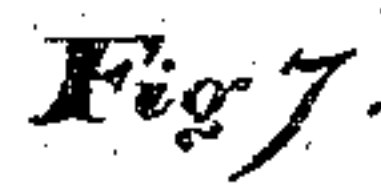
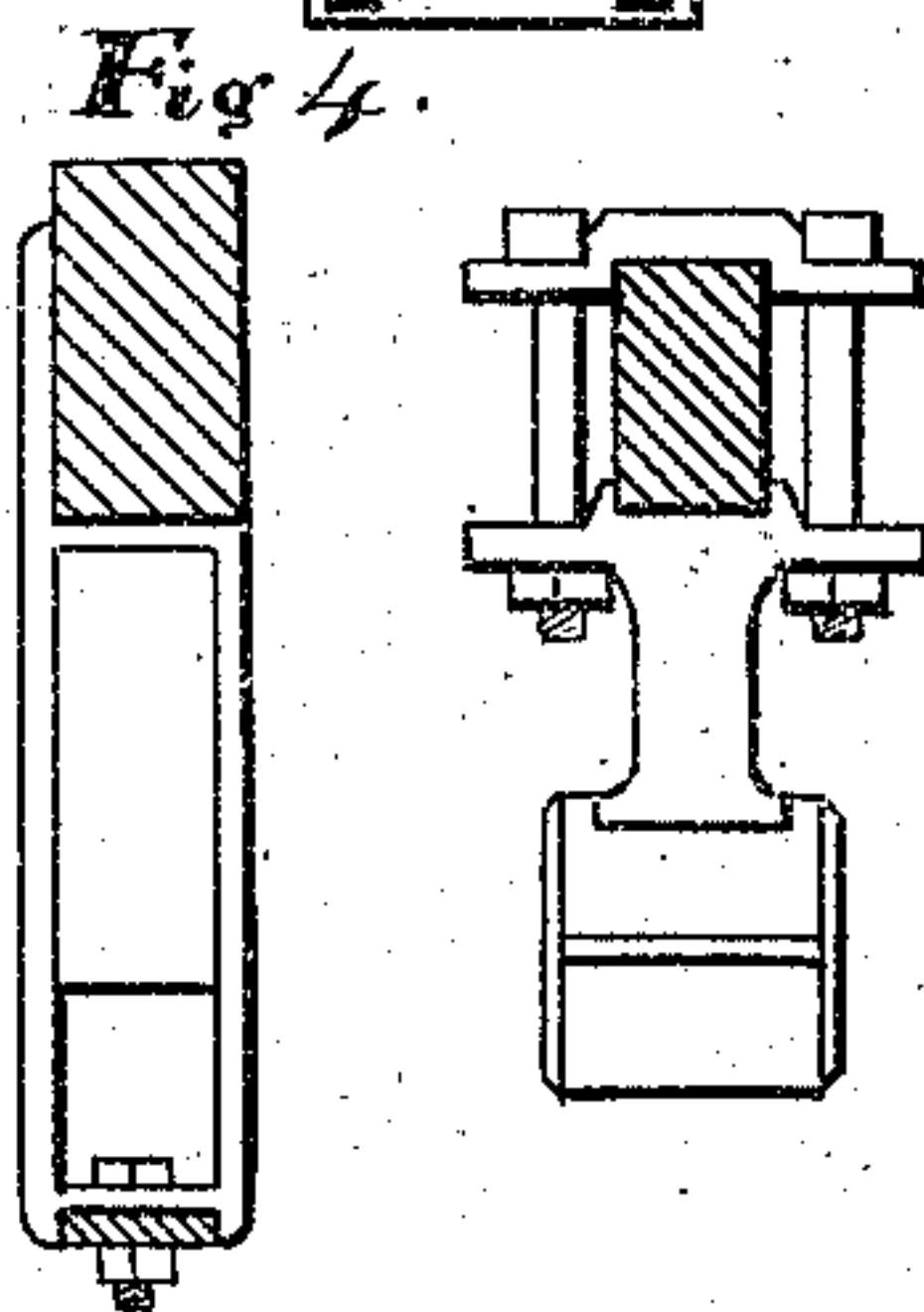
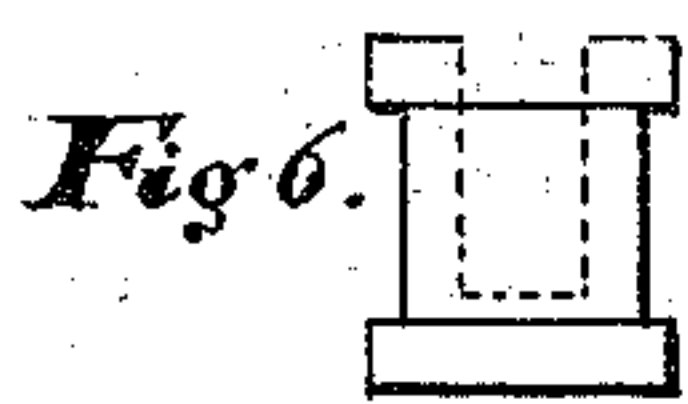
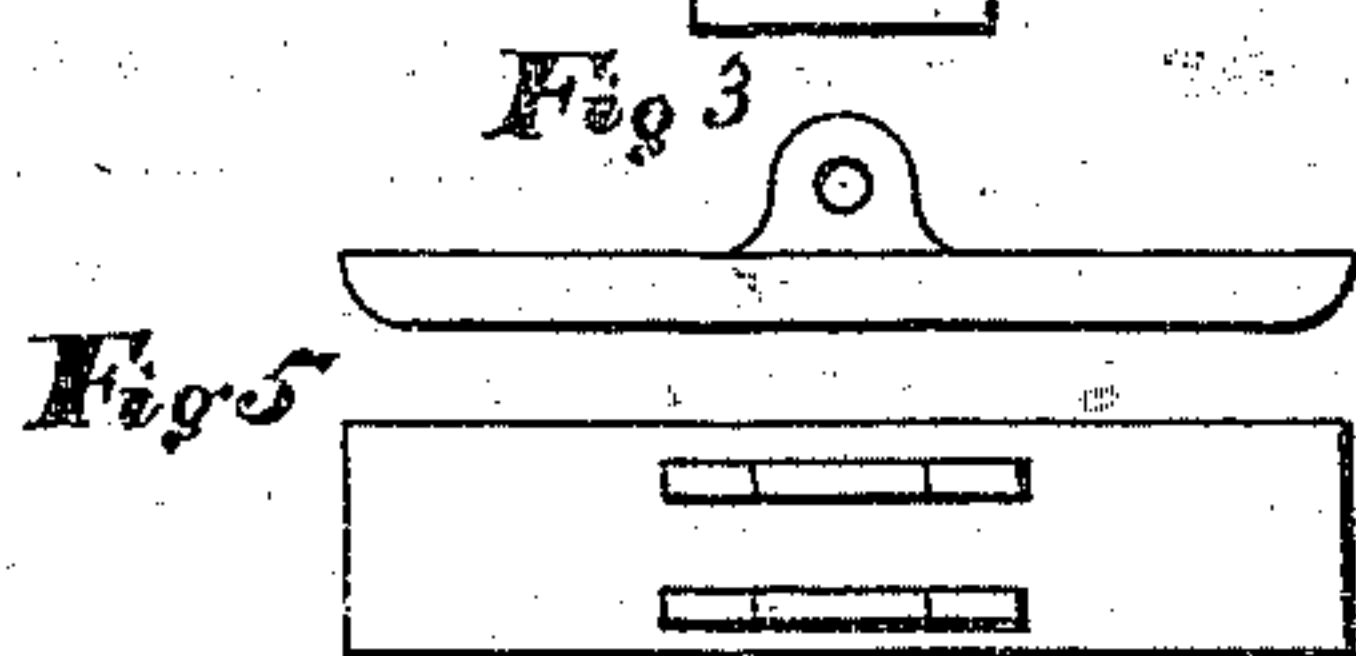
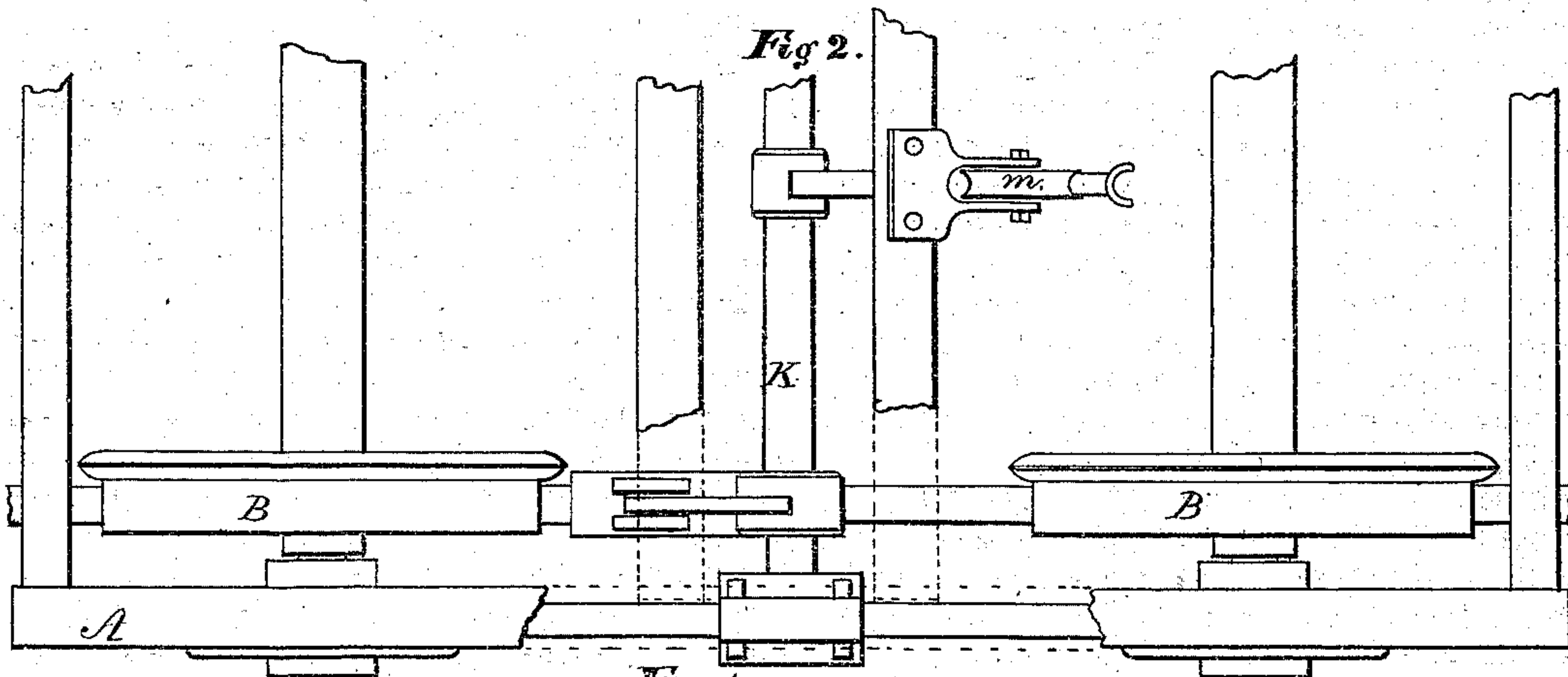
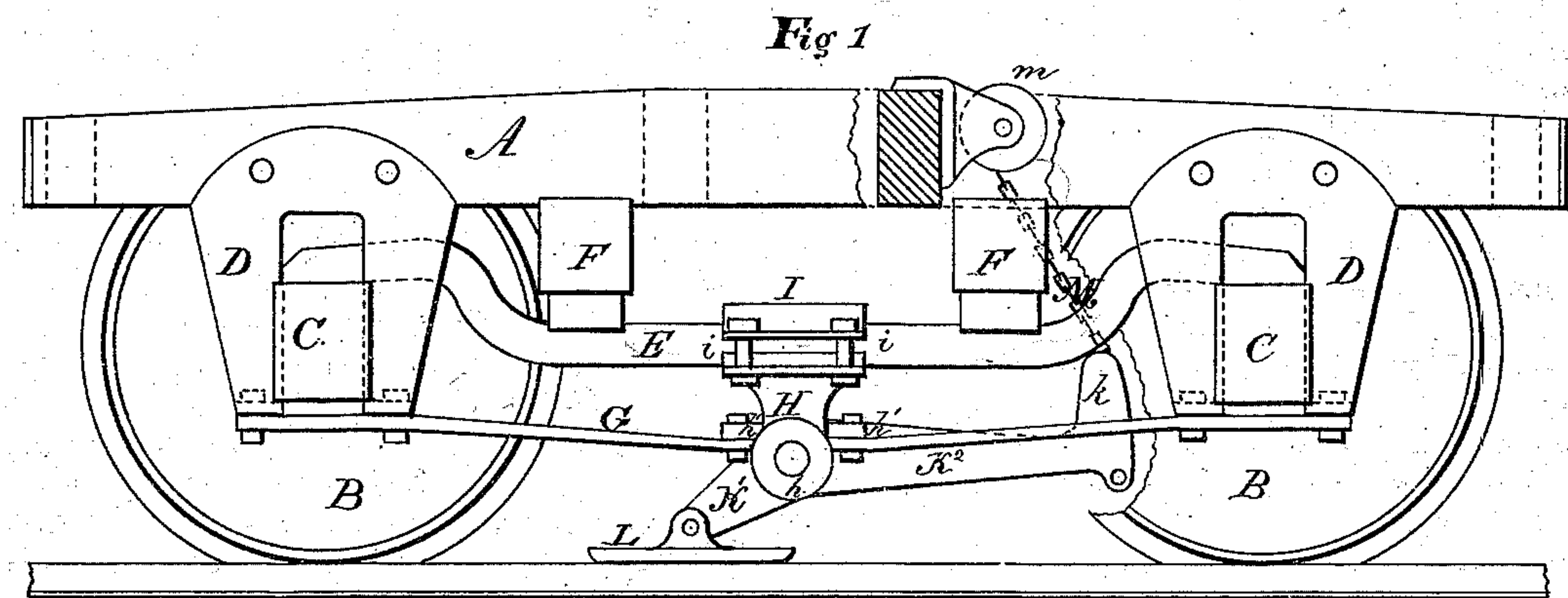


D. H. DOTTERER.

Car-Brakes.

No. 152,831.

Patented July 7, 1874.



Witnesses
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UNITED STATES PATENT OFFICE.

DAVIS H. DOTTERER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **152,831**, dated July 7, 1874; application filed March 25, 1874.

To all whom it may concern:

Be it known that I, DAVIS H. DOTTERER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Railroad-Car Brake; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a side elevation, partly in section. Fig. 2 is a plan. Figs. 3, 4, 5, 6, and 7 are detail views.

My invention has for its object to provide an improved railroad-car brake for braking on the rail instead of upon the wheels, according to the usual method. The nature of my invention consists in the novel and peculiar construction and combination of parts, having reference particularly to the connection of the brake-shoe with the equalizing-bar, so as to always retain said shoe in that relation to the rail at which it may be adjusted, and thereby avoid jumping and bumping, and with the brake-operating mechanism, so as to raise and lower said shoe directly therefrom, all as hereinafter more fully described.

Referring to the accompanying drawing, A represents the lower part of the frame of the body of a car mounted on wheels B B. C C are the axle-boxes, sustained in the housings D D, and E is the equalizing-bar, resting upon said boxes and sustaining the springs F F. G is the connecting-bar of the housings, usually made in a single piece, but, in the present case, divided centrally to make room for the boss *h* of the hanger H, which affords a bearing for the shaft K. I is a half-box, embracing the upper side of the equalizing-bar, and secured by bolts *i i* to said hanger H, which is thus suspended from the equalizing-bar. *h'* are ears on the hanger H, secured to the divided connecting-bar G by means of bolts *g*. The shaft K is provided with rigid arms K¹, to which are attached, by a pivotal or joint connection, the brake-shoes L. K² is another rigid arm, secured upon the shaft K, and provided with a grooved segmental end, *k*, for the reception, as shown, of a chain, M, passing over a sheave, *m*, and attached to the brake-handle shaft or other device, by which

power is applied for putting on and taking off the brakes.

The advantages of the foregoing construction are briefly as follows: By braking upon the rail the great injury to which wheels are subjected by the usual method is averted. When the brake is applied to the wheel it has merely the effect of stopping the rotation of the latter and causing it to slide instead of roll upon the rail until the momentum of the car is overcome by the sliding friction of the wheel upon the rail. This sliding of the wheel produces great injury to the same, destroying the curvature of its face or rim, and producing flat spots, which give an uneasy or bumping motion to the car. By sustaining the brake on the equalizing-bar, which is supposed always to remain at the one distance from the rail, the shoe L (one end of which, viz., the forward end, is intended to be weighted) will retain its adjusted position with reference to the rail instead of jumping from or bumping against the latter, as it would do if connected with the body of the car, which rises and falls upon its springs. By raising and lowering the shoe directly from the operating mechanism instead of intermediately through the friction of the wheel, as has been done already, the injurious effects above noticed of brakes on the wheel are avoided, and the entire force exerted is brought to bear directly upon the rail.

I am aware that I am not the original inventor of, broadly, a rail-brake shoe sustained by an equalizing-bar; nor of a rail-brake shoe connected directly with the brake-operating mechanism; nor of a rail-brake shoe so connected directly with the brake-operating mechanism as to be independent of the wheels.

What I claim as my invention is—

The rail-shoe L, combined with and sustained by the equalizing-bar E, and to be operated directly from the brake-operating mechanism independently of the wheels, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1874.

DAVIS H. DOTTERER.

Witnesses:

JNO. A. BELL,

M. DANL. CONNOLLY.