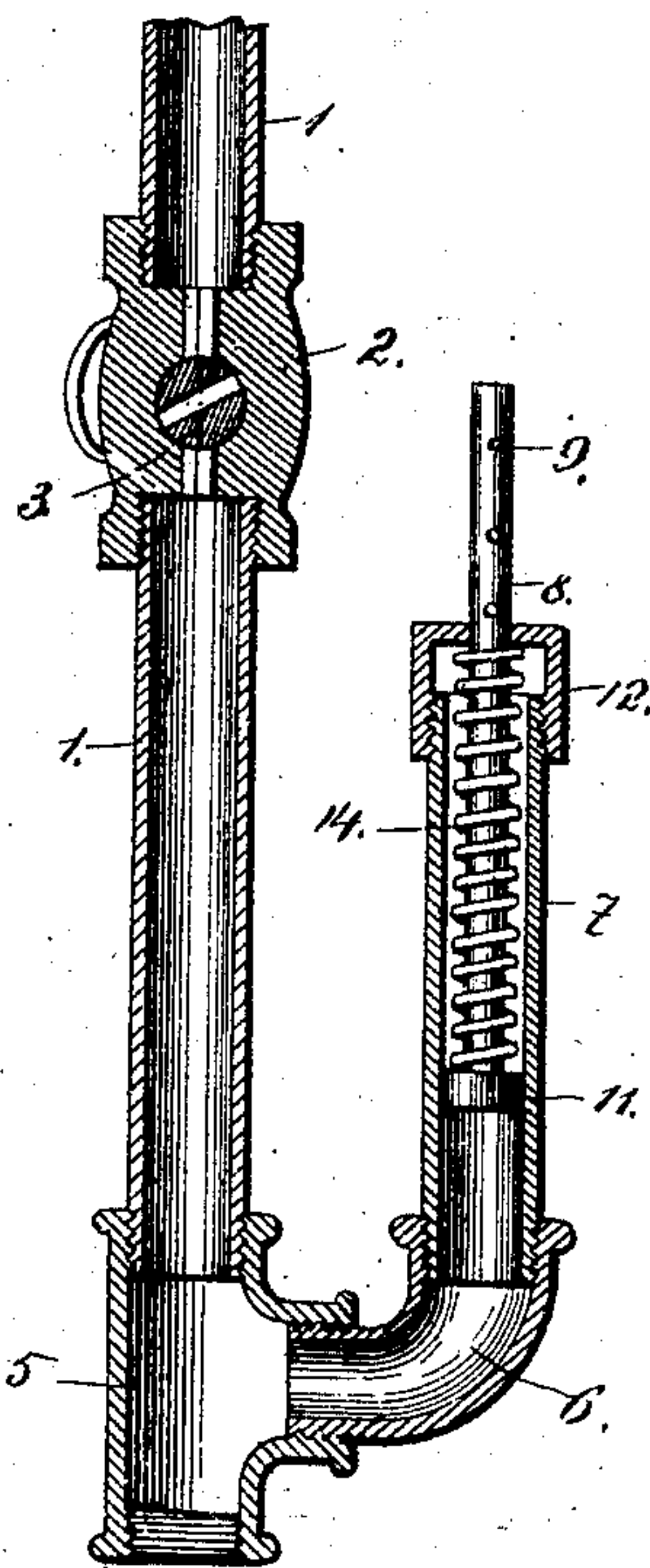
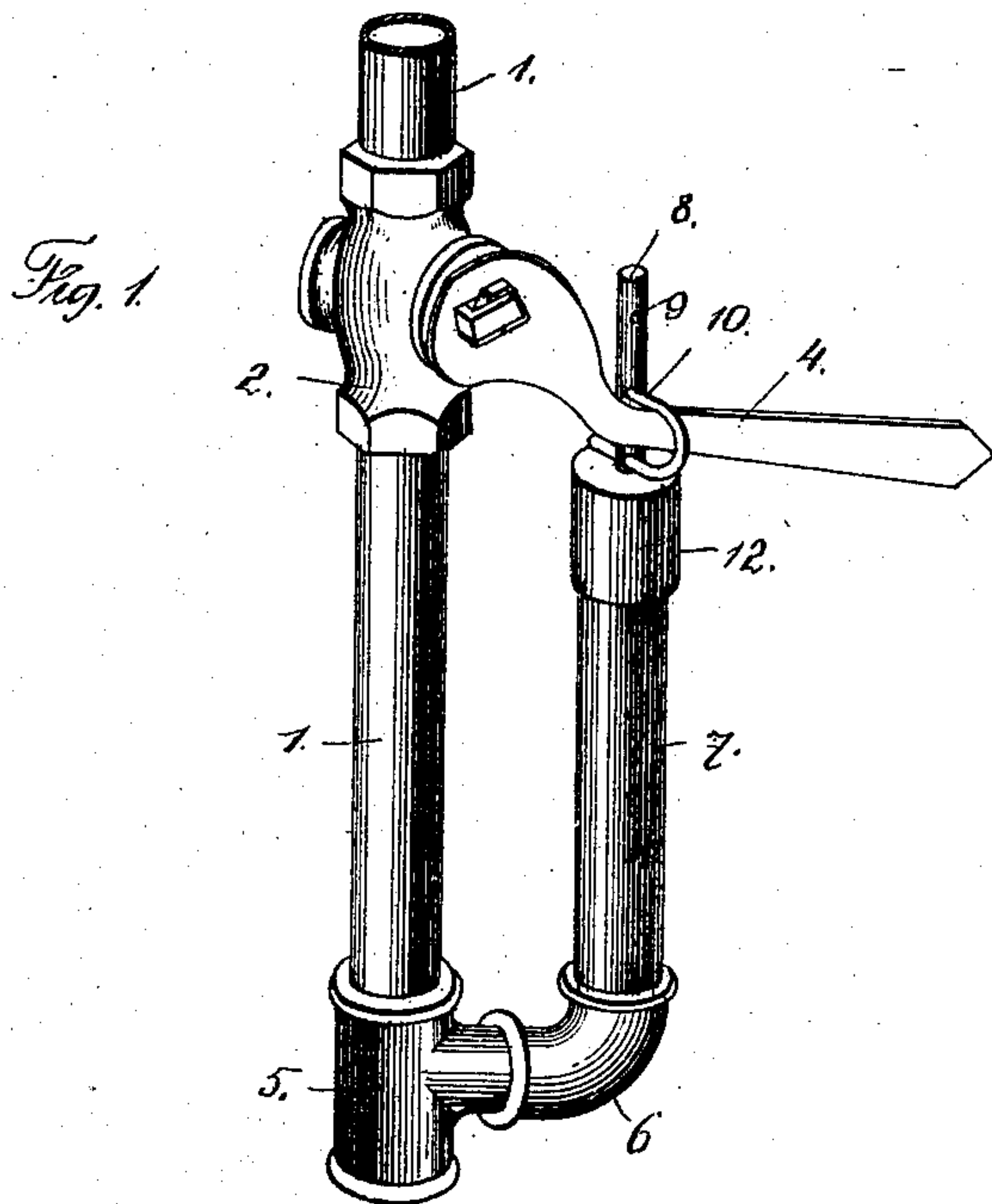


No. 840,312.

PATENTED JAN. 1, 1907.

T. F. GOODFELLOW.  
AUTOMATIC SHUT-OFF.  
APPLICATION FILED SEPT. 20, 1906.



Witnesses:  
Jesse C. Miller.  
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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC SHUT-OFF.

No. 840,312.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed September 20, 1906. Serial No. 335,438.

*To all whom it may concern:*

Be it known that I, THOMAS F. GOODFELLOW, a citizen of the United States of America, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Shut-Offs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an automatic shut-off particularly designed for controlling an accidental leakage of air, gas, steam, or a fluid.

My invention aims to provide novel means for automatically shutting off the air of a train-pipe and air-brake system, whereby should a leakage occur the air will be automatically shut off, and thereby maintain the normal pressure of air within the remainder of the air-brake system.

My improved automatic shut-off is preferably located adjacent to the connecting-hose of two cars, whereby should the hose burst or become injured and cause a leakage of air the reduction in the pressure of air will automatically actuate a valve located upon the train-pipe. To this end I have devised a simple and inexpensive shut-off which will be positive in its action and free from danger of injury by dust or deterioration.

The detail construction of the improvement will be presently described, illustrated, and then specifically pointed out in the appended claim.

Referring to the drawings, forming part of this specification, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of my improved shut-off, and Fig. 2 is a vertical sectional view of the same.

In the accompanying drawings I have illustrated a portion of a train-pipe 1 as having a valve 2, the plug of which is provided with a small by-pass 3 and with a detachable actuating-lever 4. The train-pipe is also provided with a T connection 5, carrying an elbow 6, to which a cylinder 7 is connected. In the cylinder 7 is mounted a piston 8, the upper end of which is provided with a plurality of openings 9 to accommodate a movable yoke 10, adapted to surround the actuating-lever 4 of the valve 2. The piston 8 is guided within the cylinder 7 by a piston-head

11 and a cap 12, which is detachably mounted upon the upper end of the cylinder 7. Interposed between the cap 12 and the piston-head 11 is a coil-spring 14, which surrounds the piston 8 and normally holds the piston in lowered position.

When the train-pipe 1 is placed in use, the actuating-lever 4 is elevated to open the valve 2, this movement of the actuating-lever elevating the piston 8 within the cylinder 7. The pressure of air within the train-pipe 1 is adapted to maintain the piston in its elevated position, the spring 14 being under tension. Should the train-pipe 1 burst or any pipe, hose, or tube connecting therewith, the reduction in the pressure of air within the pipe 1 permits of the spring 14 lowering the piston 8, moving the lever 4, and closing the valve 2, as shown in Fig. 2 of the drawings. The by-pass 3 of the valve 2 is adapted to permit a certain quantity of air to pass through the valve 2, which is essential in an air-brake system.

It is obvious that my improved shut-off can be used upon gas-pipes as a safety-valve, and for this reason I do not care to confine myself to the use of the automatic shut-off or to the minor details of construction entering into the same.

What I claim, and desire to secure by Letters Patent, is—

In an automatic shut-off, the combination with a pipe adapted to convey fluid under pressure, of a valve-casing interposed in said pipe, a valve in said valve-casing and having a by-pass, a lever connected to the stem of said valve, a T connection interposed in the pipe, a cylinder having one end in communication with the pipe through said T connection, a cap on the outer end of said cylinder, a piston in said cylinder having its rod extending through said cap and provided with a plurality of openings, a yoke secured in some of said openings and receiving said lever, and a tension-spring on the opposite rod between the piston and the end cap of the cylinder, substantially as described.

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

THOMAS F. GOODFELLOW.

Witnesses:

JNO. P. BUTLER,  
JAMES H. HORNON.