

No. 670,970.

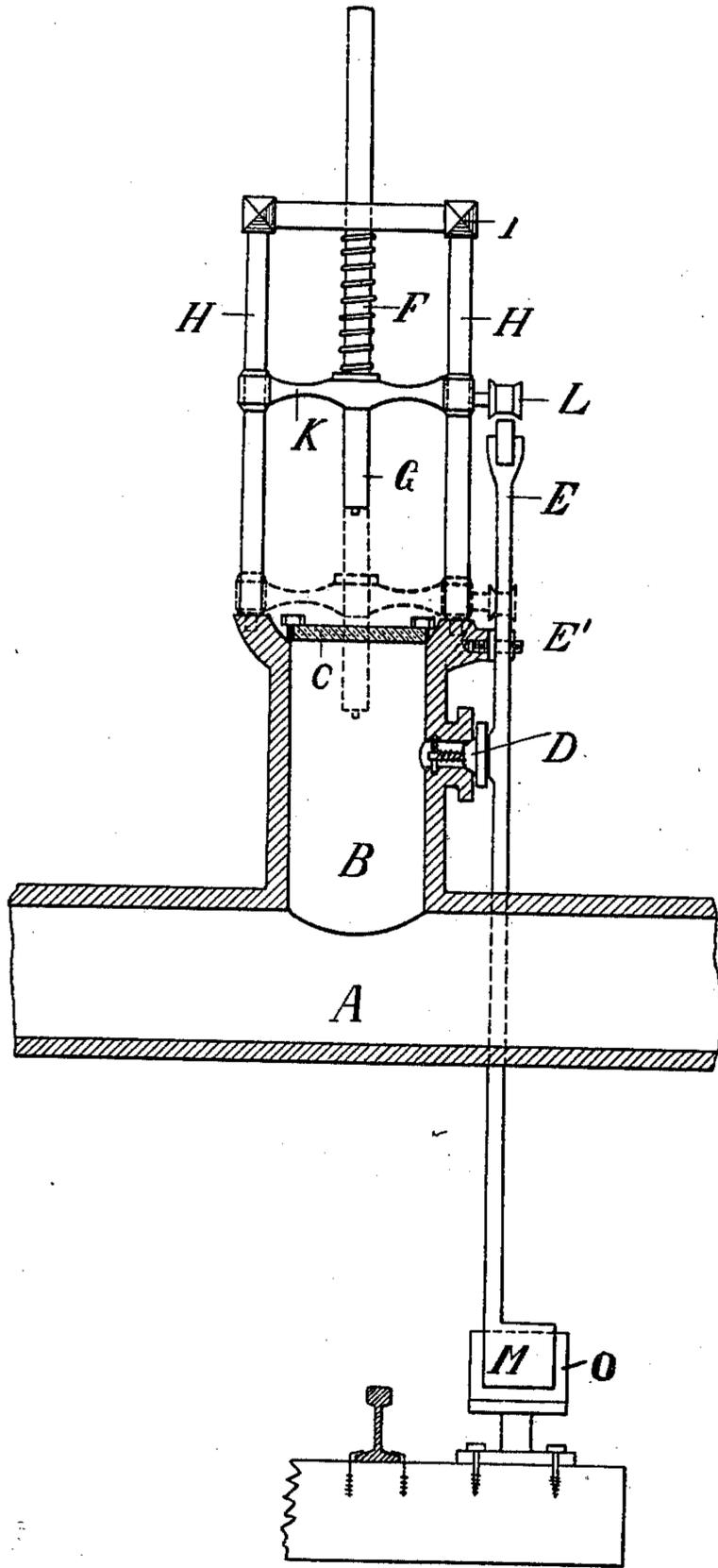
Patented Apr. 2, 1901.

J. ROEBRUCK.

APPARATUS FOR AUTOMATICALLY STOPPING RAILWAY TRAINS.

(Application filed July 16, 1900.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOSEF ROEBRUCK, OF COLOGNE, RHEINPROVINZ, GERMANY.

## APPARATUS FOR AUTOMATICALLY STOPPING RAILWAY-TRAINS.

SPECIFICATION forming part of Letters Patent No. 670,970, dated April 2, 1901.

Application filed July 16, 1900. Serial No. 23,806. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEF ROEBRUCK, a subject of the German Emperor, residing at Cologne, Rheinprovinz, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Apparatus for Automatically Stopping Railway-Trains; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms part of this specification.

This invention is an improvement in apparatus for automatically stopping railway-trains equipped with air-brakes; and it consists in the novel construction of the device which may be operated automatically by a suitable fixed device at any point desired and is hereinafter described and claimed.

The accompanying drawing represents a section of an operative form of the apparatus.

In said drawing, A designates a compressed-air-brake tube having a T B, the outer end of which is normally hermetically closed by a fragile plate C, of glass or other easily-broken material. Below this glass plate is a smaller opening closed by a valve or stopple D, which is held in place by a lever E, which is pivoted at E' and whose longer arm depends past the stopple D and below the tube A and may be provided with a weight M, so as to hold it normally in vertical position and keep the stopple tightly closed.

Secured to and projecting from the end of the T B are two guide-rods H, whose outer ends are connected by a cross-bar I, through which loosely passes a rod G, the inner end of which is supported by a cross-head K, loosely sliding on guides H. A spring T is interposed between the cross-head K and bar I, and the normal tendency of the springs is to push the rod G toward the plate C; but it is kept out of contact with the plate and the spring kept under tension by means of a stop L on the cross-head, which normally rests upon the upper end of the lever E, as indicated in full lines. These parts are preferably arranged so that the weighted end M of the lever lies close to the track and in position to contact with a stop of any suitable kind arranged upon the track, a conventional form of stop being shown. When the lever M strikes the stop, of course the motion of

its lower end is arrested, while its upper end is swung out from under the stop L, whereupon spring F forces rod G violently toward the plate C, and the rod breaks the latter, thereby permitting the escape of air, and the application of the brake thereby causing stoppage of the train. The swing of the lever M will also release the stopple or valve D, so that if for any reason the rod G should fail to break the plate the air would nevertheless be permitted to escape and the brake would be applied.

What I claim is—

1. The combination of the air-brake pipe, a fragile plate for closing the outlet from said pipe, a plate-breaking device and a contact-lever whereby said plate-breaking device is normally held inoperative, with an outlet below the plate and a valve for closing said outlet also held normally closed by said lever, for the purpose and substantially as described.

2. The combination of the air-brake pipe, a fragile plate closing the outlet thereof, the sliding rod beside the plate, springs for pressing said rod inward, a weighted lever for holding said rod out of contact with the plate and keeping the spring under compression, and means for causing said lever to release the rod whereupon the spring forces the rod to break the plate, substantially as described.

3. The combination of the air-brake pipe having an outlet, a fragile plate closing the outlet, guides extending away from the outlet, a cross-head on said guides a rod carried thereby, and a spring for forcing said cross-head and rod toward the plate; with a lever pivoted beside the guide and having a weighted lower end whereby it is normally held in vertical position, a stop on the cross-head adapted to engage the end of the lever whereby the cross-head and rod are kept away from the plate and the spring held under tension, and means whereby the lever may be caused to release the cross-head, whereupon the spring forces the rod to smash the plate, substantially as described.

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

JOSEF ROEBRUCK.

Witnesses:

AUGUST GREVEL,  
KARL SCHMITT.