

M. M. HINER & J. M. FESSLER.
Car-Brake.

No. 160,190.

Patented Feb. 23, 1875.

Fig. 1.

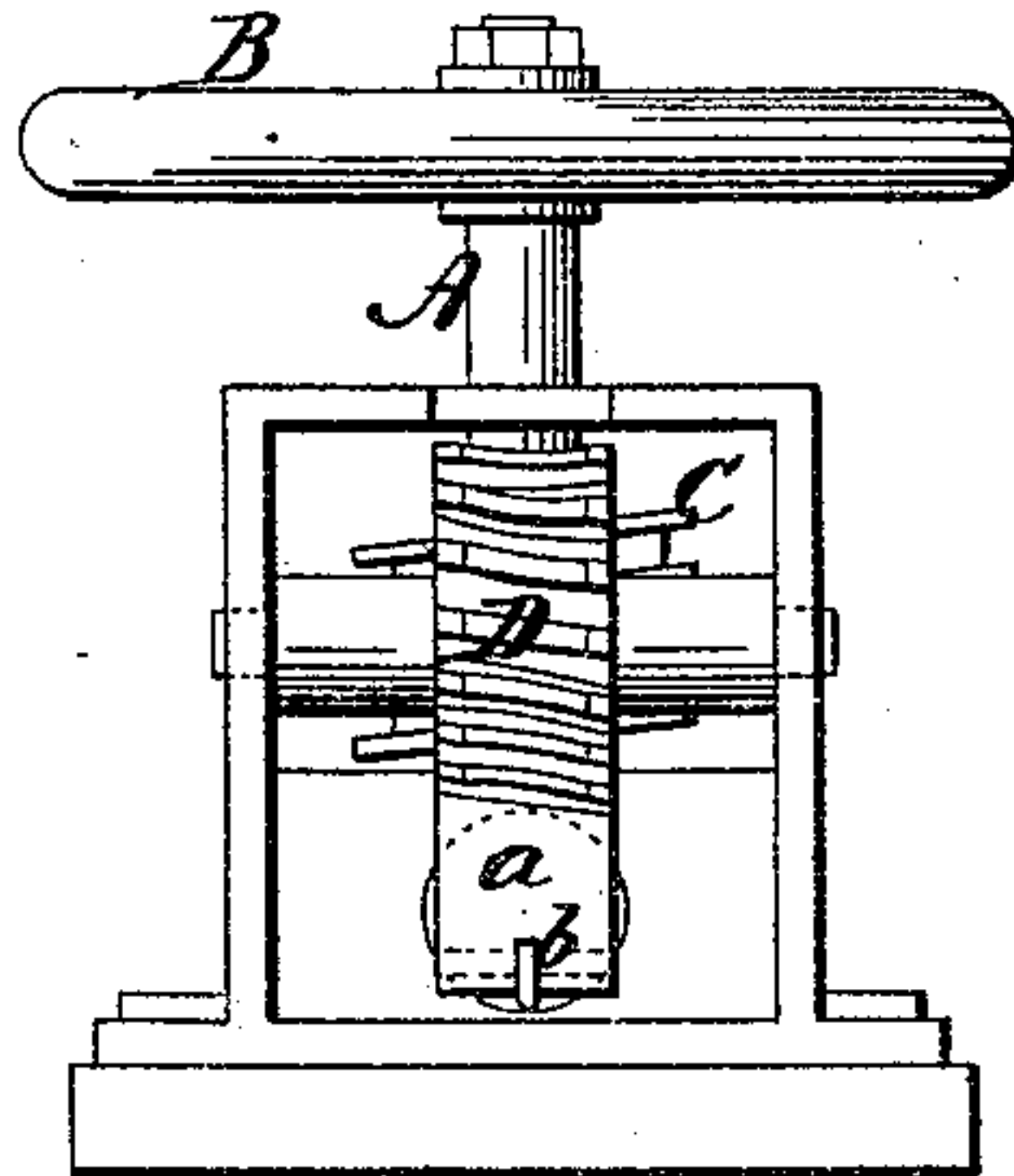
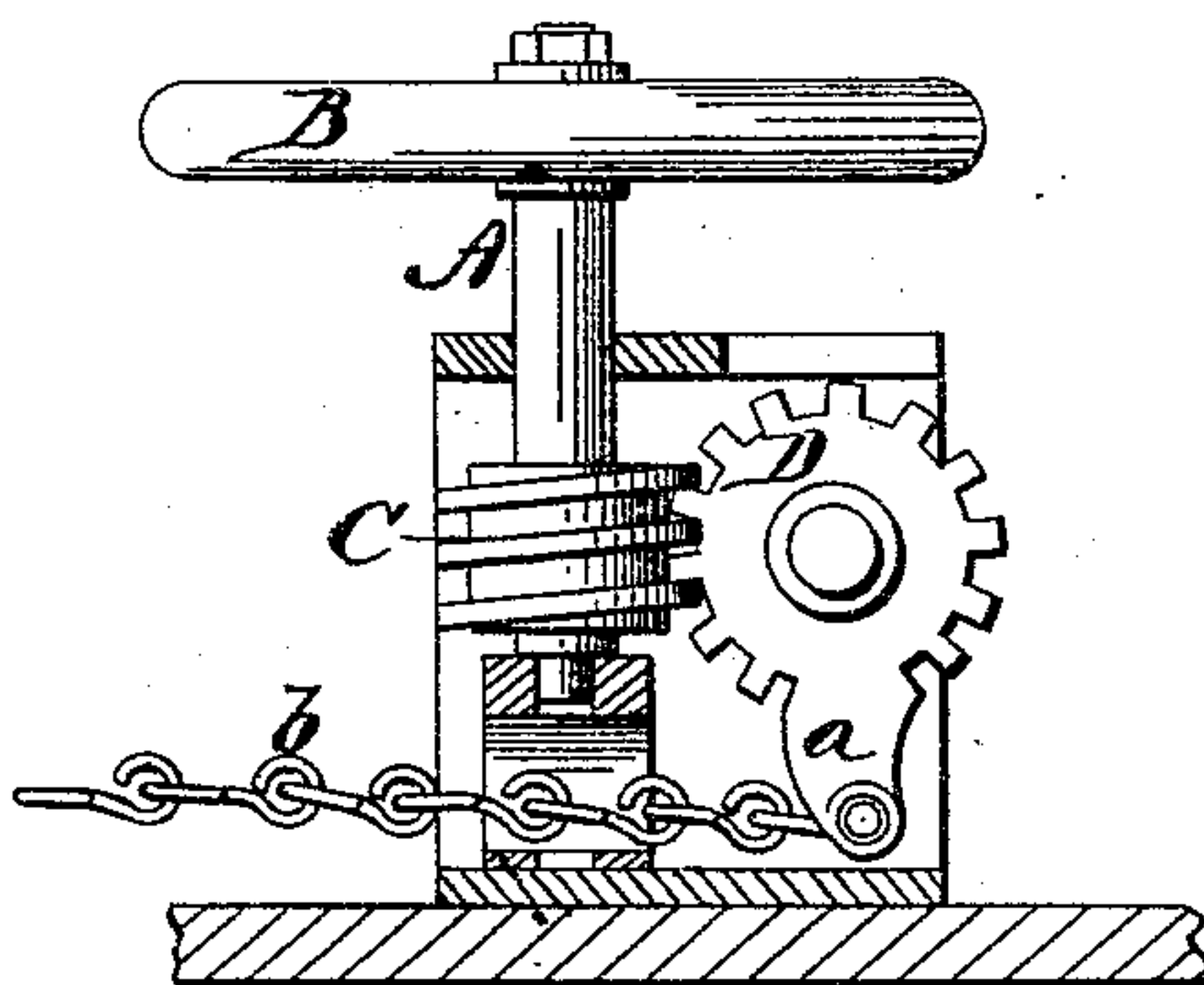


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE

MARTIN M. HINER AND JAMES M. FESSLER, OF HARRISBURG, ASSIGNORS
OF ONE-THIRD THEIR RIGHT TO F. R. CALDER, OF STATE COLLEGE,
PENNSYLVANIA.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **160,190**, dated February 23, 1875; application filed
February 15, 1875.

To all whom it may concern:

Be it known that we, MARTIN M. HINER and JAMES M. FESSLER, of Harrisburg, in the county of Dauphin and in the State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in a worm-wheel attached to, or forming part of, the ordinary upright brake-shaft, and gearing with a segment of a worm-wheel having a projecting arm, with a chain attached to its outer end, for operating a car-brake, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view, and Fig. 2 a vertical section, of our device for operating a car-brake.

A represents the ordinary vertical brake-shaft, with hand-wheel B on its upper end. Attached to or formed on this shaft A is a worm-wheel, C, which gears with and turns a segment, D, of a worm-wheel, the axis of

which is in a horizontal plane. From the segment D projects an arm, *a*, the outer end of which is, by a chain, *b*, connected with the brake.

By this device it will be seen the combined power of the screw and the lever is obtained for operating the brake.

We are aware that the brake-shaft of a railroad-car provided with a worm at its lower end, which takes into a gear-wheel upon a horizontal shaft, for operating the brakes, is, broadly speaking, not new, and we do, therefore, not claim such as our invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The segmental wheel D, provided with a downward-projecting arm, *a*, and the chain *b*, connected to said arm, in combination with the worm-wheel C on the brake-shaft A, all constructed to operate substantially as and for the purposes set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 13th day of September, 1873.

MARTIN M. HINER.
JAMES M. FESSLER.

Witnesses:

OLIVER EDWARDS,
DANIEL E. MARTIN.