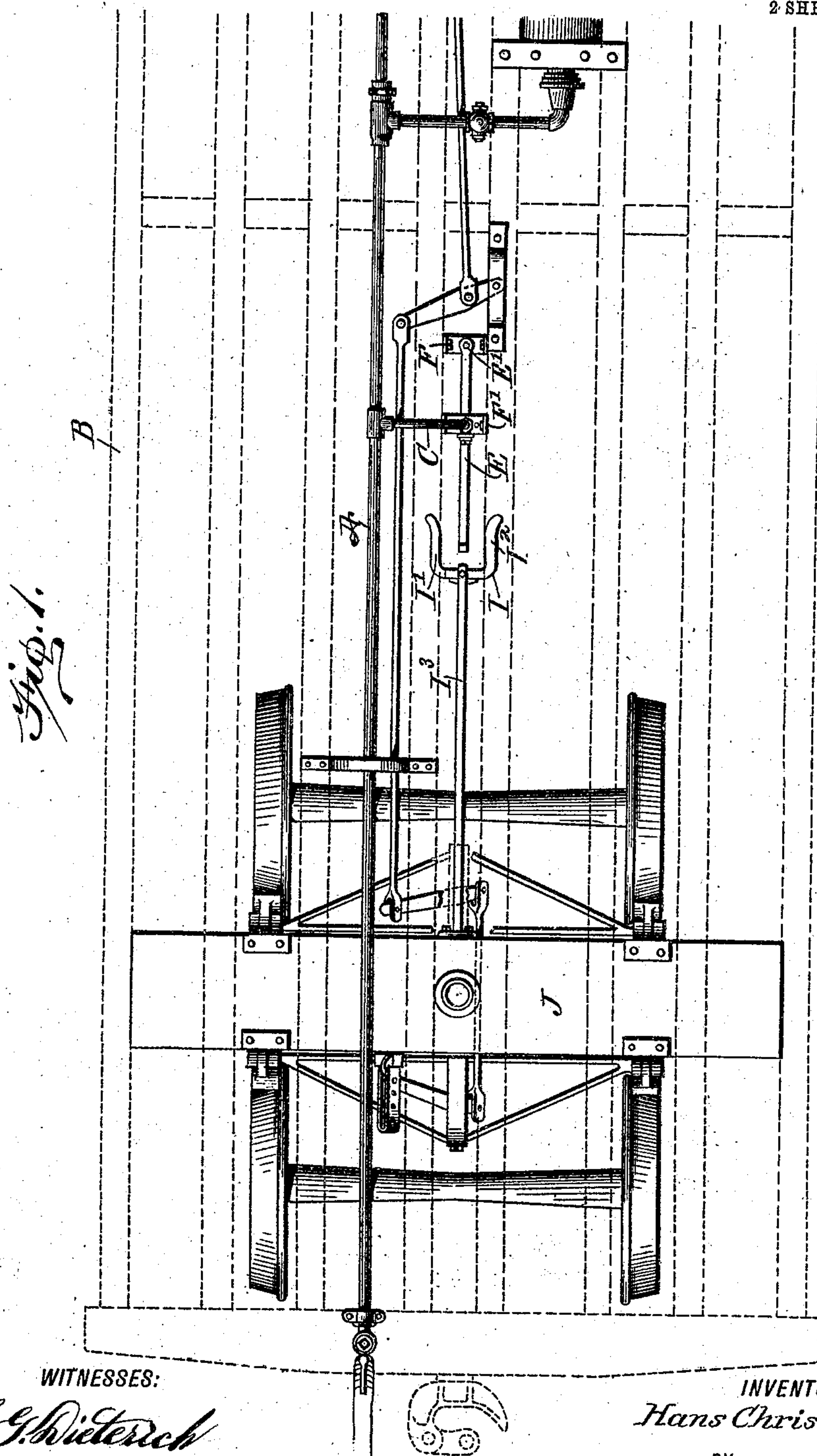


No. 814,974.

PATENTED MAR. 13, 1906.

H. C. LUCK.
AIR BRAKE APPLIANCE.
APPLICATION FILED JULY 10, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

H. G. Dieterich
Rev. J. Hooper

INVENTOR

Hans Christian Luck

BY

Munn
ATTORNEYS

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2 SHEETS—SHEET 2.

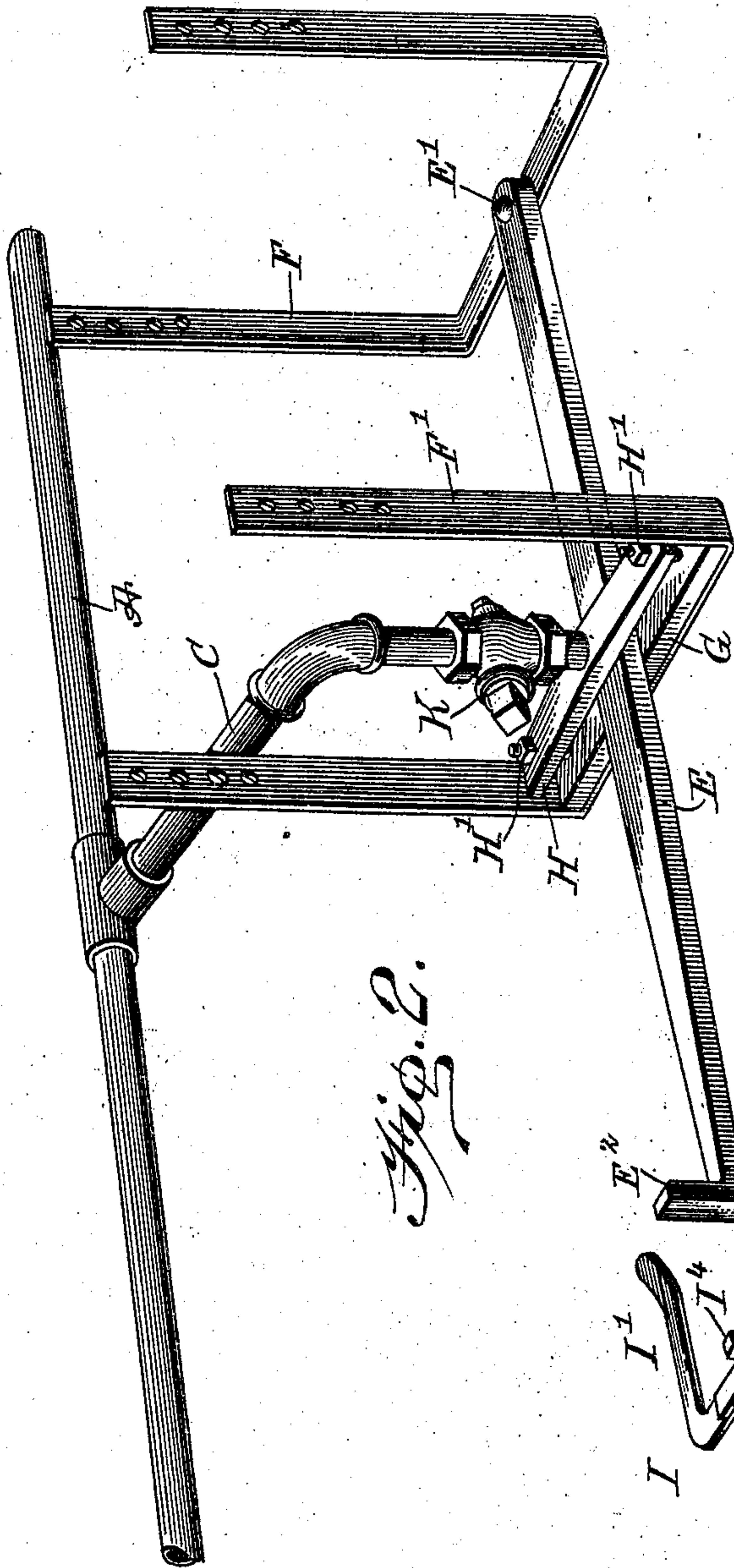


Fig. 2.

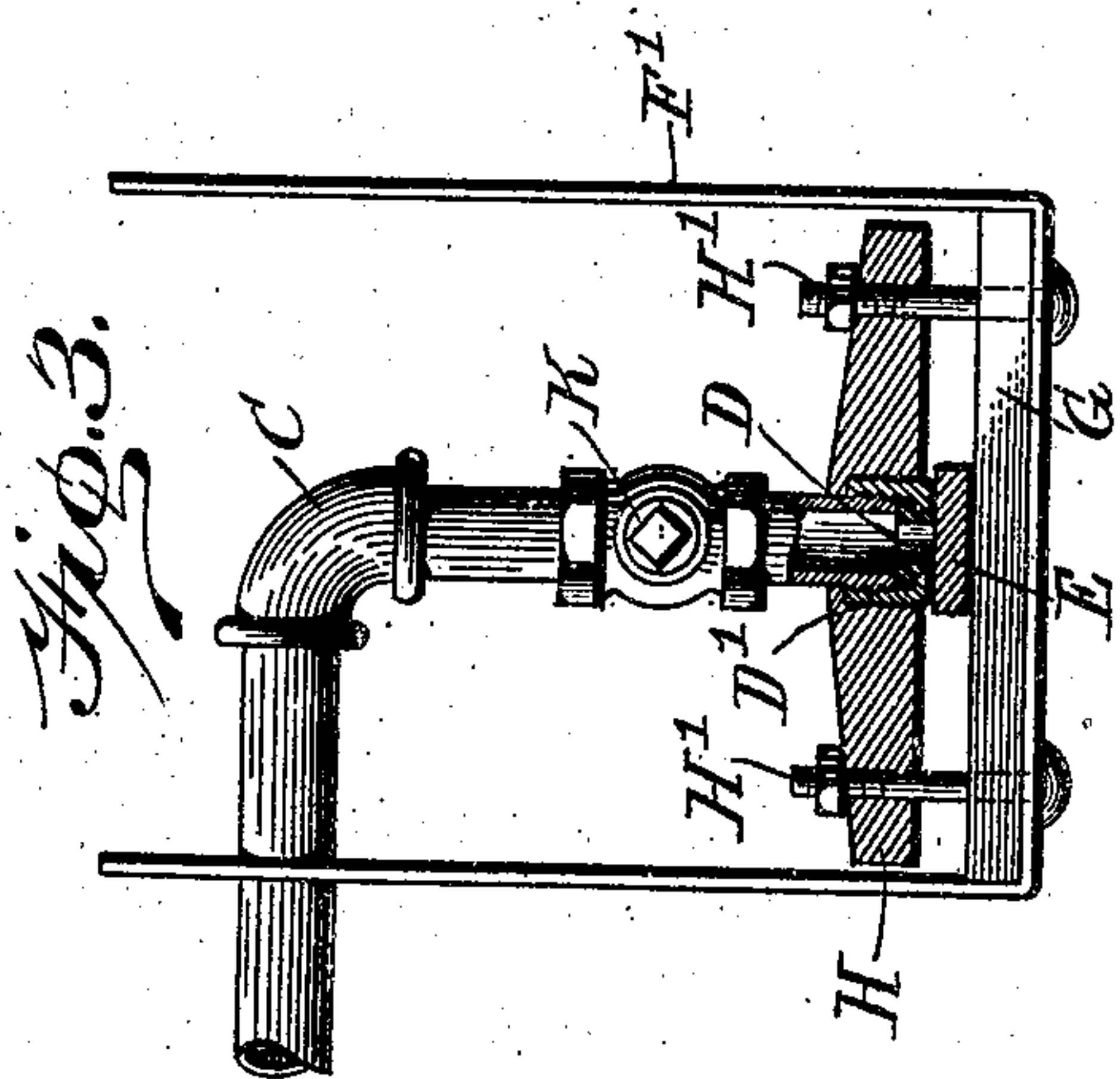


Fig. 3.

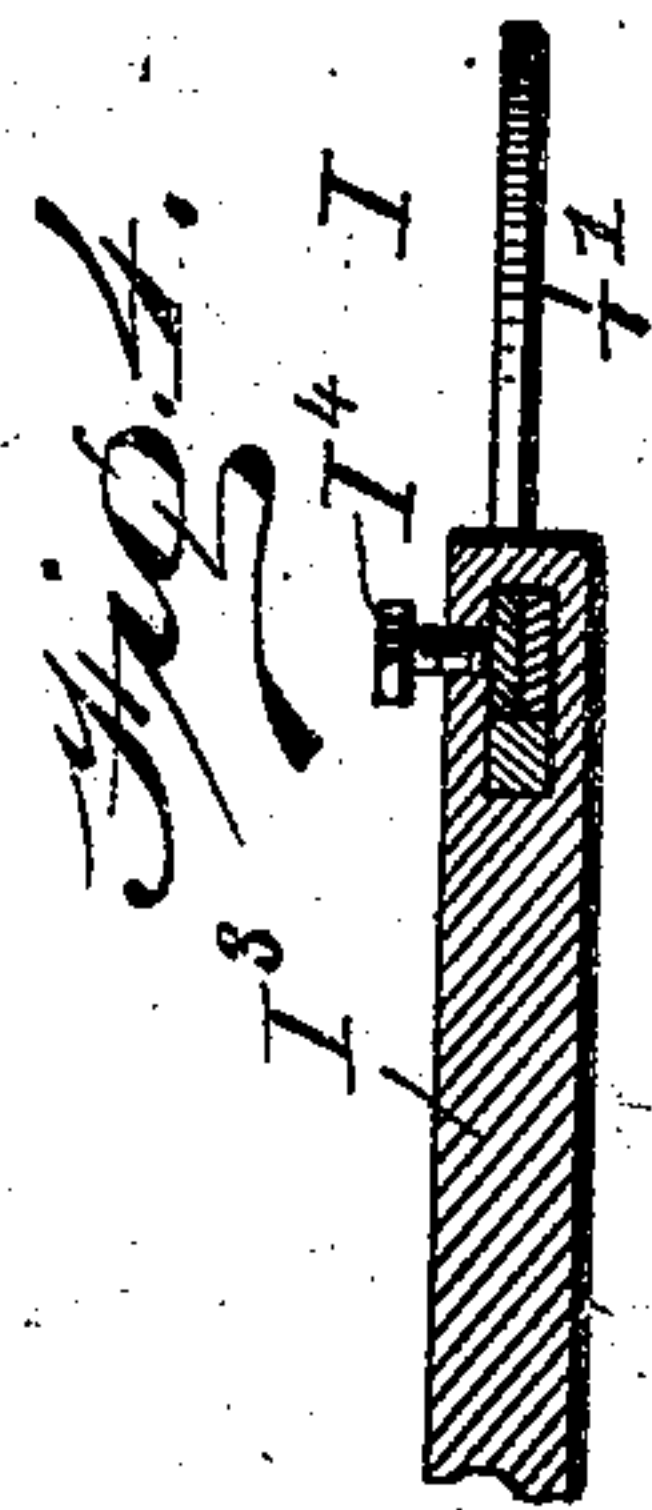
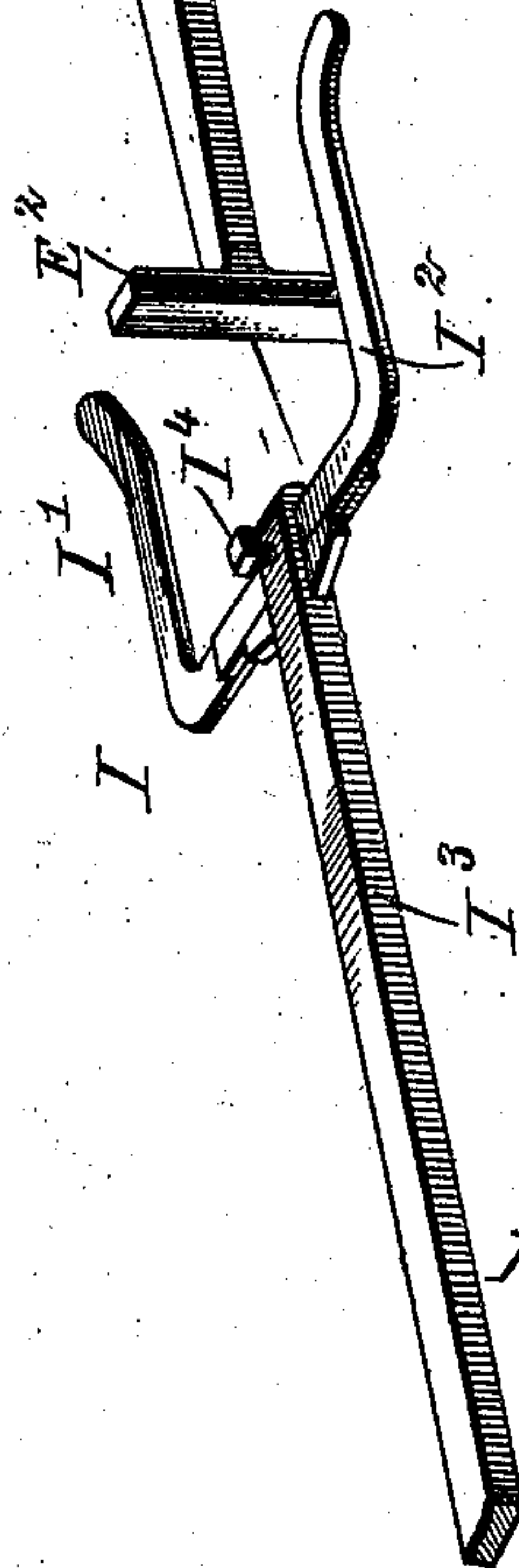


Fig. 4.

WITNESSES:
H. S. Schriener
Rev. J. Koster

INVENTOR
Hans Christian Luck
BY *Mumm*
ATTORNEYS

UNITED STATES PATENT OFFICE.

HANS CHRISTIAN LUCK, OF TELLURIDE, COLORADO.

AIR-BRAKE APPLIANCE.

No. 814,974.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed July 10, 1905. Serial No. 268,926.

To all whom it may concern:

Be it known that I, HANS CHRISTIAN LUCK, a citizen of the United States, and a resident of Telluride, in the county of San Miguel and State of Colorado, have invented a new and Improved Air-Brake Appliance, of which the following is a full, clear, and exact description.

The invention relates to fluid-pressure brakes for railroad-trains; and its object is to provide a new and improved air-brake appliance arranged to automatically set the brakes in the train in case any one of the cars in the train becomes derailed.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is an under side view of a car provided with the improvement. Fig. 2 is a perspective view of the improvement. Fig. 3 is a transverse section of the same, and Fig. 4 is a longitudinal sectional elevation of the operating-fork.

The train-pipe A of a fluid-pressure brake of the Westinghouse or other type and secured to the under side of the car-body B of a car is provided with a branch pipe C, the depending end of which is provided with a valve-seat D, of rubber or other suitable material and normally closed by a valve in the form of a lever E, extending longitudinally and fulcrumed at E' on a bracket F, secured to the under side of the car-body B.

The valve-lever E rests on a transverse bar G, carried by a bracket F', secured to the under side of the car-body, and this bar G is located directly below the valve-seat D and is connected by bolts H' with a bar H, carrying a nut D', screwing on the terminal of the branch pipe C and serving to hold the valve-seat D in place, it being understood that by the arrangement described the valve-lever E is firmly held in engagement with the seat D to close the end of the branch pipe C, and at the same time the valve-lever E can be swung to one side, so as to open the branch pipe C for the escape of air from the train-pipe A with a view to automatically set the brakes in the usual manner.

The free end of the valve-lever E is provided

with a vertical arm E², extending between the members I' and I² of a fork I, attached to a rod I³, secured to the bolster of the car-truck J, so that when the latter leaves the rails and the car-truck assumes an angular position relative to the car-body B then the fork I on account of being a permanent fixture of the truck moves with the latter, and consequently imparts a sidewise swinging motion to the valve-lever E to move the latter from under the valve-seat D to open the branch pipe C for the escape of air to actuate the air-brake mechanism in the usual manner with a view to setting the brakes to bring the train to a stop.

The branch pipe C is provided with a cut-out valve K, which is normally open, but is adapted to be closed by an operator after the train has come to a standstill, so that the air-brake mechanism in the train can be manipulated in the usual manner and while the valve-lever E is off the seat D.

The members I' and I² of the fork I are adjustably secured in the bar I³ by a set-screw I⁴ to bring the members the desired distance apart with a view to allow the truck to readily pass around sharp curves without the corresponding member I' or I² striking the bar E². Thus the car can readily pass around sharp curves without danger of the air-brakes being automatically applied by the device above described, it being understood that the angle of position of the car-truck relative to the car-body must be more than that assumed by a train going around a sharp curve for the device to automatically set the brakes as above described.

From the foregoing it will be seen that only in case of derailment of a truck and its consequent angular position relative to the car-body B causes a quick application of the brakes by means of the air-brake system, so that the train is automatically brought to a standstill within a comparatively short time after the derailment has taken place, and consequently serious damage to the train and to the road-bed is entirely prevented.

The device is very simple and durable in construction, is not liable to get easily out of order, and can be readily applied to cars as now equipped with air-brake systems. It is understood that each car is provided with two devices described, one for each truck, so that when either the front or the rear truck leaves the rails the brakes are applied to bring the train to a standstill.

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

1. An air-brake appliance for automatically setting the brakes on the derailment of a car in the train, comprising a fork fixed on the car-truck and having its members arranged in a horizontal plane, a branch pipe connected with the train-pipe, and a valve in the form of a lever fulcrumed on the car-body and normally closing the end of said branch pipe, the free end of said lever extending between the members of the said fork whereby the rotation of the truck upon the car-body beyond a predetermined angle may operate the lever to open the valve.

2. An air-brake appliance for automatically setting the brakes on the derailment of a car in the train, comprising a fork fixed on

the car-truck and having its members in a horizontal plane, a branch pipe connected with the train-pipe, a valve in the form of a lever fulcrumed on the car-body and normally closing the end of the said branch pipe, the free end of said lever extending between the members of the said fork, whereby the rotation of the truck upon the car-body beyond a predetermined angle may operate the lever to open the valve, and a manually-controlled cut-out valve on the said branch pipe.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HANS CHRISTIAN LUCK.

Witnesses

FRED BEEBE,
G. B. CUSHMAN.