

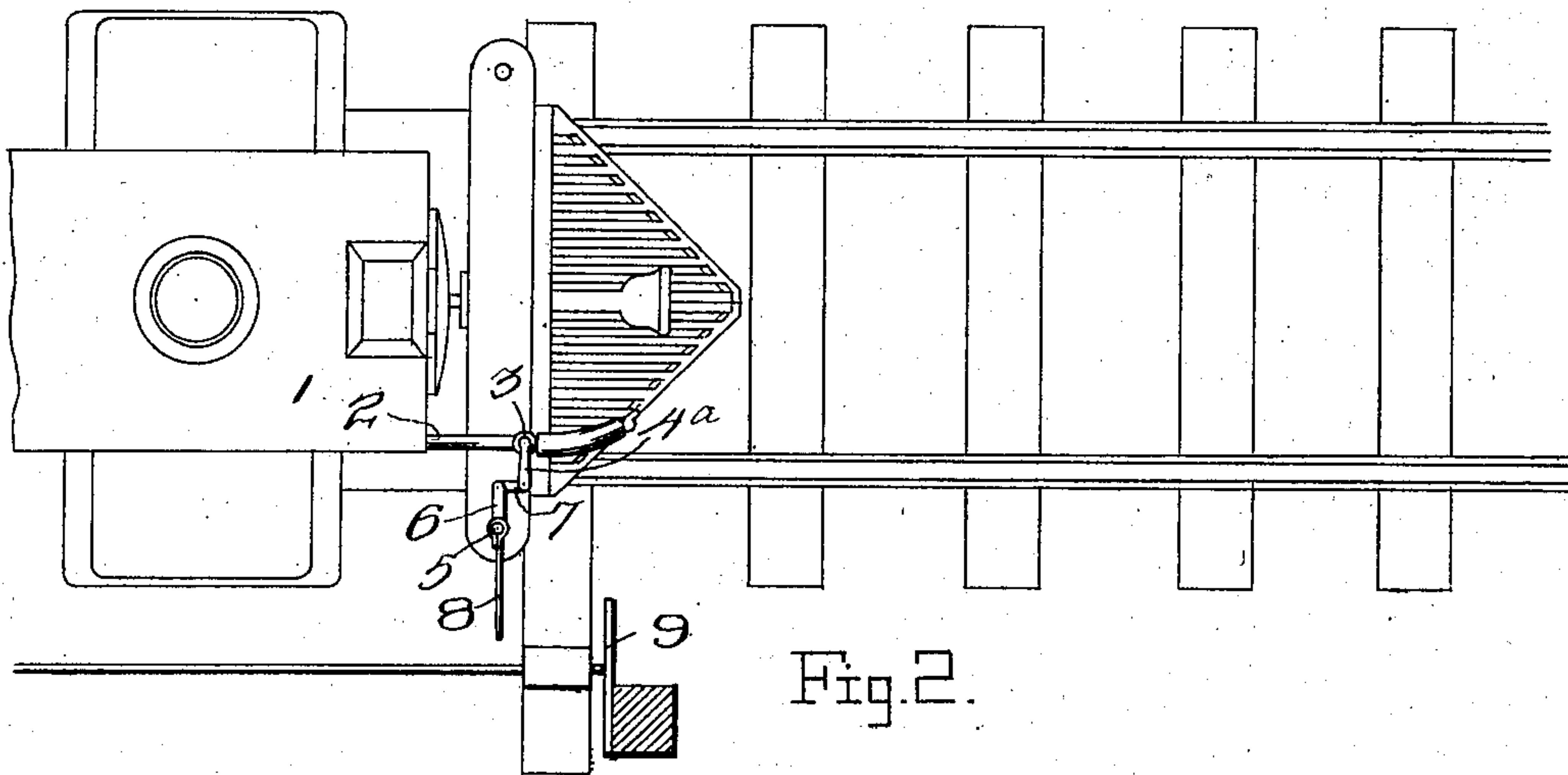
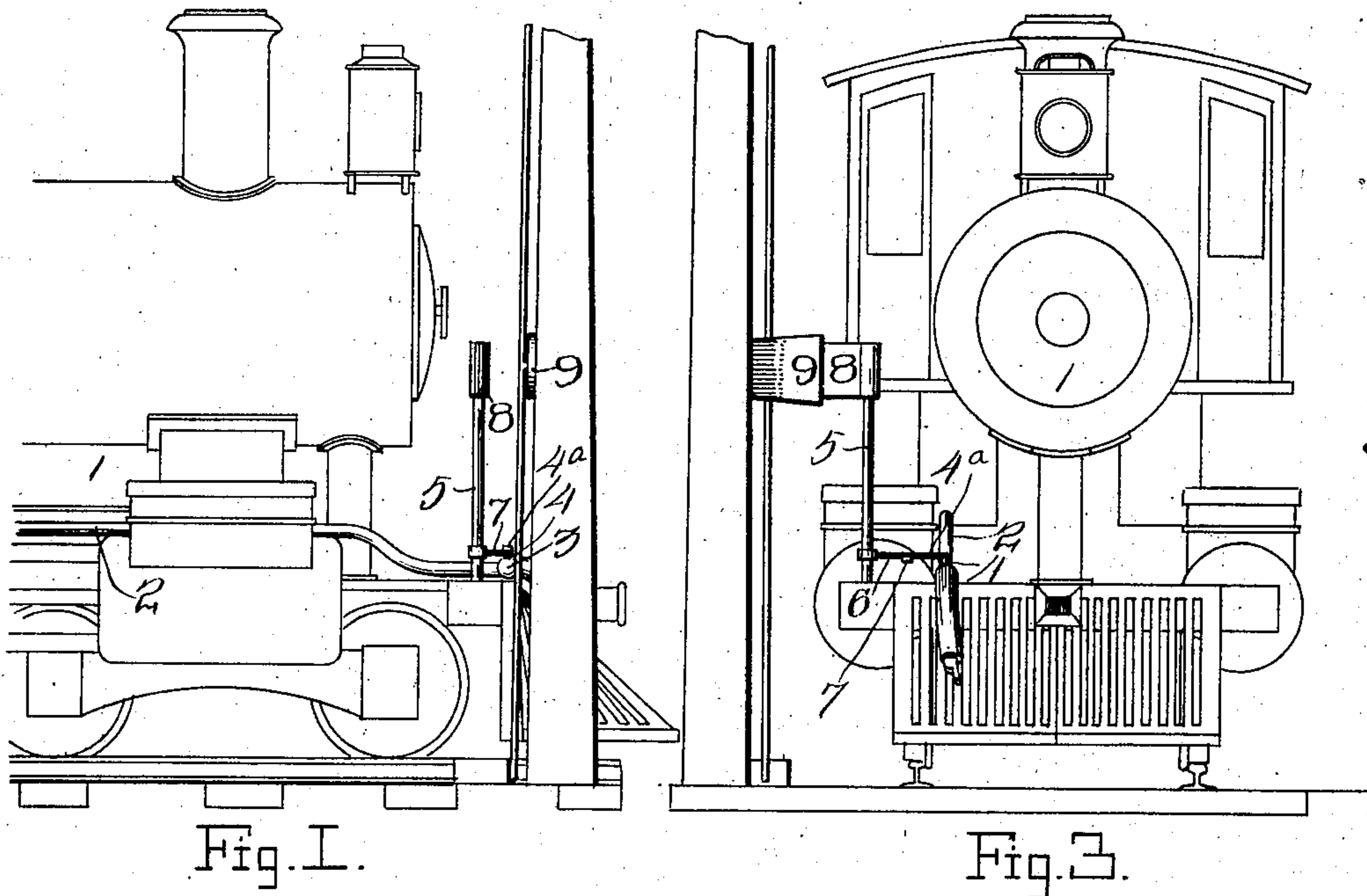
No. 737,092.

PATENTED AUG. 25, 1903.

A. H. FREEMAN.
AUTOMATIC AIR BRAKE OPERATING DEVICE.

APPLICATION FILED MAY 7, 1903.

NO MODEL.



Inventor

Alfred H. Freeman.

Witnesses

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Attorney

UNITED STATES PATENT OFFICE.

ALFRED H. FREEMAN, OF CATASAUQUA, PENNSYLVANIA.

AUTOMATIC AIR-BRAKE-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 737,092, dated August 25, 1903.

Application filed May 7, 1903. Serial No. 156,112. (No model.)

To all whom it may concern:

Be it known that I, ALFRED H. FREEMAN, a citizen of the United States, residing at Catasauqua, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Air-Brake-Operating Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices for automatically applying the brakes on a railway-train.

The object of the invention is to provide means for automatically releasing the air in the train-pipe to apply the brakes should the engineer fail to see the danger-signal or for any other reason should fail to operate his brake-valve.

A further object is to provide simple means which may be attached to any locomotives, steam, or electric cars, which are controlled by air-brakes, said means being adapted to be automatically operated by a danger-signal.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claim.

Figure 1 is a side elevation of the front end of a locomotive, showing the application of the device. Fig. 2 is a top plan view of the same, showing the device about to be operated by the arm of a signal; and Fig. 3 is an end elevation of the parts as shown in Fig. 2.

In the drawings, 1 denotes a locomotive.

2 denotes the train-pipe. 3 denotes an air-valve, arranged in said pipe at a convenient place, but preferably near the forward end of the locomotive.

4 denotes the stem of the valve, having a handle 4^a.

5 denotes a vertically-disposed shaft rotatably mounted on the forward bolster or other suitable portion of the locomotive and suitably braced to the same. Near the lower end of the shaft is fixed a laterally-projecting crank-arm 6, the outer end of which is con-

nected to the handle 4^a of the valve 3 by a link 7. On the upper end of the shaft 5 is fixed a laterally-projecting arm or plate 8, which is adapted to be arranged in the path of a target or other arm of a switch-signal 9 when the switch has been opened and the signal arm or target swung into a position indicating danger.

In practice as the locomotive approaches an open switch or other dangerous point for which a danger-signal has been set and the engineer does not see the signal or for any reason fails to operate his valve to apply brakes, the arm or plate 8 on the shaft 5 will engage the target or other arm 9 on the signal, which will turn the shaft, causing the same to open the valve 3 and release the air in the train-pipe, thereby applying the brakes and stopping the train.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

An air-brake-operating device for locomotives and the like comprising a release-valve having a stem and arranged in the train-pipe of said locomotive, a rotatably-mounted shaft carried by said locomotive, a crank-arm fixed to said shaft, a link connecting said arm with the stem of said valve to open the same, a laterally-projecting arm or plate carried by said shaft and adapted to engage the arm or target of a danger-signal and rotate said shaft to open said valve, substantially as described.

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

ALFRED H. FREEMAN.

Witnesses:

FOSTER MACADAM,
D. P. STEM.