

(No Model.)

F. W. RIESS.

BRAKE FOR CONTROLLING ROTARY MOTION.

No. 407,550.

Patented July 23, 1889.

Fig: 1.

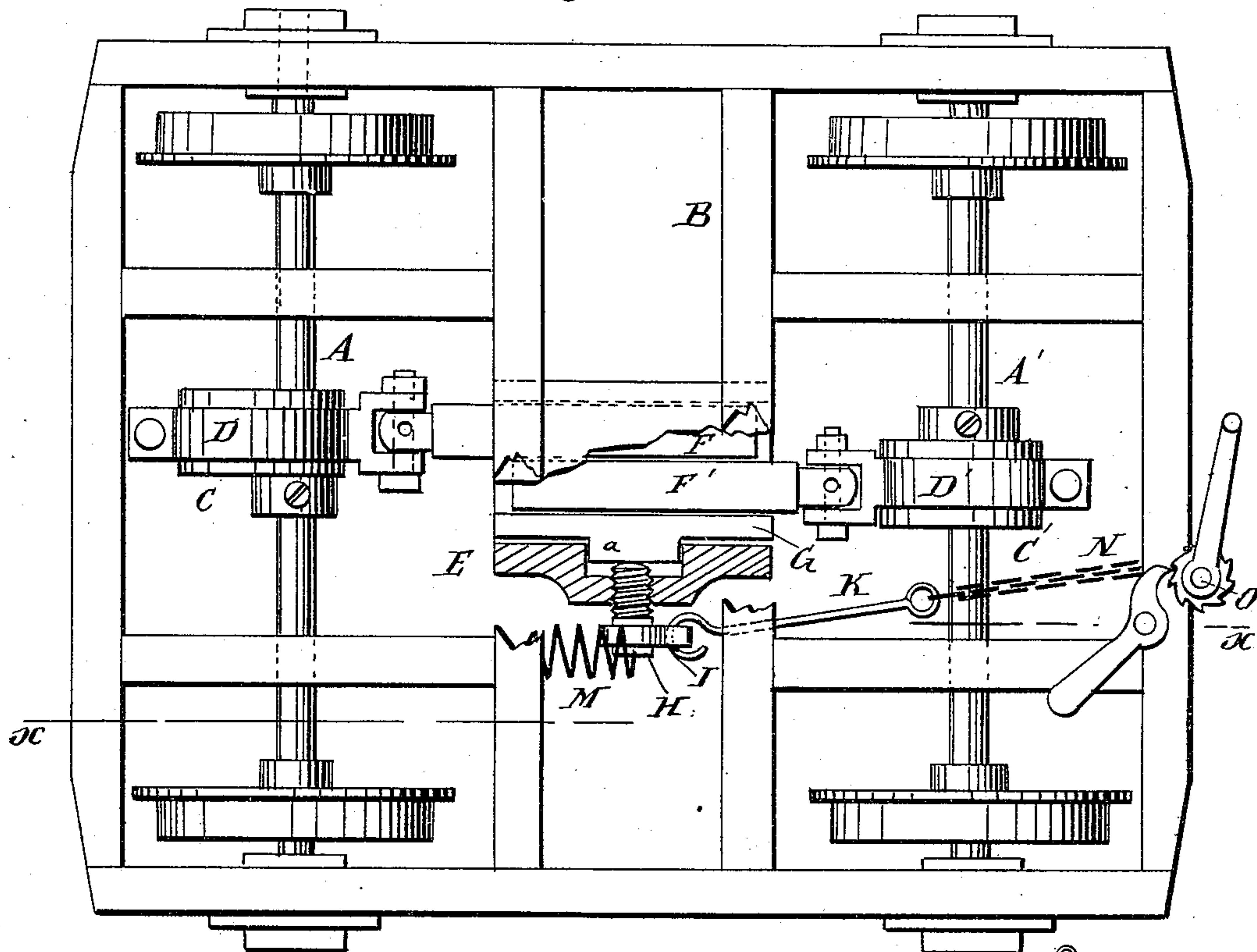


Fig: 2.

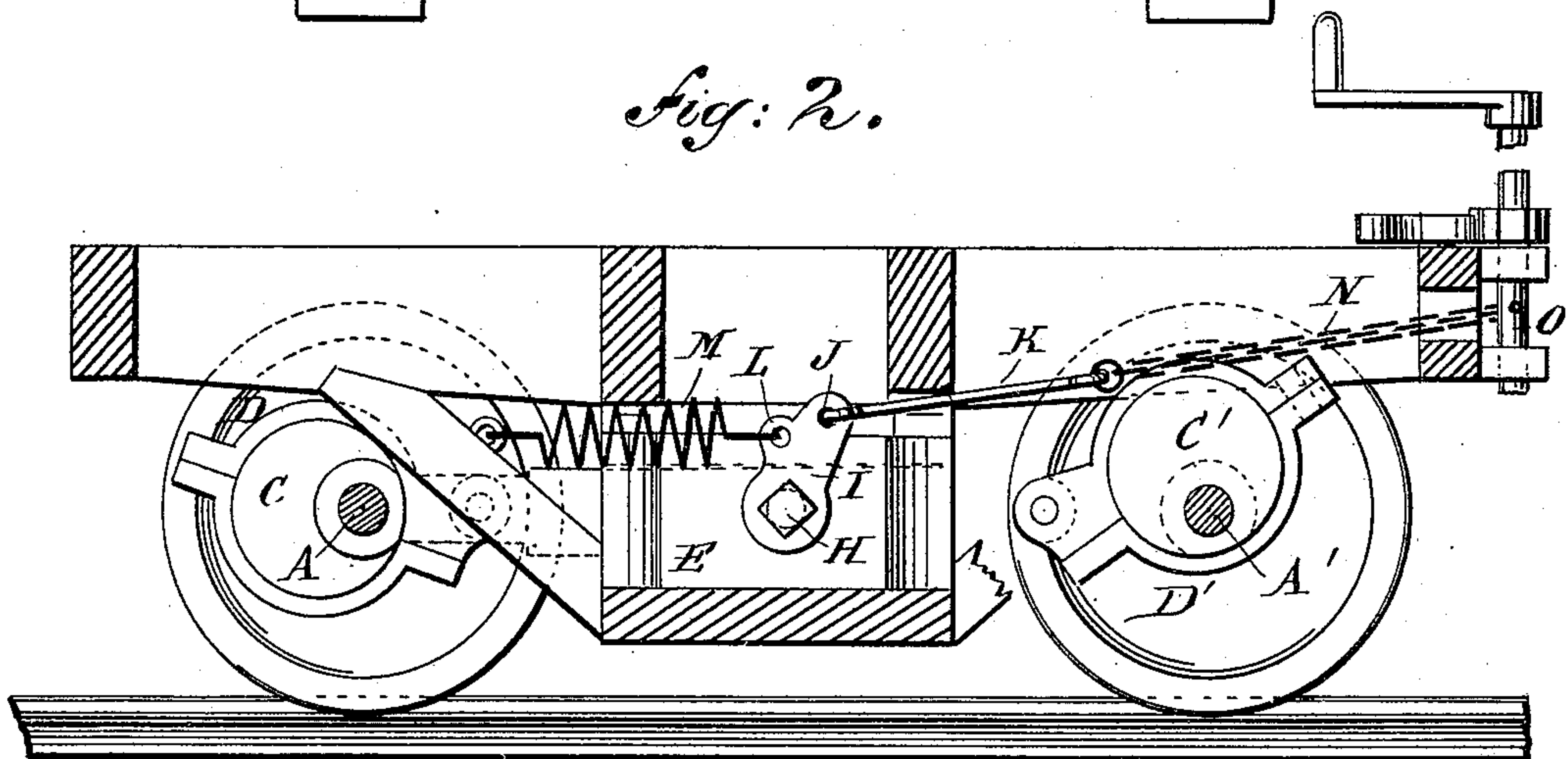
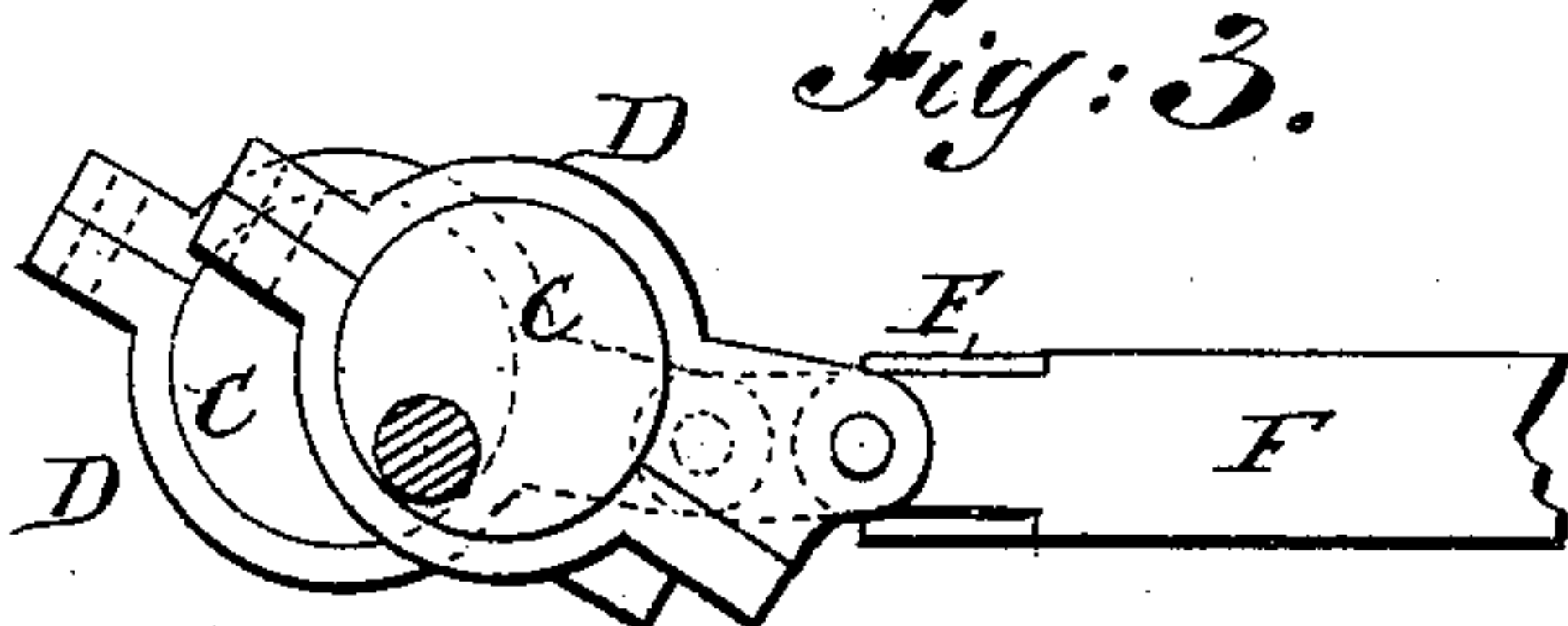


Fig: 3.

WITNESSES:
Chas. Nida
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UNITED STATES PATENT OFFICE.

FREDERICK WM. RIESS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
HIMSELF AND JACOB R. ELFRETH, OF SAME PLACE.

BRAKE FOR CONTROLLING ROTARY MOTION.

SPECIFICATION forming part of Letters Patent No. 407,550, dated July 23, 1889.

Application filed November 22, 1888. Serial No. 291,417. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WM. RIESS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented
5 a new and Improved Brake for Controlling Rotary Motion, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

10 Figure 1 is a plan view, partly in section, of a car-truck to which my improved brake has been applied. Fig. 2 is a longitudinal section taken on line *xx* in Fig. 1; and Fig. 3 is a detail side elevation of a modified form.

15 Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide a simple and effective device for controlling rotary motion generally, but designed more particularly for application to cars as a brake;
20 and my improvement will be described in this connection, although I do not limit or confine myself to its use on cars.

My invention consists in the combination,
25 with car axles or shafts, of eccentrics or cranks carried by or mounted on the axles or shafts, sliding bars connected with the eccentrics or cranks, and a clamp for binding the said bars together with greater or less
30 pressure, the clamp being operated by brake-rods worked by the usual brake-wheel, lever, or other controlling devices.

To the axles *A A'* of the car-truck *B* are attached eccentrics *C C'*, to which are fitted
35 the eccentric-straps *D D'*. To the framework of the truck is attached a clamp-box *E*, in which are placed the sliding bars *F F'*, which are pivotally connected with the eccentric-straps *D D'*.

40 The clamp-box *E* is provided with a movable plate *G*, which is held in place in the casing of the clamp-box by a boss *a*, which enters a corresponding recess in the clamp-box. A screw *H* passes through the side of
45 the clamp-box, and is capable of forcing the plate *G* against the sliding bar *F'*, which in turn is pressed against the bar *F*, the latter bearing against the side of the clamp-box.

To the screw *H* is secured an arm *I*, provided
50 with an aperture *J* for receiving the brake-

rod *K*, and with an aperture *L* for receiving one end of the retractile spring *M*, the opposite end of which is connected with a fixed portion of the car-truck frame. A chain *N* is connected with the rod *K* and with the wind-
55 lass *O*, which is of the usual form. When the windlass *O* is revolved, the screw *H* is turned through a part of a revolution, thereby causing it to bear with more or less pressure upon the plate *G*, producing more or less friction upon and between the bars *F F'* and the
60 bar *F* and the side of the clamp-box *E*. As the pressure is applied to the plate *G*, the friction upon the sliding bars *F F'* tends to retard the eccentrics and the axles by which
65 they are carried, thereby acting as a brake to the car.

Where it is desired to render the action of the brake more continuous, I apply to each axle two eccentrics arranged at right angles
70 to each other, and two sliding friction-bars, so that the said bars work in alternation as the eccentrics are revolved, thereby rendering the action of the brake practically continuous and avoiding any jar that might occur where only a single eccentric is used.

By the employment of my improved brake upon cars the friction is removed from the periphery of the wheels and I insure uniformity in the action of the brake. Another
80 advantages secured by my improvement is that by making the action of the brake variable the skidding of the car-wheels is avoided.

I do not limit or confine myself to any particular kind of sliding or friction bars or surfaces, as the surfaces may have a rotary or oscillatory motion, or a simple rectilinear motion, as may be found most practical in actual
85 experience.

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

1. The combination, with the car-axle, of an eccentric, an eccentric-strap, a reciprocating bar adapted to be slid by the eccentric-strap, and a clamp-box provided with a friction-plate, substantially as specified.
95

2. The combination, with the axle *A*, of the eccentric *C*, the strap *D*, friction-bar *F*, recessed clamping-box *E*, the plate *G*, provided with the projection *a*, and the clamping-screw
100

H, provided with the lever I, substantially as specified.

3. The combination, with the axle A, of the
eccentric C, the strap D, friction-bar F, re-
5 cessed clamping-box E, the plate G, provided
with the projection *a*, the clamping-screw
H, provided with the lever I, the retractile

spring M and brake-rod K, the chain N, and
the windlass O, substantially as specified.

FREDERICK WM. RIESS.

Witnesses:

E. FABLE, Jr.,

JNO. P. CROASDALE.