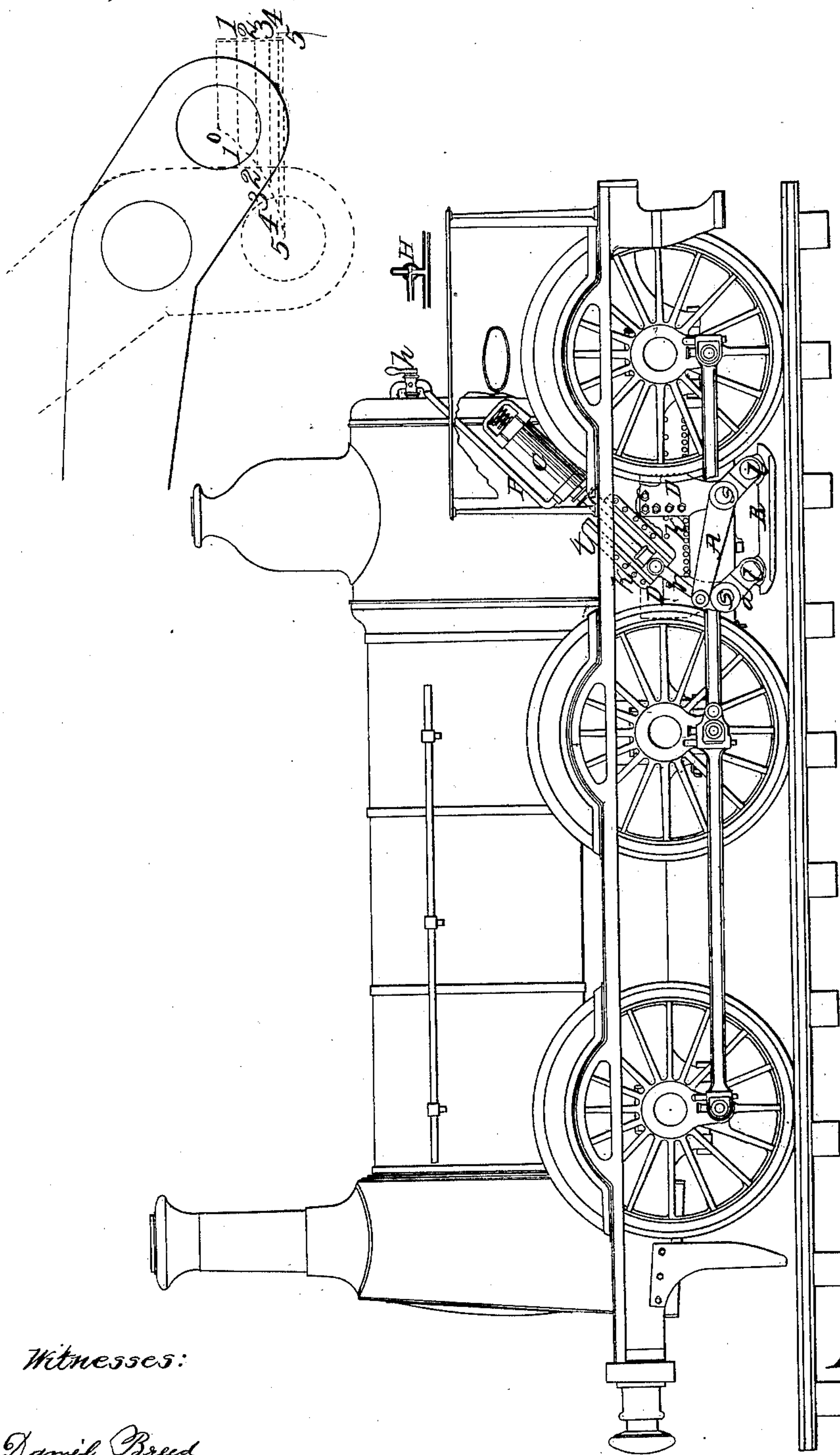


C. R. Davidson,

Steam Brake.

No 27,038.

Patented Feb. 7, 1860



Witnesses:

*Daniel Breed
E. B. Forbush*

Inventor:

C. R. Davidson

UNITED STATES PATENT OFFICE.

C. R. DAVIDSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN RAILROAD-BRAKES.

Specification forming part of Letters Patent No. 27,038, dated February 7, 1860.

To all whom it may concern:

Be it known that I, C. R. DAVIDSON, of Brooklyn, in Kings county, and State of New York, have invented a new and useful Machine for Stopping Railroad-Locomotives and Railroad-Cars, (called "C. R. Davidson's Locomotive-Brake;") and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification.

The portion of said drawing given in colors represents a general view of said machine.

h shows a cock attached to the locomotive. Through this the steam may be made to issue from the boiler (by the engineer turning it) into conducting-pipe *P*. By this pipe *P* the steam is conducted into cylinder *C*, and there pressing against the head of piston-rod *b*, which is connected with connecting-rod *r* and guided by slides *K K* forces upward lever *A* by its connection at point *i*. That lever *A*, secured by heavy fastenings at point *S* and continued to point *I*, connects at point *I* with rubber or shoe *B*, which connects with the short arm *a* and is pressed down upon the track-rails. To throw back into its former position said brake, the engineer has to replace cock *h* into its former position, as represented on the drawing. This shuts off the steam from the conducting-pipe *P*, and so from cylinder *C*. The steam in cylinder *C* is then wasted through a petcock at the bottom of said cylinder. The pressure of steam in cylinder *C* being removed by this waste,

the spiral spring *M* presses downward the head of piston-rod *b*, and thereby throws the whole combination back into the position represented in the drawings. This principle can be adapted to passenger and freight cars by means of a conducting steam-pipe running from the boiler through under the cars and having gutta-percha connections between them.

The shoe *B* is grooved on the under side and thereby made to fit nicely to the track, which secures an increase of friction-surface and also guards it from slipping off the track. It is made of the softest practicable kind of iron, which secures an increase of friction over harder material. With the action of the aforesaid combination upon it, rubber *B* may be made to sustain, if required, nearly the whole weight of the locomotive, thereby causing almost any desired amount of friction and therefore of resistance, both largely in excess of what can be produced by the present generally-adopted methods of braking railroad-trains.

I disclaim the invention of a locomotive or car brake as applied to the track; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the grooved shoe *B*, lever *A*, cylinder *C*, and spring *M*, constructed as described, for operating brakes on the rails, as herein set forth.

C. R. DAVIDSON.

In presence of—

GILBERT L. GIBERSON,
JNO. H. JOHNSON.