

(No Model.)

G. S. STRONG.
LOCOMOTIVE BRAKE.

No. 315,973.

Patented Apr. 14, 1885.

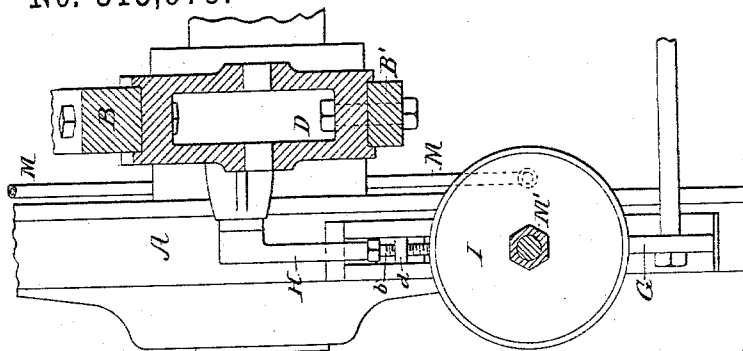


FIG. 2.

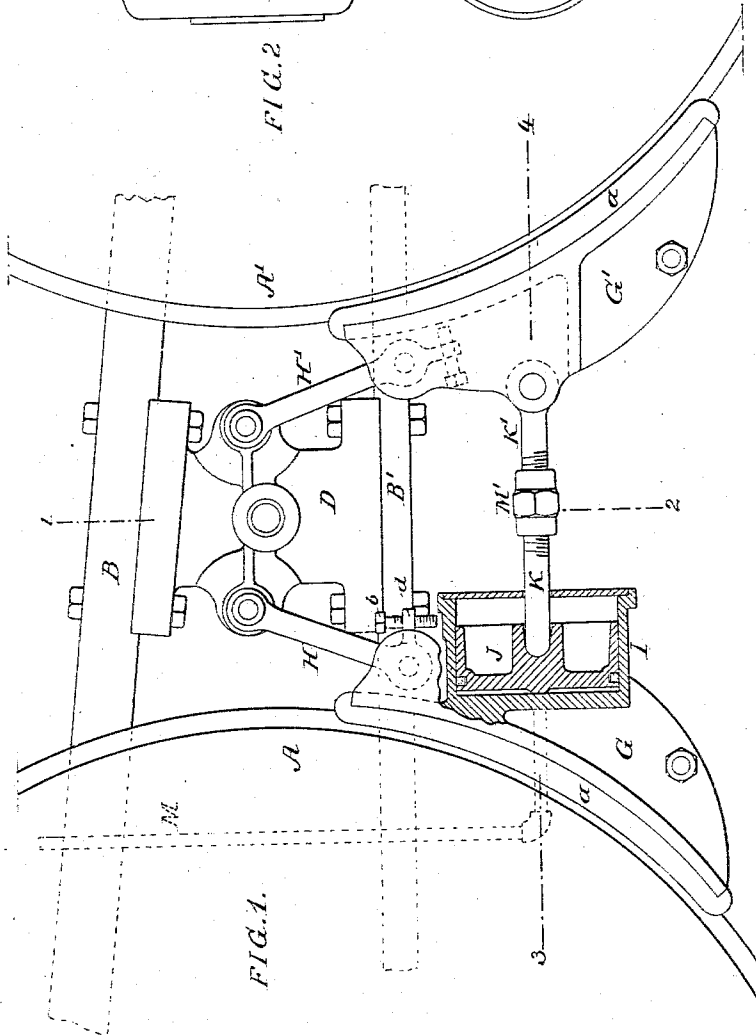


FIG. 1.

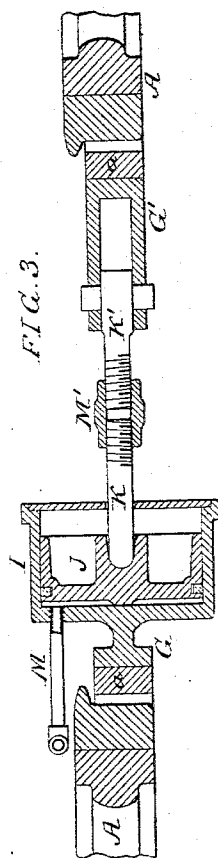


FIG. 3.

Witnesses:
John M. Clayton
Harry Drury

Inventor:
George S. Strong
by his Attorneys
Hudson & Sons

UNITED STATES PATENT OFFICE.

GEORGE S. STRONG, OF PHILADELPHIA, PENNSYLVANIA.

LOCOMOTIVE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 315,973, dated April 14, 1885.

Application filed October 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. STRONG, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented a certain Improved Braking Mechanism for the Driving-Wheels of Locomotives, of which the following is a specification.

My invention consists of certain braking mechanism, fully described and claimed hereinafter, for the driving-wheels of a locomotive.

In the accompanying drawings, Figure 1 is a side view, partly in section, of my improved braking mechanism; Fig. 2, a vertical section on the line 1 2, Fig. 1; and Fig. 3, a sectional plan on the line 3 4, Fig. 1.

A and A' represent parts of the two driving-wheels of a locomotive, and B and B' two bars of the frame-work of the engine.

D is a substantial casting, the construction of which will depend upon the character of the frame-work, the casting being in the present instance made for attachment to the two bars B B'.

G G' are the two shoes, each provided with a steel sole-plate, *a*. The shoe G is suspended by a link, H, to the casting D, and the other shoe, G', by a similar link, H', to the same casting. On one of the shoes (the shoe G in the present instance) is cast a short cylinder, I, into the piston J of which the rounded end of a rod, K, extends a short distance, this rod being connected to a rod, K', which is pinned to the shoe G'.

The connection of one rod with the other is made by an ordinary right and left screw-coupling, by which the distance apart of the shoes, when released, is determined; and in order that each shoe when released may be at a given distance from the wheel to which it appertains, I use stops, which in the present instance consist of set-screws passing through projections *d* on the links.

When the shoe G is released, it will fall away from the wheel A until its cylinder

strikes the set-screw *b* of the link H, the shoe G' at the same time falling away from the wheel A' until it strikes the set-screw (shown by dotted lines) of the link H'. In other words, while the distance apart of the shoes, when released, is determined by the coupling-rods, the stops prevent one shoe from moving farther away from one wheel than the other shoe does from the other wheel.

A steam-pipe, M, forms a communication between the steam-space of the boiler and the cylinder I of the shoe G, the pipe being furnished with an ordinary three-way cock under the control of the engineer, who is thus enabled to direct steam to the cylinder in applying the brake-shoes to the wheels, or to exhaust steam from the cylinder when the shoes have to be released. This pipe may be arranged in different ways, but a portion of it must be vertical, or nearly so, and must be long and elastic enough to yield to the limited movement of the shoe.

I am aware that brake-shoes have been so combined with cylinders and pistons that they could be applied by steam or hydraulic pressure. This, therefore, I do not claim; but

I do claim as my invention—

1. The suspended shoe G, having a cylinder, I, cast in one therewith, in combination with the shoe G' and piston J acting thereon, substantially as described.

2. The combination of the suspended shoe G and cylinder I carried thereby, with a piston in said cylinder, a shoe, G', carrying an adjustable rod, K K', acting on said piston, substantially as set forth.

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

GEORGE S. STRONG.

Witnesses:

HARRY SMITH,
HENRY HOWSON, Jr.