H. SKINNER.

Automatic Car-Brake.

No. 225,881. **Patented Mar. 23, 1880.**

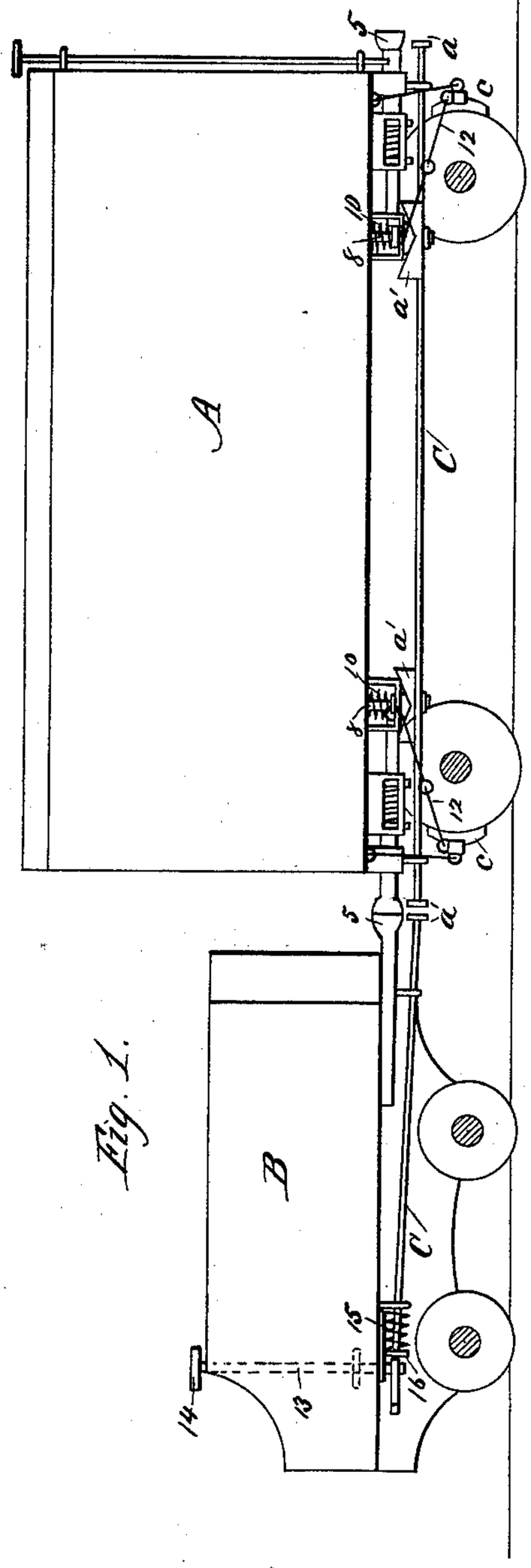

Fig. 1.

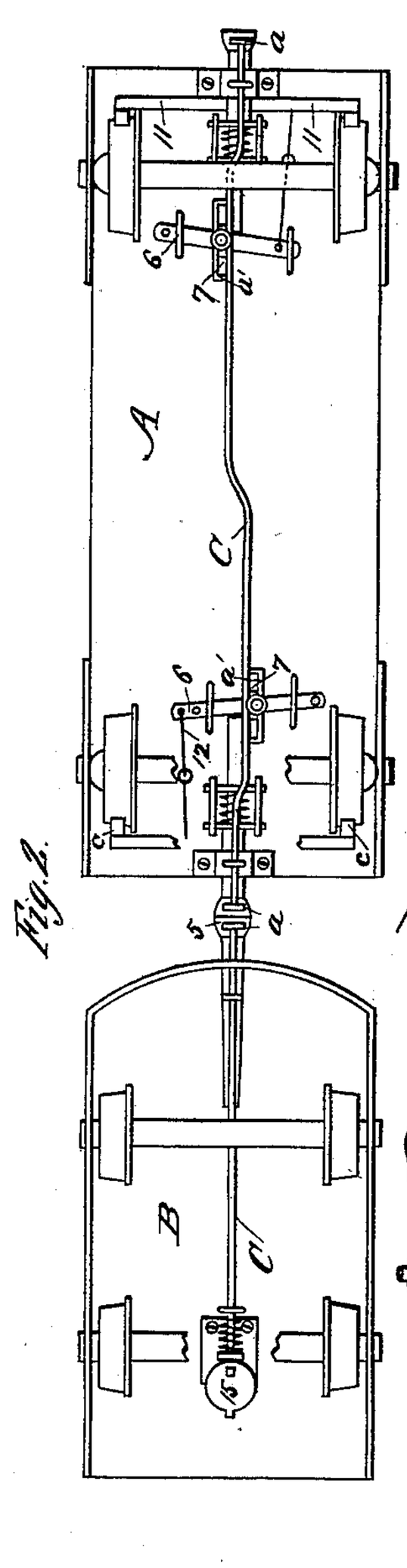

Fig. 2.

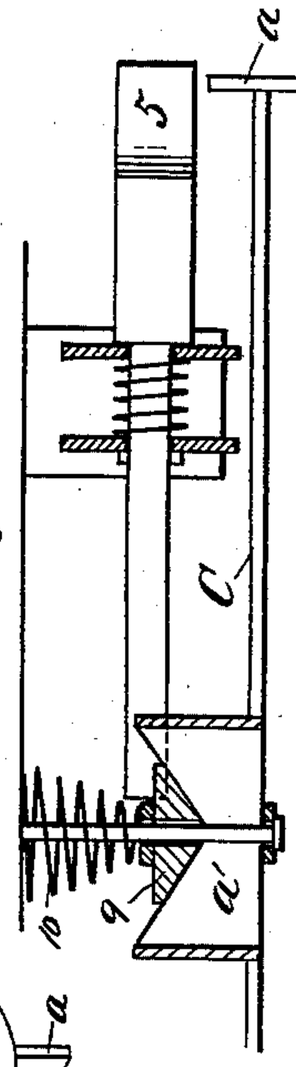

Fig. 4.

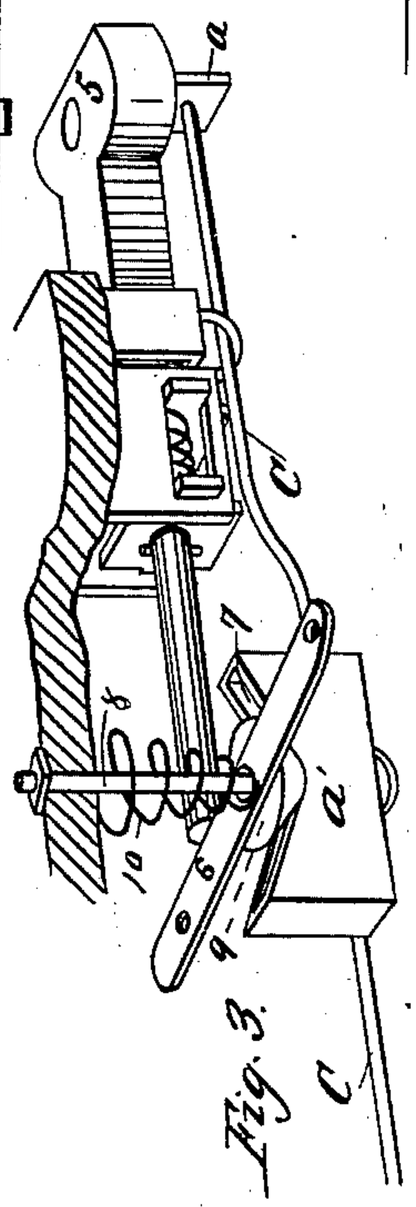

Fig. 3.

Witnesses
F. B. Townsend
John Scanlan

Inventor:
Holly Skinner
per S. B. Coupland & Co.,
Attorneys

UNITED STATES PATENT OFFICE.

HOLLY SKINNER, OF CHICAGO, ILLINOIS.

AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 225,881, dated March 23, 1880.

Application filed January 29, 1880.

To all whom it may concern:

Be it known that I, HOLLY SKINNER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Brakes for Railway-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to construct and make use of the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a brake to be used in connection with railway-cars which shall be automatically operated through the medium of the draw-bars attached to the cars, and is so constructed and arranged as to be under the control of the engineer or other person stationed upon the engine by having proper operative connection with the engine-tender, and is more especially intended for use in connection with freight-cars; and it consists of certain novel features, as will be hereinafter more fully set forth in detail.

Figure 1 is a side elevation of a railway-car and engine-tender embodying my improvements; Fig. 2, an inverted or bottom view of the same; and Figs. 3 and 4, sectional details, more clearly showing the brake mechanism.

On referring to the drawings, A represents the ordinary freight-car, and B a locomotive-tender.

C represents a rod, of suitable proportions, extending longitudinally underneath the car, and susceptible of a longitudinal movement, both ends thereof being provided with the enlarged head or flange *a*. The special function of this rod C is to throw the brake mechanism out of engagement with the draw-bars when the train is being backed up, or at any other time when it is not required to have the brakes set. This rod C may be located above, below, or at the side of the draw-bar 5. Attached to the rod C are the saddles *a' a'*, of the form shown in Figs. 3 and 4 of the drawings. The top or upper part of these saddles, having contact with the transverse lever 6, is cut away so as to have an inclined plane from both ends, and meeting at a central point. These saddles are provided with the oblong apertures 7 for the reception of the vertical stationary guide-post 8, which passes through the lever 6, forming the axis of oscillation for the same, and is inserted in the under side of the car, as shown in Fig. 3 of the drawings.

The intermediate shoulder 9, placed between the saddles *a' a'* and the lever 6, has its bearing-surfaces at an angle corresponding to the cut-away parts of the saddles *a' a'*.

The spring 10, placed upon the guide-post 8, is intended to assist the return of the lever 6 and rod C to their normal position. The force of gravity would generally accomplish this, but this spring will aid materially in effecting this result.

The lever 6 has an operative connection with the brake-beam 11, carrying the brake-shoes *c c*, by means of the cord or chain 12, or their equivalent.

The brake-rod 13 and wheel 14 are of the ordinary form usually placed upon the tender. To the lower end of this brake-rod, and immediately underneath the tender, is attached the cam-wheel 15, by means of which the rod or rods C of the whole train may be controlled and operated by a person stationed on the tender of the engine, the spring 16 returning the rod C underneath the tender to its normal position when the cam-wheel is released, which action has the effect of releasing the series of rods C of the whole train from engagement with each other.

The automatic operation of this brake mechanism is as follows: When the steam is shut off on the locomotive, the striking together of the draw-heads sets the brakes, (by means of the rear ends of the draw-bars coming in contact with the transverse lever 6,) forcing the same backward, thereby bringing the brake-shoes into contact with the car-wheels through the medium of the chain or cord connection between the brake-beam and the transverse lever having engagement with the rear end of the draw-bar. When the train is to be backed up, or at any other time when the brakes are not to be applied, the attendant, stationed on the tender, turns the brake-rod carrying the cam-wheel having an eccentric action, which, in turn, brings the ends of the rods C in contact, and imparting a longitudi-

nal movement, thereby moving the transverse lever 6 out of the way of engagement with the rear ends of the draw-bars, thus preventing the draw-bars from operating the brake mechanism.

The arrangement of the brake mechanism is such that it is not in the least affected by the vibration or motion of the train, and ordinarily the rear end of the draw-bar and the transverse lever will have an intervening space of an inch, more or less, as practical working may require, for the purpose of preventing the brake mechanism from being affected by slight movements of the draw-bars.

The application and attachment of this automatic brake do not require any alteration in the construction or parts of the ordinary car, but simply require the attachment of the longitudinal rods and their connecting mechanism.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, substantially hereinbefore described, of the rods C, the saddles a', the transverse lever 6, the vertical guide-post 8, and the spring 10, all arranged and operating as described.

2. In an automatic car-brake mechanism, the combination, substantially hereinbefore described, with the rear ends of the draw-bars, of the lever 6, the saddles a', the series of longitudinal rods C, and the cam-wheel 15, all arranged and operating in the manner set forth.

HOLLY SKINNER.

Witnesses:
L. B. COUPLAND,
W. A. SCHONFELD.