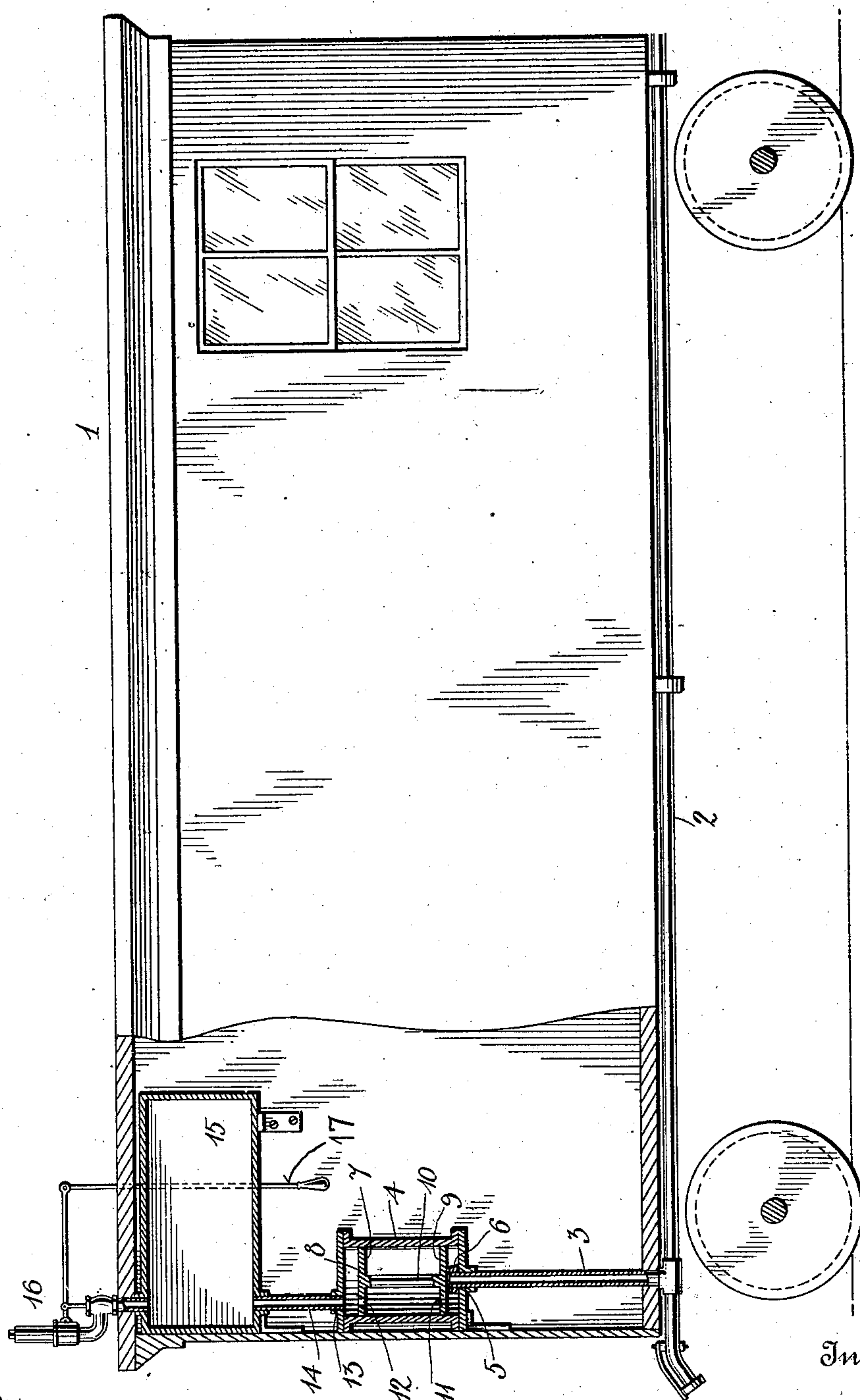


No. 860,158.

PATENTED JULY 16, 1907.

I. P. SMITH.
CONDUCTOR'S SIGNAL.
APPLICATION FILED APR. 17, 1906.



Inventor

Witnesses

C. W. Griesbauer

Isaac P. Smith

by *A. B. Wilson & Co.*

Attorneys

UNITED STATES PATENT OFFICE.

ISAAC P. SMITH, OF ELDON, IOWA.

CONDUCTOR'S SIGNAL.

No. 860,158.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed April 17, 1906. Serial No. 312,187.

To all whom it may concern:

Be it known that I, ISAAC P. SMITH, a citizen of the United States, residing at Eldon, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Conductors' Signals; 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.

10 This invention relates to conductors' signals, designed for the purpose of being placed in a caboose, and to provide means for notifying the engineer as to the condition of the train or track at some distance from the locomotive.

15 My invention has for its purpose to provide a whistle to be operated by means of compressed air supplied to a tank or reservoir from the train pipe of the air brake. These and other objects are accomplished by means of the construction illustrated in the accompanying drawing, in which,—the figure is a sectional view, taken through a caboose, and showing the manner of connecting a check valve to the train pipe, in order that the train pipe pressure may be used for sounding a whistle.

20 Referring to the drawing for a more particular description of my invention, the numeral 1 designates a caboose, and 2 is the train pipe of the air brake. Connected to the train pipe is a branch pipe 3 leading into the caboose and into a valve. An ordinary check valve may be used in place of the structure about to be described; however, the valve shown and now to be described is preferred. This valve consists of a casing 4 having an opening 5 therein through which the pipe 3 projects, the inner end of which carries a rubber gasket 6. A valve 7 consisting of two heads 8 and 9 and a connecting bar 10 is mounted to slide within the casing, said valve having a small opening 11 in one of the heads at one side, and out of register with the pipe 3. In the other head an opening 12 is provided, said opening being disposed in alinement with an opening 13 in the casing. A pipe 14 extends from said opening into an air reservoir 15, and a whistle 16 is connected to said air reservoir, and provided with any suitable means for operating the same, such as a cord 17, the whistle being disposed above the roof of the caboose.

45 The operation of my invention may be briefly described as follows: When the conductor of the freight

train desires to notify the engineer of the condition of the rear end of the train, he pulls the whistle operating cord. There is always a pressure of 70 pounds per square inch within the air reservoir since this is the 50 pressure in the train pipe. When the air is exhausted from the train pipe for setting the brakes, the valve moves downward and is forced against the rubber gasket to close the valve against the escape of air in the air reservoir owing to the contracted opening in the head 55 at that end of the valve. When the 70 pound pressure is again applied through the train pipe, the valve is forced upward and the 70 pound pressure is again available in the air tank. In case of accident to the branch pipe 3, or should the train become parted, the 70 60 pound pressure in the air tank would be sufficient to operate the whistle and notify the engineer of this fact. It will be understood that any ordinary check valve located between the air reservoir and the train pipe could be used in place of the valve shown. 65

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, as defined by the appended claims. 70

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

1. In a conductor's signal, a branch pipe connected to the train pipe, a valve comprising a casing into which the branch pipe projects, and a double headed valve, one of the 75 heads having a relatively small opening and the other a relatively large opening therethrough, an air reservoir and a whistle operatively connected with the casing, and a cushioning element within the casing to form a seat for one head of the valve. 80

2. In a conductor's signal, a branch pipe connected to the train pipe, a valve comprising a casing into which the branch pipe projects and a double-headed valve, one of the heads having a relatively small opening therethrough and the other a relatively large opening, an air reservoir and 85 a whistle operatively connected with the casing, and a rubber gasket carried by the end of the branch pipe within the casing, whereby to form a seat for one head of the valve.

In testimony whereof I have hereunto set my hand in 90 presence of two subscribing witnesses.

ISAAC P. SMITH.

Witnesses:

BENJ. G. COWL,
E. P. BUNYEN.