

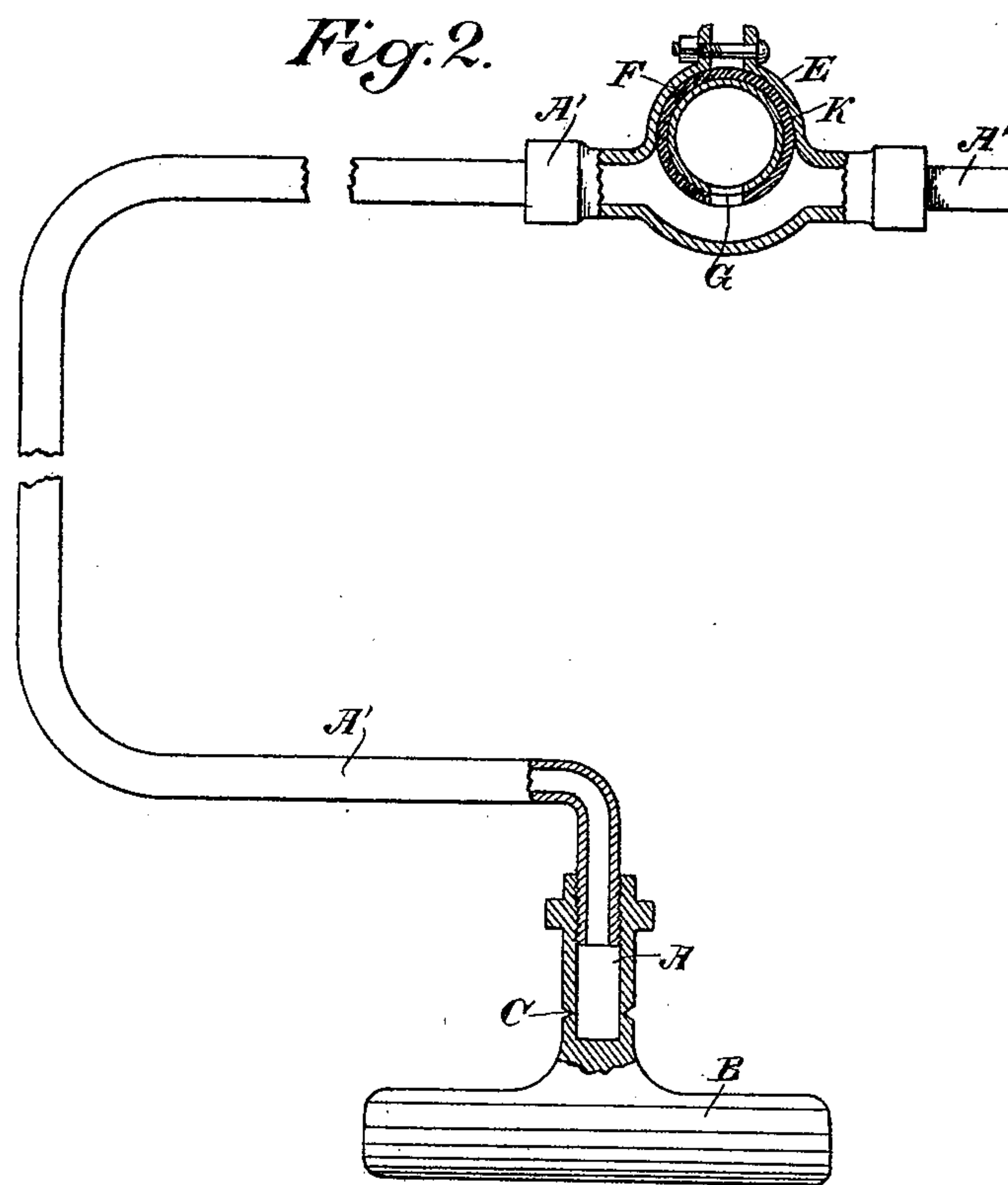
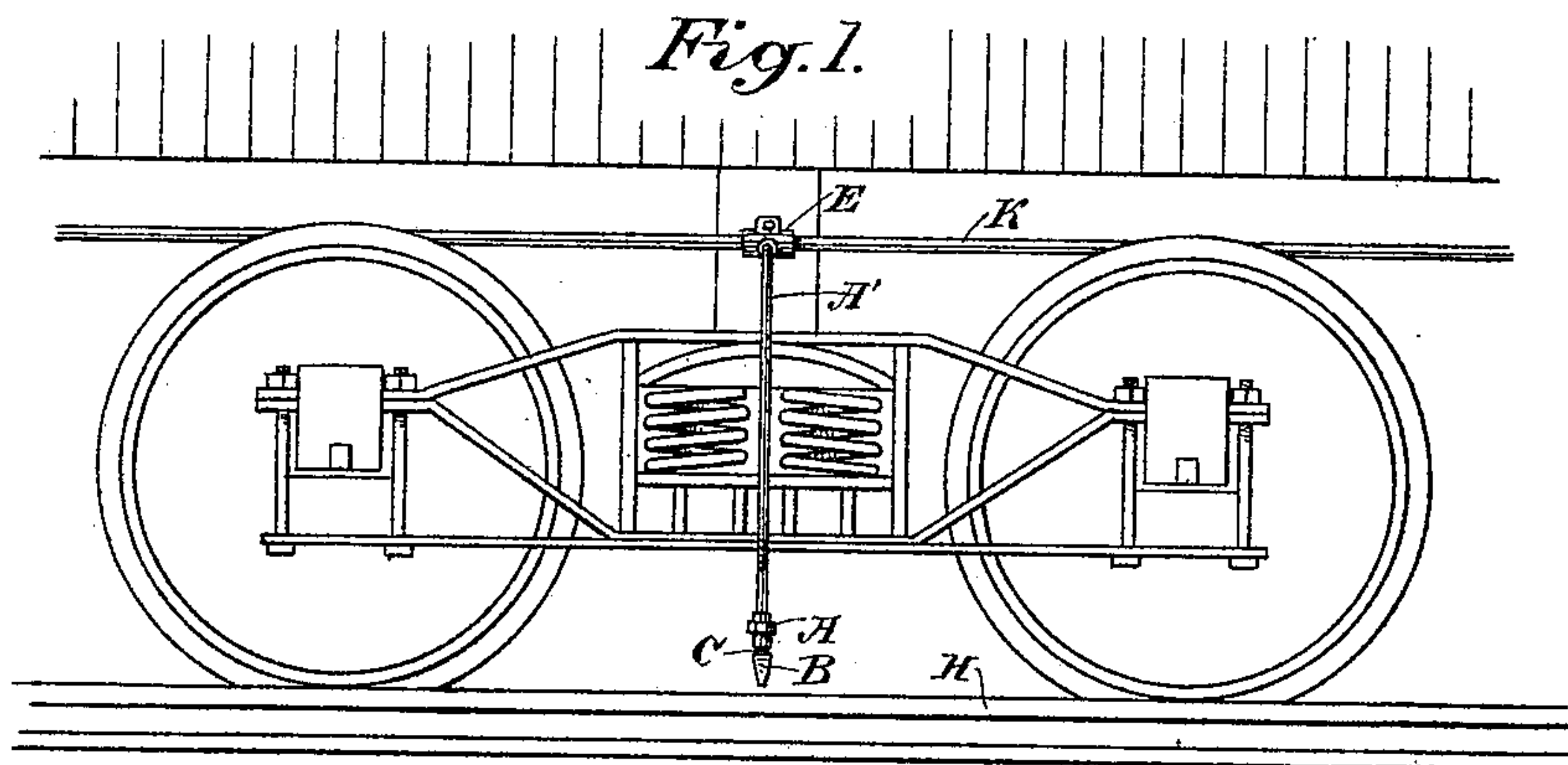
No. 624,103.

Patented May 2, 1899.

A. C. RUMBLE.  
AIR BRAKE SAFETY ATTACHMENT.

(Application filed Sept. 2, 1898.)

(No Model.)



Witnesses,  
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# UNITED STATES PATENT OFFICE.

ALEXANDER C. RUMBLE, OF OAKLAND, CALIFORNIA, ASSIGNOR OF  
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## AIR-BRAKE SAFETY ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 624,103, dated May 2, 1899.

Application filed September 2, 1898. Serial No. 690,092. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER C. RUMBLE, a citizen of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Air-Brake Safety Attachments; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device which is especially designed to be employed in connection with air-brakes upon railway and other cars and trains for the purpose of automatically setting the brakes in case of sudden accident or other occurrence which renders it necessary to apply the brakes immediately.

It consists of the parts and the constructions and combinations of parts hereinafter described and claimed.

Figure 1 shows the application of my invention to the train-pipe of a car. Fig. 2 is an enlarged sectional detail of the device at right angles to Fig. 1.

In cases of sudden accident—such as the derailment of trains, the breaking of side or connecting rods upon locomotives, and various other accidents—it often occurs that the engineer either does not know of the derailment of a car at the rear of his train or in case of the breaking of some portion of the engine, like the side rods, he is unable to apply the brakes.

The object of my invention is to provide an automatically-operating device which will apply the brakes as soon as the accident occurs.

The device consists of a tubular connection A, having a connection between itself and the train-pipe or other part in which the air is contained under pressure. This tubular device A is preferably made with an extending arm B, which may be of any suitable or desired shape, length, or construction, and the device is formed with a breakable or destructible joint, as at C, which when destroyed will allow the air to escape from the passage, and thus instantly set the brakes without other attention.

In the present illustration I have shown the device as applied to railway-cars. The tube A extends down, as here shown, between the wheels of the truck; but it may be mani-

festly placed at any point most convenient for its operation. This tube, if made of metal, has a groove or channel cut in it, as shown at C, of such depth that but small amount of metal is left between the bottom of the groove and the interior of the tube, so that it is easily breakable at this point. If desired, the connection may be made with glass or other easily-breakable substance. Below the groove C is a transverse arm or extension B, which when the parts are in position stands at a short distance, as one and one-half or two inches, above the line of the rail H, and its length is sufficient so that when fixed in place it stands transversely with the end projecting over the rail, so that if the car be derailed this end will strike the rail and the joint at C will be broken, thus admitting the passage of air through the tube A, which is connected with the train-pipe. In order to make this connection without cutting the train-pipe and for the purpose of making connecting-joints, I have here shown a clamp E, adapted to inclose the train-pipe K and having a joint-washer F inclosed within it. A hole is bored in the train-pipe, as shown at G, and the pipe A', which connects with the pipe A, has its upper end formed to open into this passage, so that when the clamp is fitted upon the train-pipe communication is made through the opening G of the pipe A' directly with the section A. For convenience the lower end of the pipe A' is threaded, and the upper end of the section A is correspondingly threaded to be screwed thereon, and the device is thus easily placed. If broken by accident or otherwise, it will give notice at once by applying the brakes to the train, and when everything is in condition for proceeding it is only necessary to screw another of these devices upon the end of the pipe A' to be in readiness for its work.

When used upon a locomotive for the purpose of stopping the train in the event of the breaking of a crank-pin or the disconnection of a side rod, the end of the part B will be projected so as to stand in the plane of movement of the side rod, but out of its reach when the rod is in its proper place. If a break should occur which released the rod, it would instantly strike this end and break the tube



A, as previously described. It will be understood that this tube and its breakable portion may be made in various ways and variously placed about the train, the object being in all cases to cause the break with certainty whenever the accident occurs and consequent setting of the brakes.

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

1. A device for opening communication between the train-pipe of an air-brake mechanism and the open air, consisting of a tube connecting with the pipe or part containing air under pressure, and a removable section of said pipe having an arm projecting laterally and adapted to form a contact-point in case of accident, said removable section having a destructible joint intermediate of its arm and the connection with the tube and said arm forming a lever to break said joint.

2. The combination with a train-pipe of an air-brake mechanism, of a tube connecting therewith, a removable lower section of the tube extending to a point near the rails of the track, and a horizontal, closed, tubular extension of said section projecting upon each

side of the tube, said removable section having a destructible joint in its length and adapted to be ruptured upon the arm making contact with another object in case of accident.

3. The combination with a tube connecting with the train-pipe of an air-brake mechanism, of a removable section on the lower end of said tube and adapted to lie in proximity to the rails, said section having an integral horizontal arm closed at its outer end, and having a destructible joint between its ends which is ruptured when the arm strikes a fixed object.

4. A tube having a projecting arm or bar, a joint or closure which is opened by contact with a fixed object, an opening in the train-pipe and a clamp connecting the upper end of the tube with the train-pipe in line with the opening and forming a tight joint therewith.

In witness whereof I have hereunto set my hand.

ALEXANDER C. RUMBLE.

Witnesses:

S. H. NOURSE,

JESSIE C. BRODIE.