

J. W. GRANTLAND.
 REVERSIBLE STOP AND CHECK VALVE.
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1,007,560.

Patented Oct. 31, 1911.

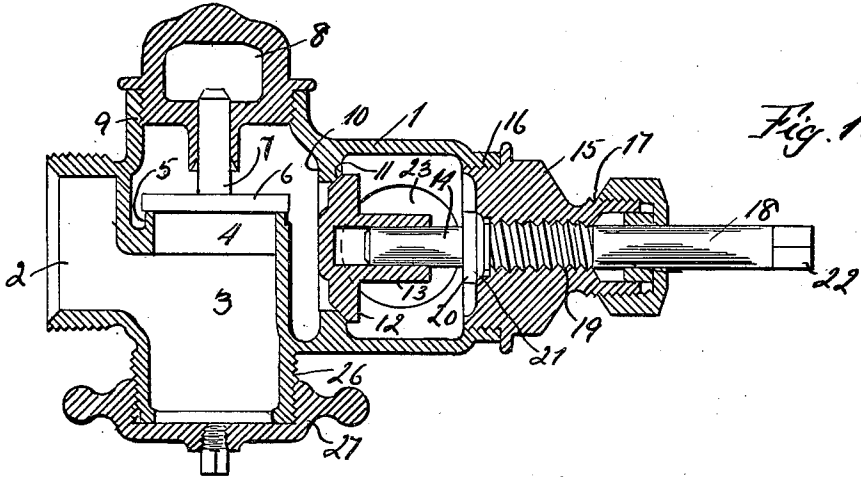


Fig. 1.

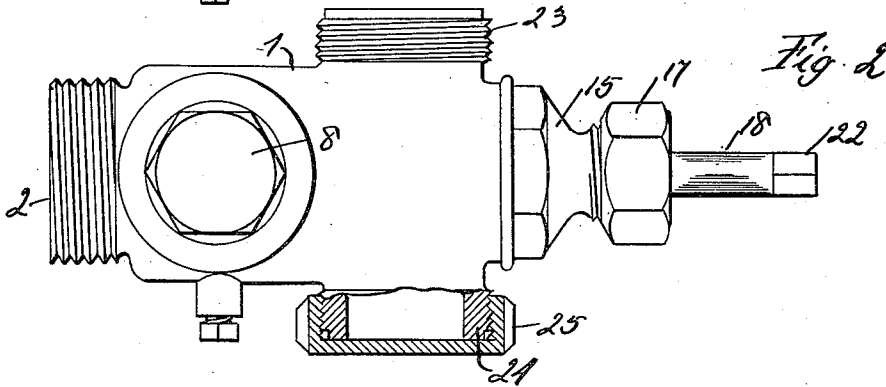


Fig. 2.

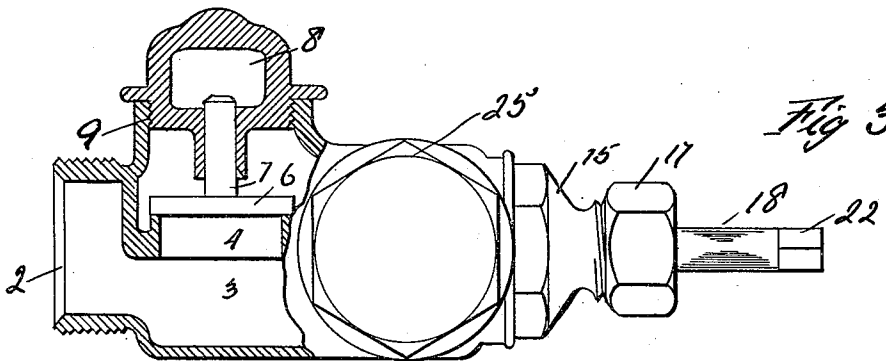


Fig. 3.

Inventor
 John W. Grantland

Witnesses
 Francis W. Brock
 Frank F. Thompson

By *W. B. Williamson*
 Attorney

UNITED STATES PATENT OFFICE.

JOHN W. GRANTLAND, OF CINCINNATI, OHIO.

REVERSIBLE STOP AND CHECK VALVE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN W. GRANTLAND, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Reversible Stop and Check Valves, of which the following is a specification.

My invention relates to a new and useful improvement in reversible stop and check valves, to be used between an injector and boiler, and has for its object to provide a simple and effective device of this description which may be used upon the right or left hand side of a boiler and which provides for closing the passage between the main check valve and the boiler, so as to permit of grinding the main check valve while the boiler is under pressure.

A further object of my invention is to provide for the attachment of a fire extinguishing hose in such a manner that the position of the feed outlet to said hose will not be affected by the use of the device, either upon the left hand or right hand side of the boiler.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1, is a central section of my device. Fig. 2, is a top view thereof, a portion of the casing being broken away to show one of the inlets to the boiler, and Fig. 3, a view similar to Fig. 1, the fire extinguisher being omitted.

In carrying out my invention as here embodied, (1) represents the casing which contains the different parts in which is formed the inlet 2 for the passage of water from an injector or other source of supply to the chamber 3. Leading up from the chamber 3 is a passage 4, the walls of which form the valve seat 5, and on this seat the main check valve 6 is adapted to close.

Formed with the valve 6 is the stem 7 which passes through an opening in the cap 8, the latter being threaded into the hub 9, by which means this valve is guided in its

vertical movement as will be readily understood.

10 is a partition upon which is formed the valve seat 11, against which the auxiliary check valve 12 is adapted to close and this valve has formed therewith a hub 13 having a central bore for the reception of the stem 14.

15 is a cap threaded into the casing at 16, and carrying the stuffing box 17 at its outer end.

18 is a rod which passes through the stuffing box and is threaded at 19 for engagement with corresponding threads in the cap 15, and this rod has formed thereon the sealing collar 20 which closes against the seat 21 formed in the cap, the stem 14 also being formed integral with the rod. The object of this construction is to close the hole through which the rod passes by screwing the sealing collar 20 tightly against its seat, thus preventing any passage of steam or water to the stuffing box 17 under normal conditions, while permitting the auxiliary check valve to freely move upon the stem 14 and perform its functions, and yet when it is necessary to grind the main check valve 6 it is readily accomplished while the boiler is under pressure by applying a wrench to the wrench hold 22 and screwing the rod 18 inward until the valve 12 is jammed against its seat, which will effectually cut off the backward flow of steam when the cap 8 is removed for gaining access to the valve 6, and its seat 5 for grinding or other repair.

Threaded hubs 23 and 24 are formed upon the sides of the casing and a cover 25 is provided so that when the casing is coupled up with the boiler from either side, the opposite hub is closed by the cover being threaded thereon. This permits the device to be attached to either side of the boiler without interfering with the position of the parts thereof.

26 is a threaded hub, the opening through which leads from the chamber 3 and this hub is normally closed by the cover 27, but when it is desired to use the device as a fire extinguisher this cover is removed and the hose coupled to the hub in the ordinary manner, and when the fire extinguisher is being used the auxiliary valve 12 is closed upon its seat as before described.

In the modification shown in Fig. 3, the fire extinguisher outlet is omitted but in all other respects the device is the same.

Of course I do not wish to be limited to the exact details of construction as here shown, as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a device of the character described, a casing having an inlet for connecting the supply with a chamber formed in the casing, a port leading upward from said chamber, a main check valve adapted to close said port in one direction, two outlets from the casing, either of which is adapted to be connected to a boiler, an auxiliary check valve interposed between said outlets and the main check valve, a threaded rod, a stem formed with the rod upon which the auxiliary valve slides and by which said valve may be closed upon its seat, and a sealing-collar formed integral with the threaded rod for closing the opening through which the rod passes.

2. In a device of the character described, a casing having an inlet for connecting the supply with a chamber formed in the casing, a port leading upward from said chamber, a main check valve adapted to close said port in one direction, two outlets from the casing, either of which is adapted to be connected to a boiler, an auxiliary check valve interposed between said outlets and the main check valve, a threaded rod, a stem formed with the rod upon which the auxiliary valve slides and by which said valve may be closed upon its seat, and an outlet leading from the above named chamber adapted to receive a fire extinguisher hose as specified.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN W. GRANTLAND.

Witnesses:

J. L. LYNN,
NELSON B. CRAMER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."