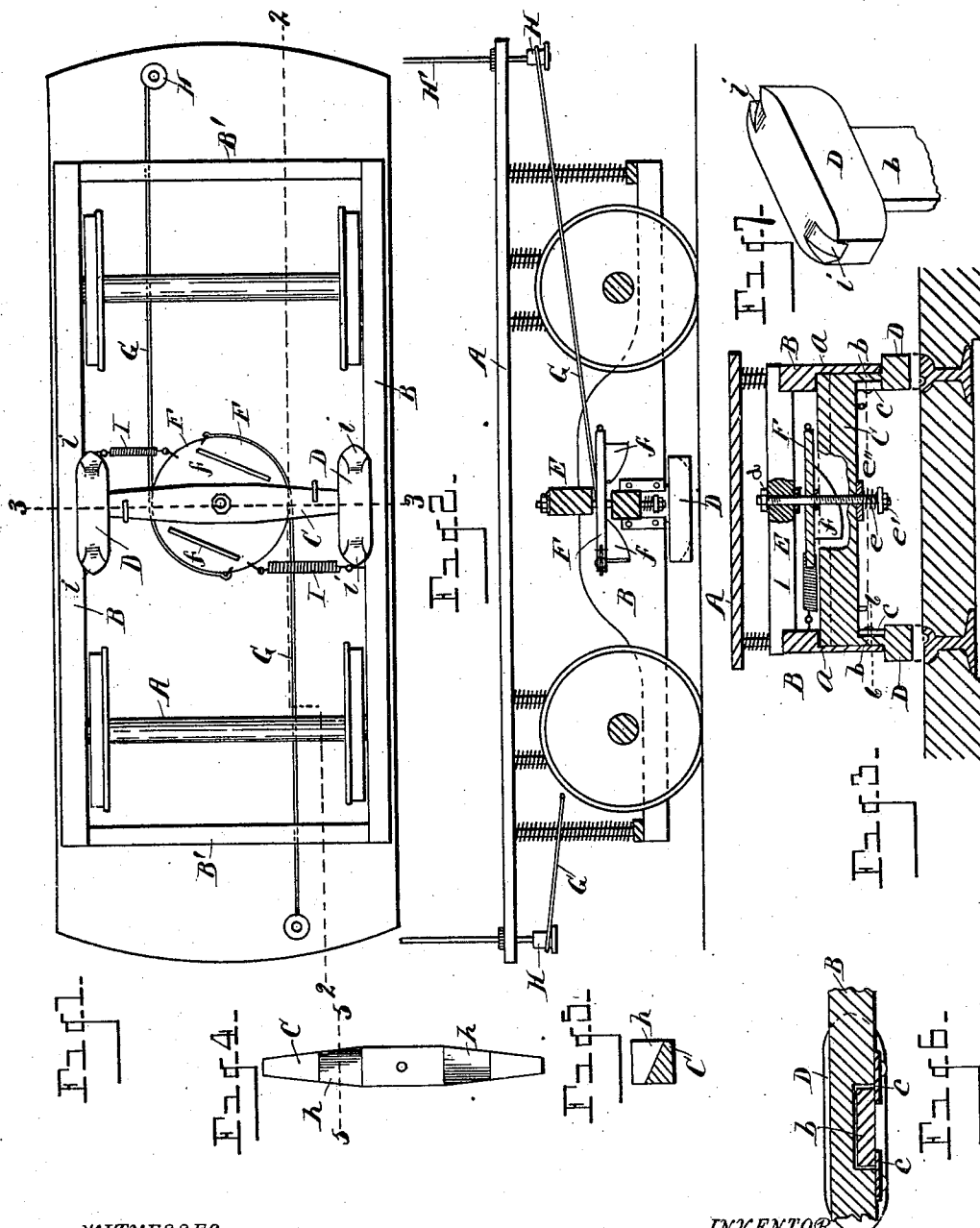


(No Model.)

A. S. GOETZ.
CAR BRAKE.

No. 577,294.

Patented Feb. 16, 1897.



WITNESSES

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 577,294, dated February 16, 1897.

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To all whom it may concern:

Be it known that I, ADOLPH S. GOETZ, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Car-Brakes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in car-brakes; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and effective means for applying the brake-shoe directly to the rails of the track to stop the car instead of to the wheels of the truck, as commonly practiced, whereby the car may be stopped without sliding the wheels upon the rails, obviating the wearing of a flat surface upon the periphery of the wheels, and overcoming the annoyance and jar incident to the rotation of a wheel with a flat surface, which object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a truck-frame and platform of a car provided with my improved brake mechanism. Fig. 2 is a vertical longitudinal section on line 2 2, Fig. 1. Fig. 3 is a vertical transverse section on line 3 3 of Fig. 1. Fig. 4 is a plan view of the cross-beam carrying the brake-shoes. Fig. 5 is a cross-section on the line 5 5 of Fig. 4. Fig. 6 is a horizontal section on line 6 6 of Fig. 3. Fig. 7 is a perspective of one of the brake-shoes.

Referring to the letters of reference, A designates the platform of a car, which is mounted in any suitable manner upon the frame of the truck or running-gear, which consists of the horizontal side rails B and the end cross-rails B'. Extending transversely between the side rails B is a cross-beam C, which is mounted to move vertically, and whose end portions extend into vertical ways a, formed in the inner face of said side rails. Depending from

the ends of said cross-beam C and lying in said ways are the right-angle stems b, which are securely attached to the ends of said cross-beam, and which carry upon their lower ends the brake-shoes D. Said stems are permitted to move freely in the ways in said side rails, but are firmly secured therein by the extending plates c, secured to said rails and projecting onto the inner face of said stems, as clearly shown in Fig. 6.

Passing transversely between the side rails of the truck-frame and secured at its ends thereto is a fixed cross-beam E, which extends parallel with the movable cross-beam C, and from which depends a bolt d, which passes through the movable beam C and receives on its lower end a coiled spring e, which is confined between a washer e' on the end of said bolt and the plate e'', bearing against the under face of the beam C, whereby the force of said spring serves to normally retain said beam in an elevated position. Journaled upon said bolt or rod d, adjacent to the upper face of the cross-beam C, is a disk or wheel F, carrying upon its under face the opposed wedge-blocks f, which normally stand on opposite sides of the cross-beam C, adjacent to the opposite beveled inclines h in the upper edge of said beam. Attached to the periphery of said wheel F, on opposite sides thereof, and passing partially around said wheel in opposite directions are the cables G, which lead to the drum H of the brake-stem H', whereby as said cable is drawn upon by a rotation of said drum the wheel F is rotated, so as to cause the wedge-block f thereon to engage the inclines h in the cross-beam C, and by a continued rotation of said wheel force said cross-beam downward, carrying the brake-shoes D, connected therewith, into contact with the rails of the track, as shown by dotted lines in Fig. 3, causing said shoes to bear with great pressure upon the rails and serving to stop the momentum of the car.

Upon the release of the brake the wheel F, carrying the wedge-blocks, is returned to its normal position by means of the coiled springs I, attached to the periphery thereof and to the opposite side rails of the frame, thereby withdrawing the wedge-blocks f from the inclines of the cross-beam C, when said beam will be raised through the action of the

springs *e*, so as to carry the shoes *D* free from the track. By this arrangement it will be seen that a wedge force is exerted to carry the brake-shoes into contact with the rails which is very powerful, and affords efficient means for stopping the momentum of the car without in any sense interfering with the free rotation of the car-wheels. This construction also operates with equal efficiency from a brake located at either end of the car.

To prevent the brake-shoes from brushing sand from the rail when it is found necessary to use sand in stopping the car quickly, there is provided in each end of the shoe a flaring, beveled recess *i*, which serves to collect the sand and direct it between the under face of the shoe and the rail.

While I have shown the rotary wheel carrying the wedge-blocks for actuating the cross-beam to which the brake-shoes are attached, it is evident that this beam may be actuated by a single wedge moving at right angles to said beam.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-brake, the combination with the truck-frame, of the vertically-movable cross-beam, the ways in the inner face of the rails of the frame which receive the ends of said beam, the brake-shoes connected with said beam and depending adjacent to the rails of

the track, and the rotary movable wedge for actuating said beam.

2. In a car-brake, the combination with the truck-frame, of a vertically-movable cross-beam carrying the depending brake-shoes, the oppositely-inclined ways in the upper face of said beam, the rotary disk carrying the wedge-blocks adapted to engage in said ways, and means for actuating said disk.

3. In a car-brake, the combination with the truck-frame, of the vertically-movable cross-beam carrying the brake-shoes which depend adjacent to the track, the fixed cross-beam above said movable beam, the rod depending from said fixed beam and passing freely through said movable beam, the spring on the lower end of said rod bearing against the under face of said movable beam, and the movable wedge for actuating the movable cross-beam.

4. In a car-brake, the combination with the brake-actuating mechanism, of the brake-shoes depending adjacent to the rails of the track, said shoes having in their under face, at each end, an inclined recess, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ADOLPH S. GOETZ.

Witnesses:

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