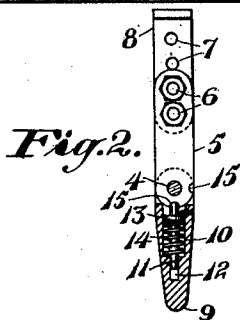
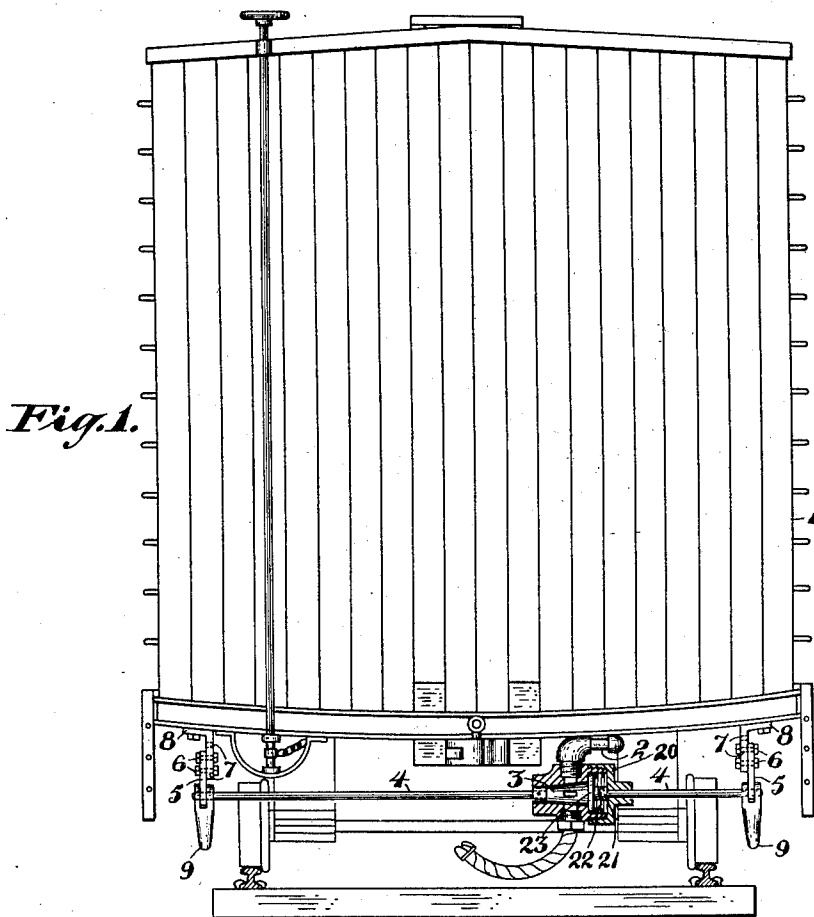


G. W. CURTIS.
 VALVE OPERATING MECHANISM FOR CARS.
 APPLICATION FILED JUNE 21, 1910.

1,002,370.

Patented Sept. 5, 1911.



WITNESSES:

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GEORGE W. CURTIS, OF OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-HALF TO EDWARD F. MAY, OF OAKLAND, CALIFORNIA.

VALVE-OPERATING MECHANISM FOR CARS.

1,002,370.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed June 21, 1910. Serial No. 568,110.

To all whom it may concern:

Be it known that I, GEORGE W. CURTIS, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Valve-Operating Mechanism for Cars, of which the following is a specification.

The present invention relates to means for controlling air pipes used for breaking purposes on railroad cars. In coupling or uncoupling of these cars it is necessary also to couple or uncouple the air pipes of the several cars, and in doing so it is further necessary to operate the valves controlling these pipes, that is, to open these valves after coupling them and to close said valves before uncoupling them. Heretofore it has been the practice, so far as I know, in operating these valves, for the brakeman to pass between the cars which are being coupled or uncoupled. This practice has been the cause of great loss of life and limb among brakemen, amounting to about one-third of the total number of railroad accidents on account of having to reach over or under the drawhead to turn the angle cock on the opposite side of the drawhead.

The object of the present invention is to provide means whereby this practice is no longer necessary.

In the accompanying drawing, Figure 1 is an end view of a car equipped with my valve operating means; Fig. 2 is a side view on an enlarged scale of a lever and its fulcrum for operating the valve.

Referring to the drawing, 1 indicates a car having an air pipe 2. 3 indicates a rotary valve for said pipe connected at the ends to stems 4. 20 indicates a cap screwed on to the end of said casing, which surrounds the wide end of the valve, said cap abutting against a shoulder 21 on the valve, so that by screwing said cap on to said casing the conical valve may be made tight in its bearing. 22 indicates a spring in said casing, pressed between said cap and the head 23 of said valve and resiliently pressing said valve so as to make it tight in its bearing. By reason of this cap and spring a perfectly tight joint is provided, while at the same time each end of the valve is connected to means extending to the corresponding side of the car for turning said valve. The other ends of said stems pass through bearings in

the lower ends of hanger sections 5 adjustably secured by bolts 6 through apertures 7 to upper hanger sections 8 secured to the bottom of the car. On the end of each stem is secured a handle 9, forked to pass on either side of the lower hanger section. By means of either handle the stem attached thereto, and the valve, can be turned. Each handle is hollow, as shown at 10, and in the cavity thereof is secured a stem 11 having a rounded end and sliding in a bearing 12 in said handle having a collar 13 against which presses a spring 14 coiled around the stem. The rounded end of the stem is thus adapted to enter either of two sockets 15 in the rounded end of the lower hanger section, thus retaining the handle in either of two positions, the handle in one position opening the valve and in the other closing it. This arrangement permits of free and unobstructed access to the drawhead or to the center of the car. The construction in use at present is defective in this respect, in that the clothing of the operator is liable to become caught upon the angle-cocks preventing quick escape from between the cars.

A further objection to the arrangement for operating the valves now in use is that they are apt to be accidentally closed by persons, generally unauthorized, passing between the cars and stepping on the angle cock. When this happens, the brakes are deprived of air connection from the engine, so that they can not be properly set when desired.

I claim:—

1. In combination with a car and an air brake pipe, a valve casing connected to said pipe, a cap for said casing, a conical valve in said casing, means operatively connected with said valve passing through said casing and cap respectively and extending to the respective sides of the car substantially in line with one another and with the valve, and means at each side of the car for turning said valve about its axis, substantially as described.

2. In combination with a car and an air brake pipe, a valve casing connected to said pipe, a cap for said casing, a conical valve in said casing, a spring in said casing between the head of the valve and the cap, means operatively connected with said valve passing through said casing and cap respectively and extending to the respective sides of the

car substantially in line with one another and with the valve, and means at each side of the car for turning said valve about its axis, substantially as described.

5 3. In combination with a car, and an air brake pipe, a valve for said pipe, stems connected to said valve extending to the sides of the car, and adjustable bearings at the sides of the car for said stems, each stem being
10 provided at the sides of the car with

means for turning said stem, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE W. CURTIS.

Witnesses:

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