

S. RANDALL.
Railway Car Brake.

No. 83,728.

Patented Nov. 3, 1868.

Fig. 1

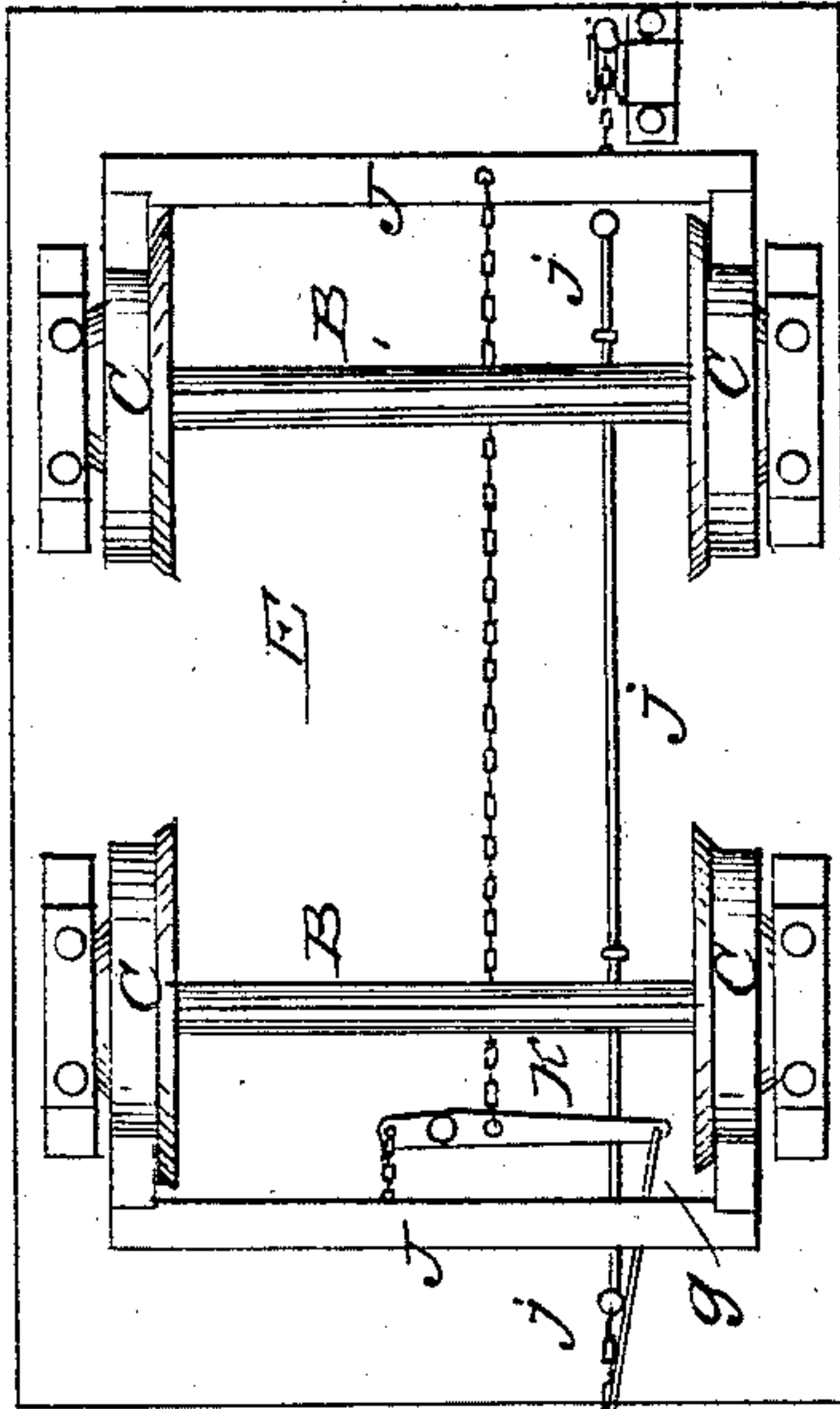


Fig. 2

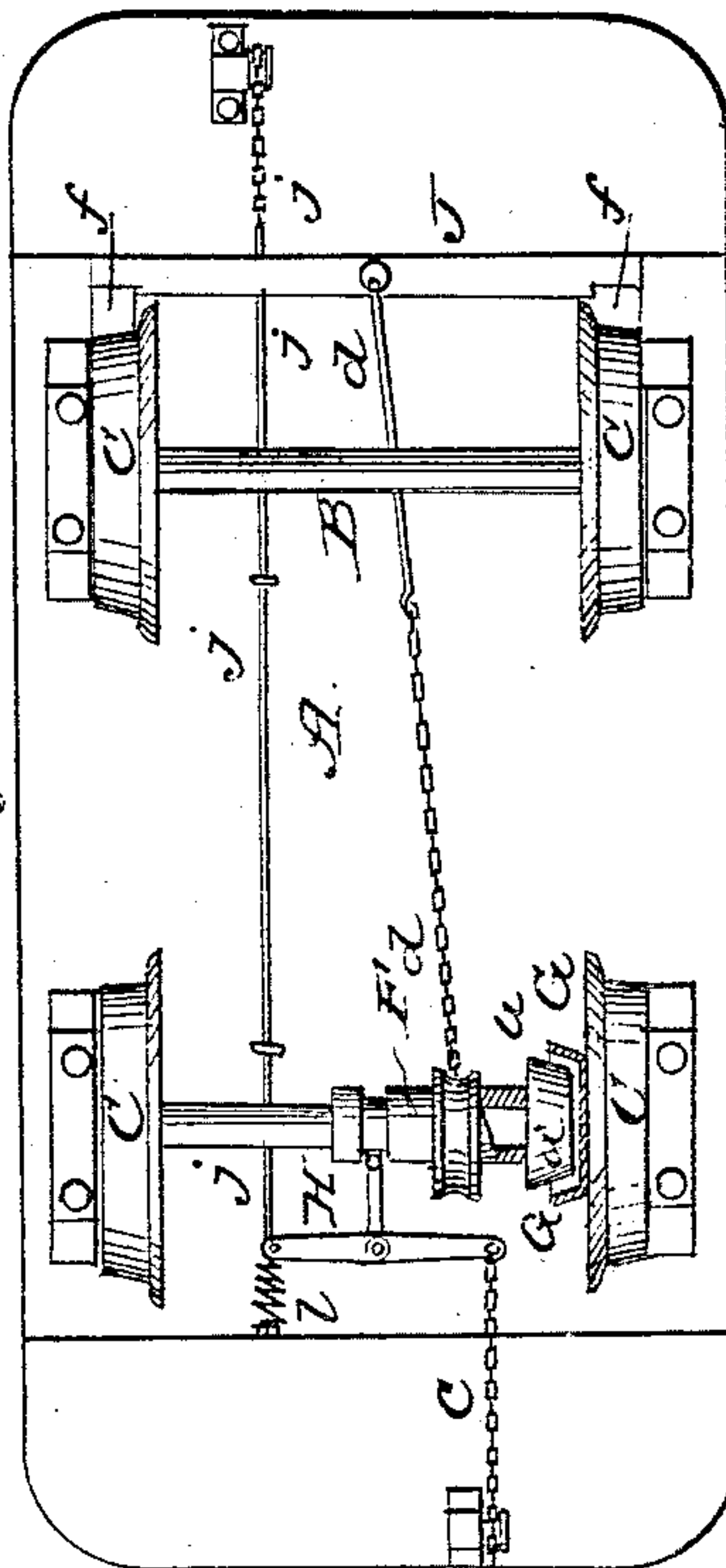
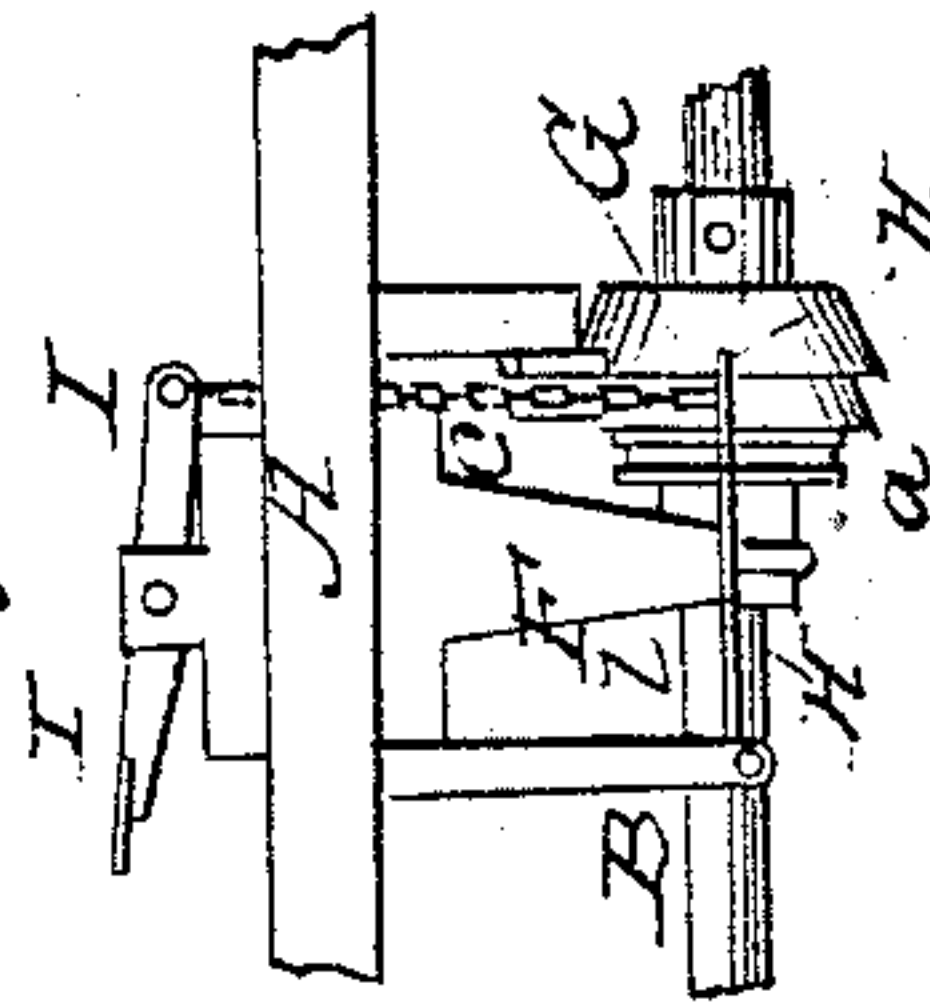


Fig. 3



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STEPHEN RANDALL, OF CENTREVILLE, RHODE ISLAND.

Letters Patent No. 83,728, dated November 3, 1868.

IMPROVED RAILWAY-CAR BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, STEPHEN RANDALL, of Centreville, in the county of Kent, and State of Rhode Island, have invented a new and improved Railroad-Car Brake; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents an inverted plan view of a railroad-car provided with my improved brake.

Figure 2 is an inverted plan view of a horse-car provided with the same.

Figure 3 is a detail front view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in car-brakes, and it consists in the construction of the grooved eccentric with the sleeve bearing the friction-disk, the shoulder upon the car-wheel or axle, and with the brake-chain, whereby an increased leverage is produced for winding up the chain.

A car may be provided with these friction-brakes alone, or with them in connection with the ordinary brake-shoes.

A, in the drawing, represents the platform of an ordinary or suitable railroad-car; B B are the axles of the same; C C, the wheels on these axles; all arranged as usual, or in suitable manner.

In fig. 1 are shown two trucks, D and E, belonging to one car, each truck having two axles and their wheels.

In fig. 2 is shown a car with but two axles and their wheels.

F is a sleeve, sliding on one of the axles B, and allowing the axle to turn loose in it. The sleeve F has a truncated-conical, a convex, or any other suitable-shaped end, *a*

Upon the sleeve F is formed, or fastened in any proper manner, a grooved eccentric, F', to which the end of the brake-chain or chains is secured. The object of this eccentric is to produce an increased leverage for winding up the chains upon the sleeve.

G is a shoulder, formed on the same axle B on which the sleeve F is arranged.

The shoulder G has a face, shaped so that the end, *a*, of the sleeve will fit tight against it, so that, whenever the sleeve is moved towards the disk G, it will, by the friction of the rotating disk, be carried around with the axle.

The wheels C may, if desired, form the friction-disk, as shown in fig. 2.

The friction-clutch F is operated by means of a lever, H, which is pivoted to the under side of the car-platform, or to the truck-frame.

The lever H can be operated by means of a chain, *c*, and lever, I, the latter being pivoted to the plat-

form, or to another portion of the car, as indicated in fig. 3.

By pressing with the foot upon the lever I, the lever H will be turned so as to carry the clutch F against the disk G. The sleeve F will then be turned with the axle, and will wind a chain, *d*, around the eccentric, F', to which one end of said chain is fastened, the other end being attached to a brake-head, J, or to a lever, *e*, secured thereto. By winding the chain *d* around the grooved eccentric, the brake-head will be drawn towards the sleeve, and the shoes *f* on such brake-head will be pressed against the wheels C. The chain *d* being thus stretched, the sleeve F will remain stationary, as it cannot be turned any further, on account of the stretched chain. The sleeve will then also serve to brake its own axle, B, as it is held stationary against the face of the rotating disk G. Thus, as soon as the lever I is moved, the brakes will be applied to all the four wheels. To transmit the required motion to the other truck, a chain, *g*, may be secured to the eccentric, F', or to the lever H with one end, and with the other end to a lever, K, on the other truck, as in fig. 1, which lever K may either serve to operate the brake-heads J J on its truck, or to operate a sliding clutch on one axle and a brake-head on the other axle, in the same manner as the lever H operates them on the first truck.

The head J, on the truck on which the lever H is used, or rather the lever *e* on each head J, may, by means of a rod or chain, *i*, be connected with another head, J, which acts on the same wheels on which the friction-clutch already acts, and which is, consequently, unnecessary.

For allowing the brakes to be operated from either end of the car, a chain, *j*, is attached to the lever H, and extends, as shown, to the opposite end of the car, to a lever, I, arranged thereon. By means of chains, rods, or ropes attached to the lever H, a series of cars may be connected with each other and with the engine of a train, so that, when the engineer moves his lever I, the brakes will be applied to all wheels throughout the train, while still the brakes on all cars can be separately acted on by their own brakemen.

By means of a spring, *l*, the levers and brakes are brought to their original position as soon as the pressure on the lever I ceases.

In horse-cars, as in fig. 2, the device is arranged substantially as on the truck first described.

Having thus described my invention,

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

The combination of the grooved eccentric F' with the sleeve F, shoulder G, and brake-chain or chains, as herein described, for the purpose specified.

STEPHEN RANDALL.

Witnesses:

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