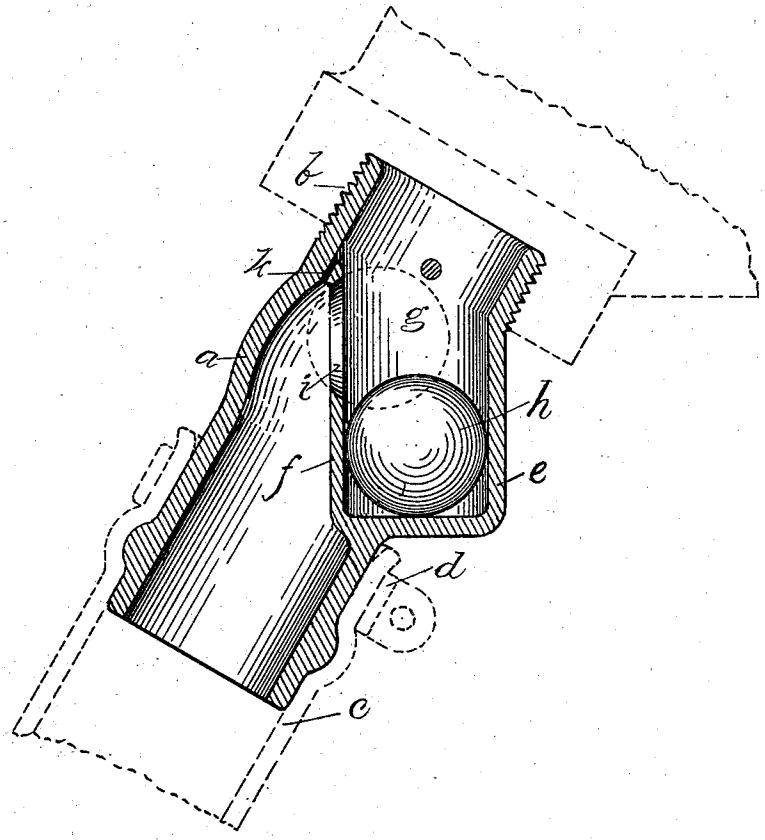
No. 749,810. PATENTED JAN. 19, 1904.

C. TRUMAN.

AIR BRAKE SAFETY DEVICE.

APPLICATION FILED JULY 23, 1903.

NO MODEL.



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

No. 749,810. Patented January 19, 1904.

UNITED STATES PATENT OFFICE.

CHARLES TRUMAN, OF TOLEDO, OHIO.

AIR-BRAKE SAFETY DEVICE.

SPECIFICATION forming part of Letters Patent No. 749,810, dated January 19, 1904.

Application filed July 23, 1903. Serial No. 166,682. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TRUMAN, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Air-Brake Safety 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to air-brake systems; and its object is to provide a cheap simple automatic attachment which will prevent the accidents which arise from the bursting or breaking of the air-hose which connects the air-pipes of the cars composing the train. I attain this object by means of the device hereinafter described and shown, and illustrated in the single figure of the accompanying drawing, which is a central vertical sectional elevation of my device.

In the drawing, *a* is a short length of pipe threaded at one end, as at *b*, for connection with the air-pipe and adapted at its other end for connection with an air-hose *c* by means of a clamp *d* in the usual manner.

Projecting downwardly from the under side of the part *a* is an enlarged portion *e*, which, in connection with a vertical wall *f* across the passage through the inclined pipe length *a*, forms a chamber *g*. Within this chamber upon its bottom rests loosely a ball *h*. In the wall *f* above the ball *h* is a circular opening *i*, forming an air-passage and a seat for the ball-valve *h*.

It should be understood that there is one of these devices at each end of each of the cars in the train. Assuming that the parts are assembled as indicated and that the air-pipes and the connecting-hose are under air-pressure, now if the hose bursts, permitting the sudden undue escape of air, the reduction of pressure above the ball permits the air beneath the ball to expand and to lift the ball into the position indicated by the dotted line in the drawing. In other words, the suction of the rapidly-escaping air will close the ball-valve. The air is now permitted to escape slowly through a small aperture through the wall *f*, as at *k*, thus bringing the rear portion of the train to a gradual stop and leaving the engineer in full control of the brakes on that section of the broken train which is attached to the locomotive.

The size and weight of the ball and its normal distance from its valve-seat are such that the ball is not moved by either the "service" or "emergency" application of the brakes, and it will be seen that upon charging or recharging the line the ball will by its own gravity drop from its seat, thus leaving the train-line unobstructed.

The advantages of the present invention over devices which have heretofore been proposed for the same purpose—such, for instance, as piston-actuated safety-valves, plungers for opening and closing the angle-cock, and automatic valves for opening and closing the passage through the plug or key of the angle-cock—are quite manifest, since my appliance consists of only two small parts in which the only machine-work consists of the cutting of the single thread *b*. Moreover, my valve requires no lubrication and will not be caused to stick by extreme cold weather or dust. It will be seen that my device may at slight expense be applied in a few minutes to any car and that a few workmen can in a single day equip the freight-cars of a whole railroad with the safety appliances above described.

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

An air-brake attachment consisting of a casing adapted to be connected at one end with a train-pipe and at its other end to an air-hose and having on the under side of its interior a recess, a ball which rests normally in said recess, a wall across the interior of the casing having an air-passage therethrough which forms a valve-seat for the ball, and means for permitting a retarded flow of air around the ball when in closed position.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES TRUMAN.

Witnesses:

CARL H. BECKHAM,

ALMON HALL.