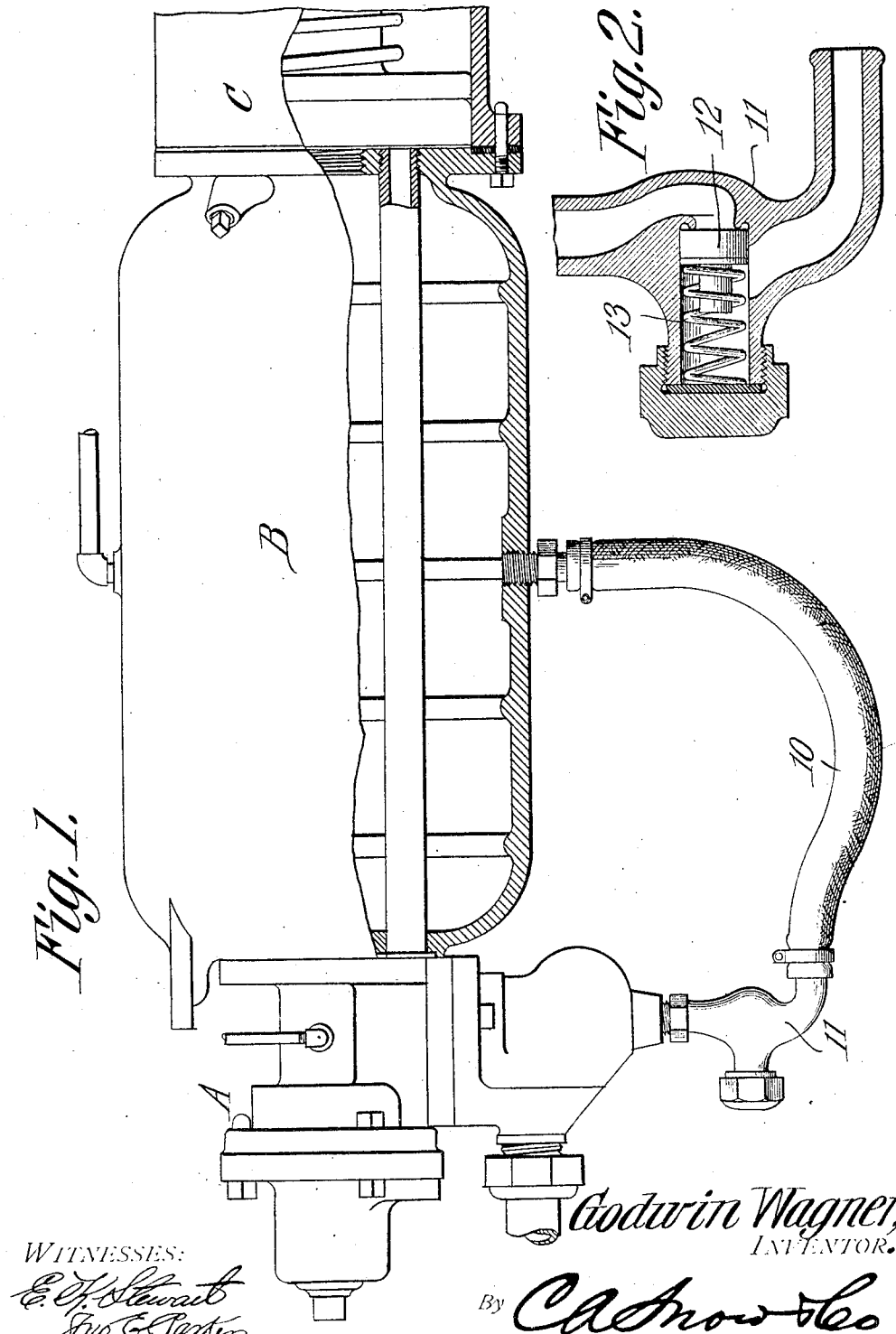
No. 856,665. PATENTED JUNE 11, 1907.

G. WAGNER.

FEED VALVE FOR AIR BRAKE SYSTEMS.

APPLICATION FILED SEPT. 14, 1906.



WITNESSES:

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FEED-VALVE FOR AIR-BRAKE SYSTEMS.

No. 856,665. Specification of Letters Patent. Patented June 11, 1907.

Application filed September 14, 1906. Serial No. 334,655.

To all whom it may concern:

Be it known that I, GODWIN WAGNER, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Feed-Valve for Air-Brake Systems, of which the following is a specification.

This invention relates to air brake systems of the Westinghouse or New York type, and has for its principal object to provide a means for more quickly replenishing the supply of air in the auxiliary reservoir than is possible by the employment of the ordinary triple valve.

A further object of the invention is to provide a direct connection between the train pipe and the auxiliary reservoir, this connection forming a by-pass around the main piston of the triple valve, so that it will not be necessary for the engineer to wait until the air passes through the feed groove of the triple valve in order to obtain a full supply of air for braking purposes.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is an elevation, partly in section, of the ordinary triple valve, auxiliary reservoir, and a portion of the brake cylinder, showing the improved feed connection for the auxiliary reservoir. Fig. 2 is a detail sectional view showing the check valve employed in the feed connection.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The triple valve A, the auxiliary reservoir B, and the brake cylinder C are of a well known type and are arranged to operate in the usual manner.

Extending between the train pipe and the auxiliary reservoir is a feed pipe connection 10. This is shown in the present instance as formed of flexible material, although it may be metal. One end of the feed pipe connection is coupled directly to the auxiliary reservoir, and the other is shown as connected to the drip cup of the triple valve, although this connection may, of course, be made at any point so long as there is a direct flow of air from the train pipe to the auxiliary reservoir. In this connection is arranged a valve casing 11 containing a one way valve 12 that is closed by a spring 13, the valve opening only in the direction of the auxiliary reservoir, so that after the passage of the air from the train pipe to the reservoir, there can be no return of the air through this connection, the air being compelled to pass in the usual manner through the triple valve casing when it is desired to apply the brakes.

In the ordinary triple valve construction, the air from the train pipe passes through a feed groove that is formed in the triple valve casing, or in the main piston of the valve proper, and this feed groove is open only when the triple valve is at release position. It is necessary, therefore, that considerable time elapse after the release of the brakes before the auxiliary reservoir can be restored to full pressure, and it frequently happens that the engineer has no air at his command when it is necessary to check the travel of a train in descending grades. In the present case it is not even necessary for the engineer to wait the return of the triple valve to release position, for as soon as the engineer's brake valve is placed at full release, or at running position the air flowing from the main reservoir through the train pipe will pass through the connections 10 to the several auxiliary reservoirs, and a supply of air will be almost instantaneously replenished. Owing to the resistance offered by the spring 13, it is impossible for the air which enters the auxiliary reservoir through this connection to prevent the return of the triple valve to release position, inasmuch as the pressure which acts on the train pipe side of the main piston must be in excess of that which acts on the auxiliary reservoir side thereof.

I claim:—

In an air brake system, the combination with the auxiliary reservoir and the drip cup,

each provided with the usual threaded plug-opening, of a valve casing engaging the plug-opening of the drip cup, and a feed pipe engaging at one end with the drip cup and at its other end with the plug-opening of the reservoir.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GODWIN WAGNER.

Witnesses:
A. W. BITTER,
E. WOLFF.