(No Model.)

W. M. BRISBEN.

CAR BRAKE.

No. 332,324. Patented Dec. 15, 1885.

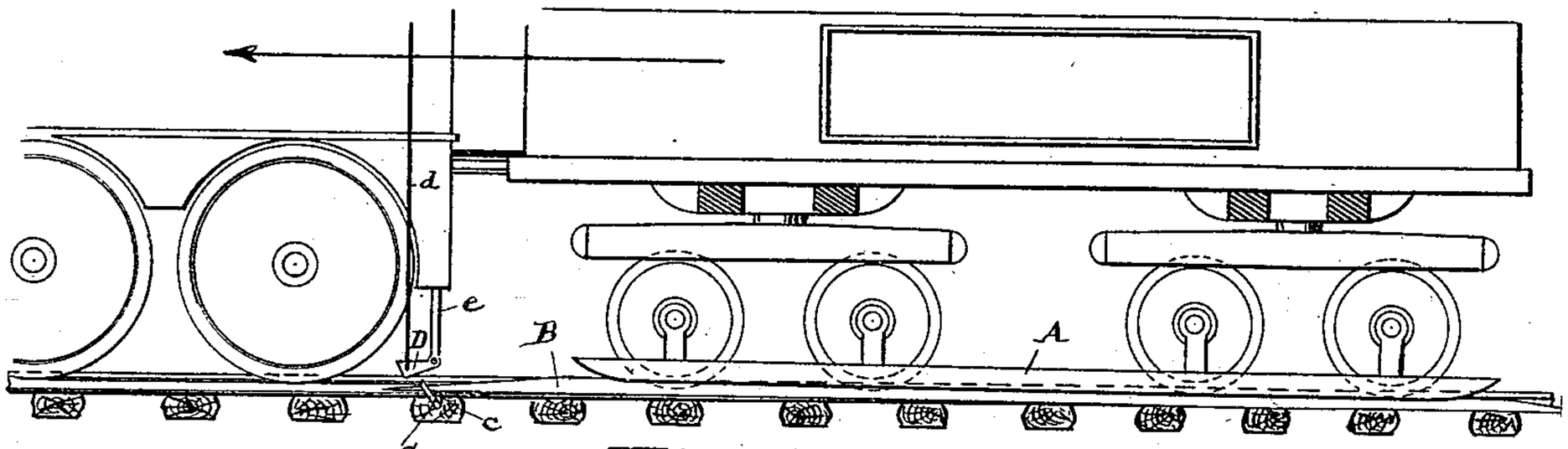

Fig. 1.

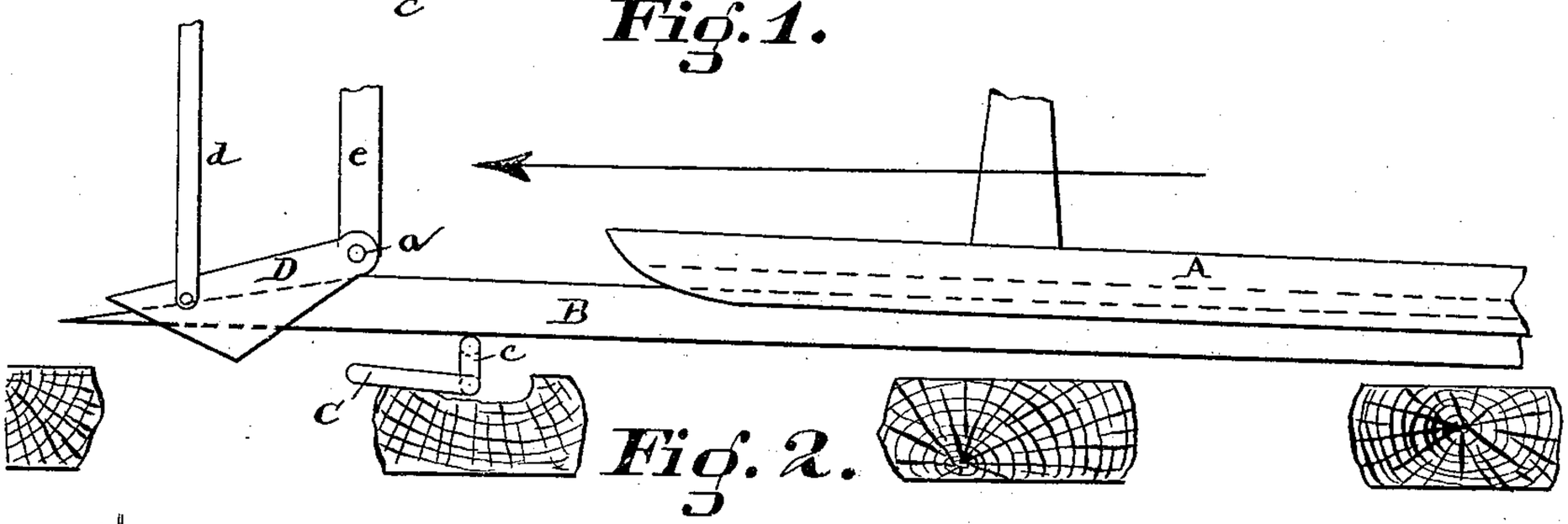

Fig. 2.

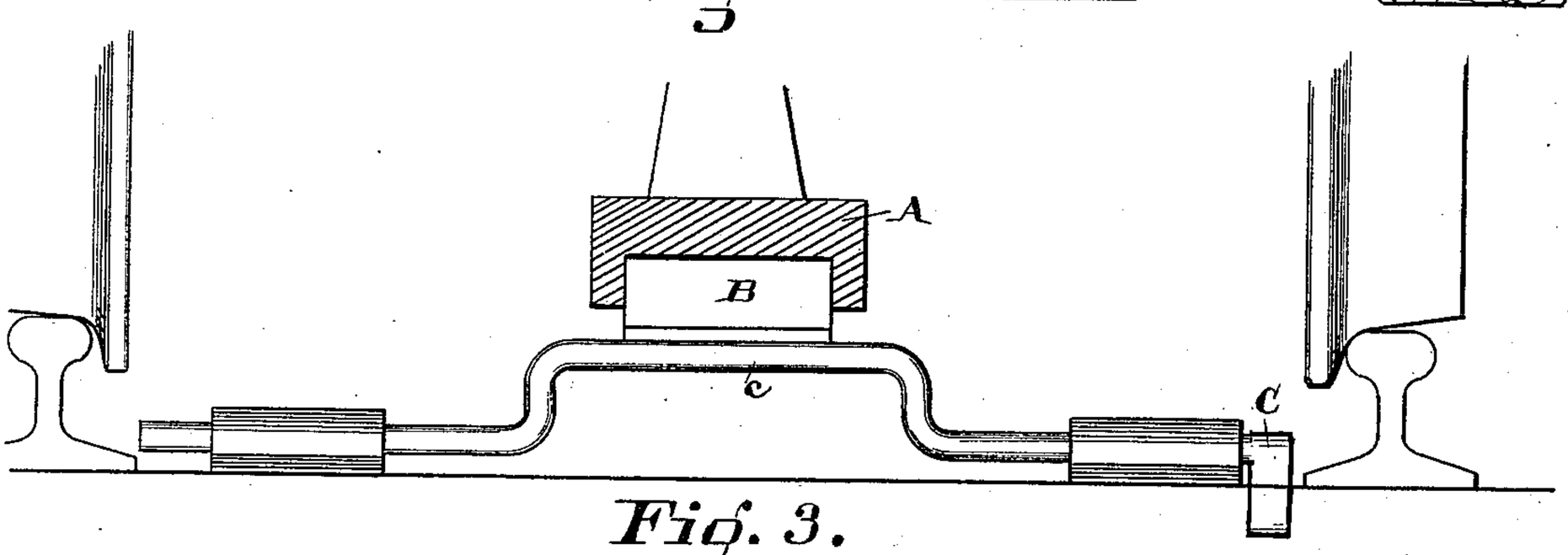

Fig. 3.

Fig. 4.

Attests.

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WILLIAM M. BRISBEN, OF PHILADELPHIA, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 332,324, dated December 15, 1885.

Application filed May 21, 1885. Serial No. 166,217. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BRISBEN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful improvements in mechanical appliances and their application to arresting the movement of railway car or cars by the intervention of a fixture secured to the road-bed or the substructure of the line of rails, with a similar or equivalent attachment to the car-truck; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a view in side elevation of a railway car and track with my improved "brake" system attached. Fig. 2 is an enlarged view in side elevation of the brake system shown in Fig. 1. Fig. 3 is an enlarged view in cross-section, partly in section and partly in elevation.

This invention has relation to a brake system for railway-cars generally, whether operated by steam or any artificial power or medium, or by gravity, whereby, motion having been given to a car or train of cars, it can be brought to a state of rest quickly without danger.

In all appliances in use and known, so far as I am able to ascertain, the principle of overcoming the momentum of moving bodies on railways, technically called "rolling stock," and stopping the same, has been by applying friction by mechanical appliances to the surface or "tread" of the wheels, and thereby indirectly to the "rails" upon which the wheels move, or directly to the rails, which in many cases are defective and often inoperative, expensive to keep in repair and serviceable condition and to operate. A very great part of the foregoing incidents I entirely overcome by my system, by which the necessary resistance to overcome the inertia in a moving train or car and bring it to a state of rest is imparted by frictional contact of a special attachment, fixed to that part of the car called the "truck," with a corresponding attachment fixed to the ties or road-bed.

The same letters refer to like parts in all figures.

In Fig. 1 B, is a skid, of wood or metal—such as a plank or a T-rail—of suitable length, laid lengthwise, midway between the rails, so that its upper surface in its normal condition be about flush with the top thereof, fixed rigidly at that end next or nearest to that from which the car is supposed to pass along the line of rails, having no lateral motion; but that end farthest from the approach is arranged to have a slight vertical movement upon a cam, *c*. (Seen in Fig. 3 in an abnormal position.) C is a crank, operating the cam *c*, all of which, in combination with the skid B, are attached to the road-bed or ties. To the frame of the car-truck or axles of the car, as represented, a second skid, A, which may be of such cross-section as to match, technically speaking, with the skid B, is fitted, so that in passing along the line of rails it will come in frictional contact and match with the skid B, as shown in Fig. 3, and fully explained hereinafter. To a car preceding, or that one to which the skid A is attached, a device for operating the cam *c* is attached, as follows: At some convenient and accessible part of the car—say in the "cab" of the engine—a rod, *d*, having a vertical or suitable movement, extends downwardly to a point near the level of the top of the rails in such lateral position that it, by the car or engine to which it is attached, in passing over the skid B will pass directly over the head of the arm C, or will itself strike and trip over the arm. Near its end and to it is fitted a tripping-plate, D, securely fastened to a stanchion, *e*, but free to move on a pivot, *a*, when the rod *d* is thrown down.

I will now describe the operation and effect of the several parts of my system. As set forth, when brought in contact by the action of the engineer or other hand of a train passing along the line of rails, (the train is supposed to move in the direction of the arrow,) as it approaches the skid B, he throws down the rod *d*, the plate D strikes and throws over the arm C, the cam *c* elevates the skid B, presenting an inclined surface to the skid A on the car. As the car approaches, the skid A comes in contact and "matches" with skid B, producing great friction, thereby impeding the movement of the train, the weight of the car is taken up upon the skid B and off of the wheels and track, increasing the resistance, and ef-

fects the object f my invention—brings the train from a state of motion to one of rest.

Fig. 4 is a modification of my invention, being a double skid, A′ and A, hinged at *h*, having a spring, S, fitted between them, giving an easy motion in stopping the train, and preventing jar, if the stop be made abruptly.

I do not confine the arrangement of elevating the skid B, as set forth, in order that it may be brought in contact with the skid A on the car for the purpose stated. The skid A may be lowered in any suitable manner to have contact with the skid B. Nor do I confine myself to operating the lowering or elevating device by hand, as it is quite evident to any one skilled in mechanical devices that all such operations can be done by steam lifts or devices; therefore,

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

1. A system of brakes for railway-cars, wherein the resistance to overcome the movement or momentum on the rolling stock on a railway is effected by the application of friction imparted by a skid, A, attached to the under side of a car-truck's axle or frame, in combination with a skid, B, fixed to the roadbed, substantially as herein described.

2. In a system of car-brakes on a railway-car, a tripping-plate, D, in combination with arm C, substantially as and for the purpose described.

3. The combination of the cushion or spring S with the double skid A′ A, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of May, 1885.

WILLIAM M. BRISBEN.

Witnesses:

ANDREW ZANE, Jr.,

WM. H. CARSON.