May 7, 1897.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

MARCEL GOUDREAU, OF TAUNTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ADOLPHE MILOT, OF SAME PLACE.

## WATER-GAGE.

SPECIFICATION forming part of Letters Patent No. 625,724, dated May 23, 1899.

Application filed May 7, 1897. Serial No. 635,511. (No model.)

*To all whom it may concern:*

Be it known that I, MARCEL GOUDREAU, of Taunton, in the county of Bristol and State of Massachusetts, have invented an Improved Water-Gage, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved water-gage. Fig. 2 is a front view. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a side view showing a modified form, and Fig. 5 is a front view of Fig. 4.

Sight-tube water-gages have long been in common use, and many attempts have been made to cause the breaking of the sight-tube to automatically close the passages connecting the sight-tube with the boiler. (See, for example, Patents No. 497,594 to Beinke, dated May 16, 1893, and No. 587,297 to Best, dated August 3, 1897.)

My invention is an improvement in that class of gages; and it consists in the combination of the valves which control the passages leading from the boiler into the sight-tube with power-storing devices such as a spring or weight, in which power is stored when those valves are opened to connect the sight-tube with the boiler, and a strip of paper arranged to resist the closing action of each power-storing device and strong enough for that purpose until the sight-tube is broken, when the strip of paper is wetted and so much weakened by the escape of steam and water that it breaks and no longer prevents the power-storing device from closing the valves.

In Figs. 1, 2, and 3 the gage is of the ordinary construction except as to the handles B B' of the valves *b b'*, each of which is provided with a power-storing device such that when the valve is opened power is stored up, which when released will close the valve. The simplest and best form of power-storing device for stationary boilers is a strap *a* or *a'* and a weight *b<sup>2</sup>* or *b<sup>3</sup>*, the strap being wound about

the handle when the handle is turned to open the valve and unwound by the force of the weight when the handle is not held from turning by the strip A or A' of paper, which is looped about one of the guard-rods of the sight-tube and its end caught by a hooked projection from the handle, as will be clear from the drawings.

In Figs. 4 and 5 the power-storing device is a spring *b<sup>4</sup>*, connected by shafts *a<sup>3</sup>* with both handles, and a block fast to strap *a<sup>3</sup>* engages a lever *d*, fulcrumed at *d'*, whose long arm is connected to one of the guard-rods by a strip of paper A, folded about the guard-rod and caught by a hook on the long arm of lever *d*. This form of my device is preferred for marine or non-stationary boilers, where weights would be objectionable.

The main advantages of my improved water-gage are its simplicity and cheapness of construction and the fact that water-gages in common use can be readily altered into mine, for I utilize the usual valves *f* by simply connecting power-storing apparatus with the handles of such valves and holding such apparatus under tension by means of paper or the like.

What I claim as my invention is—

The improved valve-gage above described comprising valves to open and close the connections to the sight-tube of the gage to the boiler; power-storing apparatus put under tension when such valves are open and closing such valves when free to operate; and a strip of paper the tensile strength of which under normal conditions resists the stress of such power-storing apparatus and which when wetted as by the breaking of the sight-tube allows the operation of such power-storing apparatus to close the valve.

MARCEL GOUDREAU.

Witnesses:

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