No. 763,162. PATENTED JUNE 21, 1904.

J. L. CURRAN.

FEED VALVE.

APPLICATION FILED DEC. 23, 1903.

NO MODEL.

Fig 1

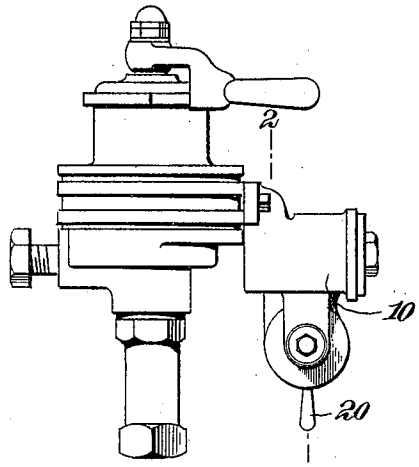
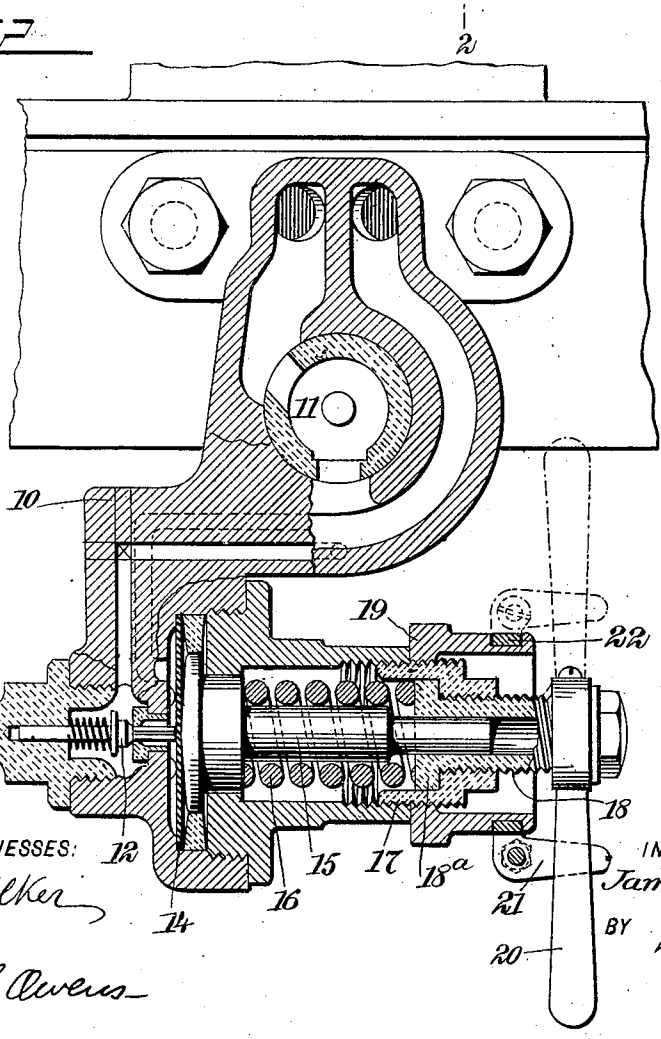


Fig 2



WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 763,162. Patented June 21, 1904.

UNITED STATES PATENT OFFICE.

JAMES L. CURRAN, OF ROCKLIN, CALIFORNIA.

FEED-VALVE.

SPECIFICATION forming part of Letters Patent No. 763,162, dated June 21, 1904.

Application filed December 23, 1903. Serial No. 186,331. (No model.) REISSUED

To all whom it may concern:

Be it known that I, JAMES L. CURRAN, a citizen of the United States, and a resident of Rocklin, in the county of Placer and State of California, have invented a new and Improved Feed-Valve, of which the following is a full, clear, and exact description.

This invention relates to the feed-valve employed in automatic air-brake systems in connection with the brake-valve to control the train-line pressure supplied from the main drum.

Heretofore in instances where the brake apparatus is arranged to operate with two train-line pressures it has been customary to provide two feed-valves set respectively to feed the two pressures and to arrange these valves so that either may be employed, according to the exigencies of the occasion.

The prime object of my invention is to provide a single feed-valve which may be made to serve the purposes of the plural valves now commonly employed. This end I attain by constructing the valve with means facilitating its ready adjustment from one pressure to another, so that the single valve may be made to feed high or low pressure, as the occasion may require.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is an elevational view showing the feed-valve and brake-valve in their usual connection, and Fig. 2 is an enlarged sectional view on the line 2 2 of Fig. 1.

The feed-valve may be of the usual type. As here illustrated, it is the commercial Westinghouse slide feed-valve applied to the brake-valve in the usual manner.

10 indicates the valve-casing; 11, the slide-valve; 12, the feed-valve proper; 14, the diaphragm for actuating the feed-valve 12; 15, the diaphragm-stem; 16, the regulating-spring, and 17 the usual regulating-nut.

According to the form of my invention herein illustrated the regulating-nut 17 is formed with a central bore longitudinally threaded, and a screw 18 operates therein, this screw having a flange 18^a, which bears against the regulating-spring in place of the regulating-nut 17. The said screw 18 is longitudinally recessed to receive the outer end of the stem 15, as shown.

19 indicates a lock-sleeve, which is screwed on the regulating-nut and serves to hold the same firmly in the proper adjustment. Now it is clear that by moving the screw 18 outward in the nut 17 until the flange 18^a engages said nut, as shown in Fig. 2, and then adjusting the nut and screw bodily the tension of the regulating-spring 16 may be set as desired. Then by tightening up the lock-sleeve 19 the regulating-nut may be held at this adjustment. It will be seen that the screw 18 may be moved inward from the position shown in Fig. 2. When the screw is moved outward, as in Fig. 2, the spring 16 is under a relatively low tension, and this sets the feed-valve to the low pressure. By moving the screw inward independently of the regulating-nut the regulating-spring may be set for high pressure.

Various means may be employed for thus adjusting the screw 18 independently of the nut 17. I have shown a handle 20, suitably fastened on the outer end of the screw and straddled by the fork 21 of a friction-band 22, which encircles the lock-sleeve 19. When the handle 20 is turned down, as in Fig. 2, the flange 18^a is engaged with the regulating-nut, and the valve is then adjusted for low pressure. By throwing the handle 20 upward, as indicated by the broken lines in Fig. 2, the regulating-spring will be compressed, placing it under greater tension, and thus setting the valve for high pressure. The said friction-band 22 holds the handle tightly in its upper position, while the handle is prevented from moving beyond a downward position by the engagement of the flange 18^a with the regulating-nut.

By means of this invention it will be seen that the engineer has only to throw the handle 20 from one position to another to change the

set of the feed-valve. This enables a single valve to serve the purpose of the duplex valve heretofore employed.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the intent of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A feed-valve for brake systems, comprising the combination with the casing and valve proper, of an adjustable means for regulating the valve, a handle connected with the regulating means and lying outside of the casing, and a friction-band mounted on the valve and connected with the handle.

2. A feed-valve for brake systems, comprising the combination with the casing and valve proper, of an adjustable means for regulating the valve, a handle connected with the regulating means and lying outside of the casing, and a friction device connected with the handle, and comprising a friction-band mounted on the valve and a fork straddling the handle and attached to the band.

3. A feed-valve for brake systems, comprising the combination with the casing, valve proper, and regulating-spring, of a screw for adjusting the regulating-spring, said screw extending outside of the valve-casing, a handle attached to the screw outside of the casing, and a friction device connected with the handle, and comprising a friction-band mounted on the valve and a fork straddling the handle.

4. A feed-valve for brake systems, comprising the combination with the casing, valve proper, regulating spring and nut, of an adjusting-screw operating in the nut and extending outside of the casing, a handle attached to the screw, a lock-sleeve operating on the regulating-nut, a friction-band on the lock-sleeve, and a fork on the friction-band and engaging the handle.

5. A feed-valve for brake systems, comprising the combination with the casing and valve proper, of an adjustable means for regulating the valve, a handle connected with the regulating means and lying outside of the casing, a member friction-tight on the valve, and means connecting said member to the handle, for the purpose specified.

6. A feed-valve for brake systems, comprising the combination with the casing and valve proper, of a stem attached to the valve, a longitudinally-recessed screw loosely receiving the valve-stem, a regulating-spring bearing between the valve and screw, a regulating-nut threaded in the casing and having the screw threaded therein, and an operating-handle connected with the screw.

7. A feed-valve for brake systems, comprising the combination with the casing and valve proper, of a stem attached to the valve, a longitudinally-recessed screw loosely receiving the valve-stem, a regulating-spring bearing between the valve and screw, a regulating-nut threaded in the casing and having the screw threaded therein, an operating-handle connected with the screw, a lock-sleeve working on the regulating-nut and coacting with the casing, and a friction-tight restraining device acting between the lock-sleeve and handle, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES L. CURRAN.

Witnesses:
JOHN HILL,
ARTHUR THALER.