(No Model.)

F. HENSLEIN, Jr.

CAR BRAKE.

No. 545,427. Patented Aug. 27, 1895.

Fig. 1.

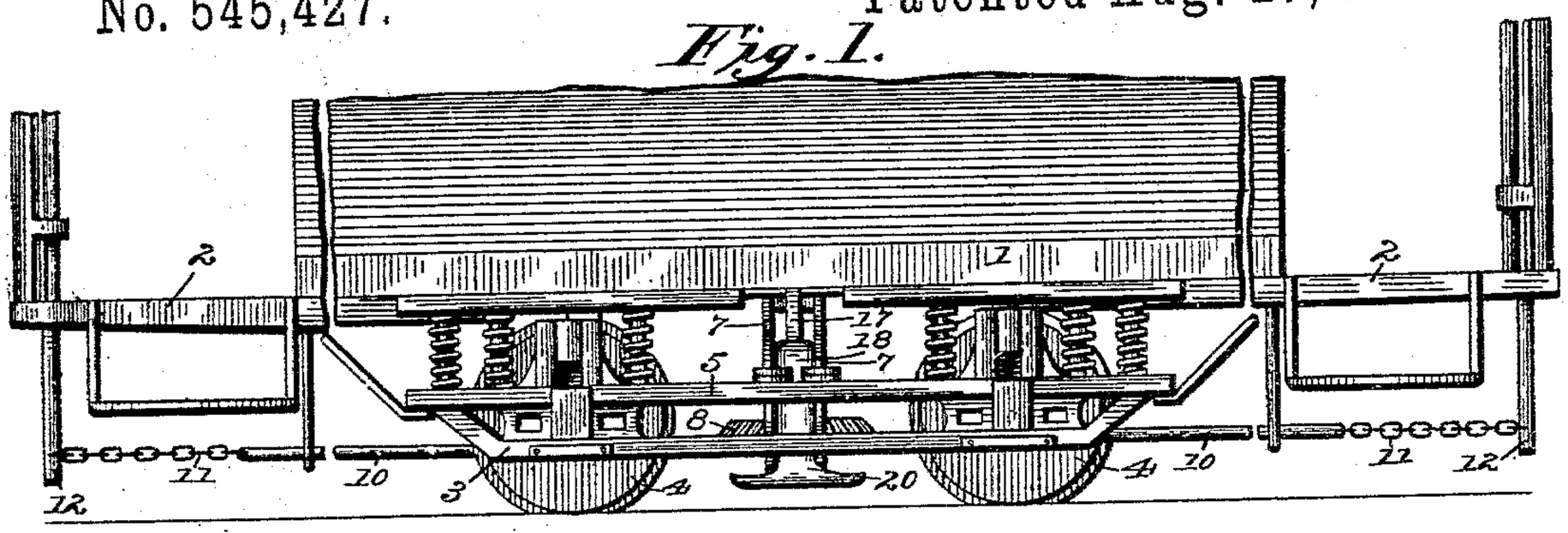


Fig. 2.

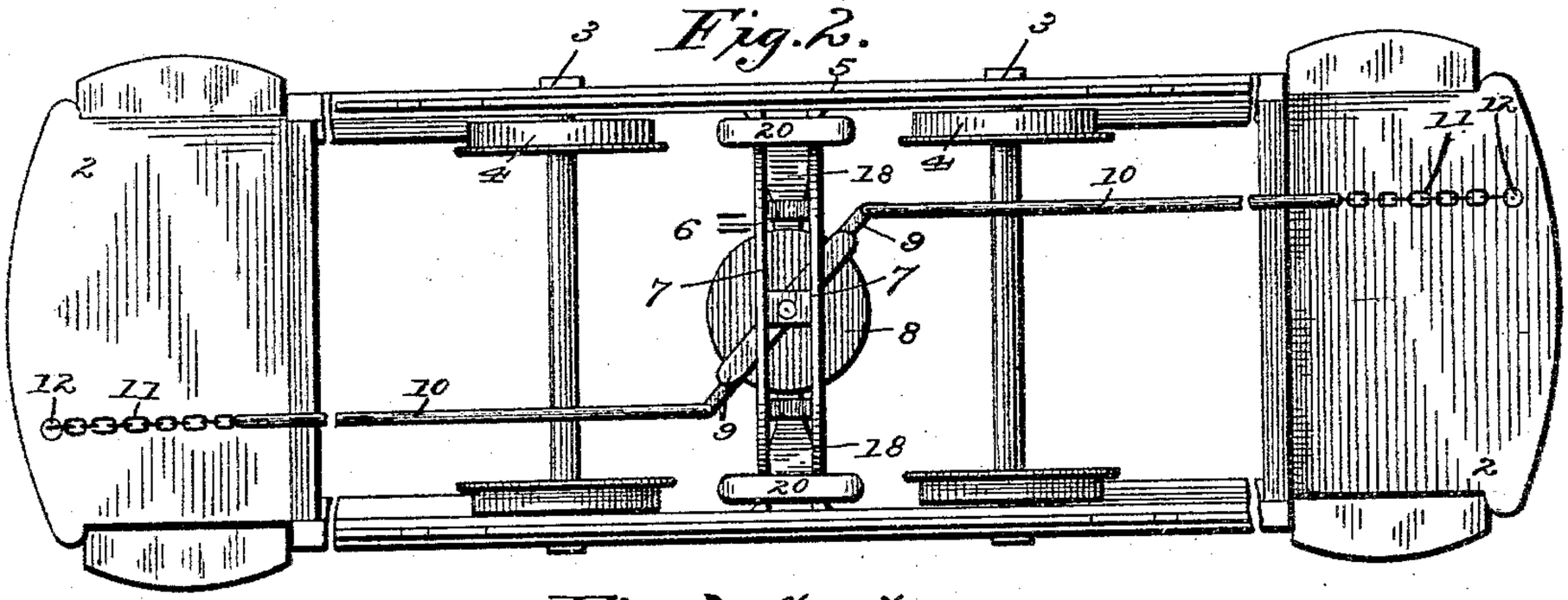


Fig. 3.

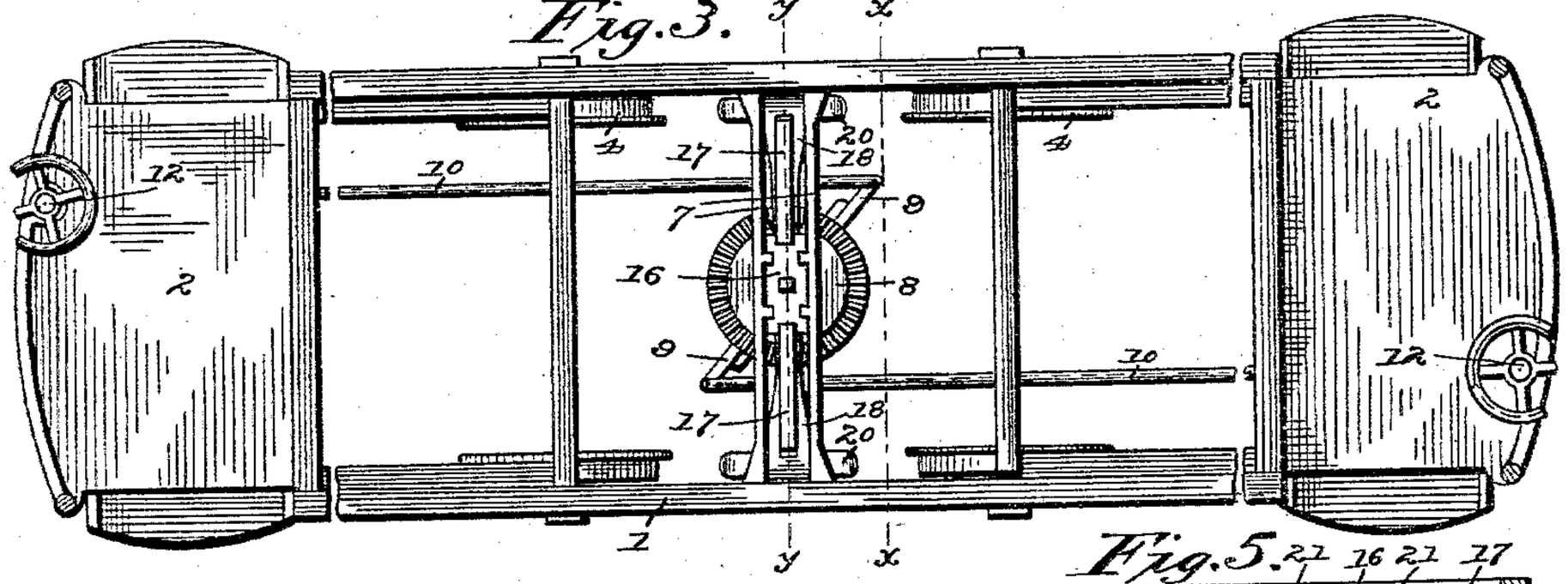


Fig. 4.

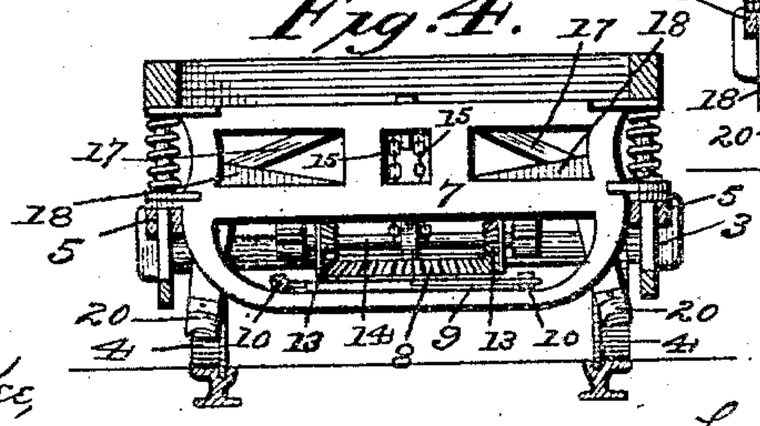
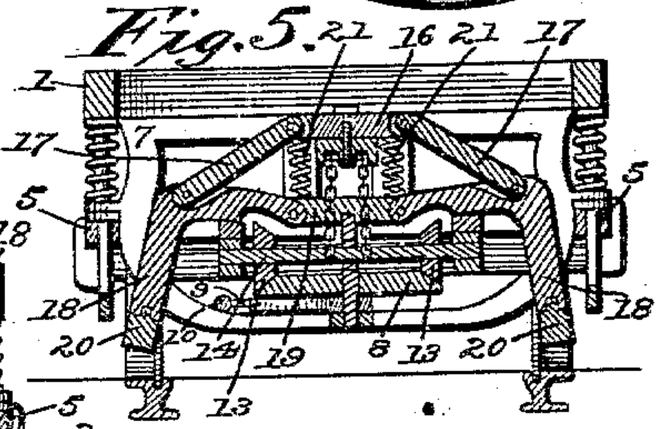


Fig. 5.



Witnesses
Edwin G. Chase
Louis G. Randall

Inventor
Frank Henslein Jr.
by John Wedderburn
his Attorney.

UNITED STATES PATENT OFFICE.

FRANK HENSLEIN, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO LIZZIE I. HOFFMAN, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 545,427, dated August 27, 1895.

Application filed June 15, 1895. Serial No. 552,947. (No model.)

To all whom it may concern:

Be it known that I, FRANK HENSLEIN, JR., a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes; and I do hereby 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.

My invention relates to improvements in car-brakes, the same being especially applicable to use upon electric and cable cars and also upon railway-cars where it is important to stop the movement of the car suddenly.

The invention consists of a car having the usual front and rear platforms, trucks, wheels, &c., a transverse frame secured to the under side of the car, preferably at the center, in which frame is mounted in suitable bearings a beveled gear-wheel having arms extending outwardly therefrom, which are connected through suitable rods and chains with the break-operating shaft projecting upward through the front and rear platforms of the car. The beveled cog-wheel referred to meshes with two beveled pinions mounted upon the ends of a pair of horizontal shafts moving in suitable bearings and having secured to them the lower ends of a pair of chains, which are connected at their upper ends to a block in which are pivoted two arms, which are also pivoted to levers, upon the lower ends of which a pair of brake-shoes are secured.

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings, Figure 1 represents a side elevation of a car-body, showing the usual trucks with my brake mechanism secured thereto. Fig. 2 is a bottom plan view of the same. Fig. 3 is a plan view with the bottom with the car-body removed. Fig. 4 is a section on the line *x x* of Fig. 3. Fig. 5 is a section on the line *y y* of Fig. 3.

Like reference-numerals indicate like parts in the various views.

My brake mechanism is adapted to be attached to railway-cars of the usual form of construction.

In the drawings, 1 represents a car-body having the front and rear platforms 2, frame 3, and wheels 4 4. Connecting each pair of trucks on opposite sides of the car are longitudinal beams 5 5, which serve to support the frame 6, in which my brake mechanism is mounted. The frame 6 is made up of two castings 7 7, suitably secured together, and in the lower part of said frame is rotatably mounted a beveled cog-wheel 8, having diametrically-arranged arms 9 9 extending outwardly therefrom. Connected to the outer ends of the arms 9 are rods or pitmen 10 10, connected at their outer ends through chains 11 11 to the lower ends of the brake-operating shafts 12 12, of the usual form of construction. The beveled cog-wheel 8 meshes with a pair of beveled pinions 13 13 upon the ends of short shafts of drums 14 14, which move in suitable bearings in the frame 6. These shafts or drums have connected to them chains or cords 15 15, which are in turn connected at their upper ends to a block 16, moving in guides between the two castings 7 of which the frame 6 is made up. Pivoted to the upper end of the block 16 and extending downwardly and outwardly therefrom is a pair of rods 17 17, in turn pivoted to levers 18 18, fulcrumed at their inner ends to a block 19 between the two castings 7, extending downwardly at their outer ends and having secured to them in any suitable manner the brake-shoes 20 20, which are adapted to engage the rails upon which the car moves. Between the stationary block 19 and the movable block 16 I place a pair of coiled springs 21 21, through the action of which the brake-shoes 20 are kept normally out of engagement with the rails.

My brake may be operated from either end of the car by turning the operating-shaft 12, which withdraws the rods or pitmen 10 through the chains 11 and turns the beveled gear-wheel 8 in its bearings. The gear-wheel 8 in turn rotates the shafts or drums 14 through the pinions 13 and winds the chains 15 upon them. This withdraws or forces downward the movable block 16, which, acting through

the rods 17 and levers 18, throws the brake-shoes 20 down in contact with the rail and brakes the car.

By the use of my invention I am enabled to brake the car quickly and conveniently and stop it almost instantaneously. Furthermore, by using a track-brake instead of one which engages the rim of the wheel the wheels themselves are not ground down flat, causing slipping on the rails.

The brake-shoes 20 may be removed and new ones inserted thereon in a convenient manner, or they may be reversed, if desired.

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

1. In a car brake, the combination of a frame adapted to be secured to the under side of the car, a cog wheel rotatably mounted in said frame, brake operating shafts on the front and rear platforms of the car, connections between said shaft and said cog wheel, a pair of shafts having pinions at their outer ends, which mesh with said cog wheel, brake shoes and connections between said brake shoes and said drums, whereby upon operating the shafts upon the platform of the car, said brakes may be thrown down in contact with the rails, substantially as described.

2. In a car brake, the combination of a frame adapted to be secured to the under side of the car, a cog wheel rotably mounted in said frame, a pair of diametrically arranged arms projecting outwardly from said cog wheel, pitmen connected to the outer ends of said arms, brake operating shafts mounted on the front and rear platforms of the car, a flexible connection between said shafts and said pitmen, a pair of horizontally arranged shafts or drums having pinions on their outer ends meshing with said cog wheel, a block moving in ways in said frame, chains connecting said movable block and said shafts or drums, a pair of levers pivoted to a stationary block in said frame having brake shoes secured to their outer ends, rods connecting said movable block and said lever, and springs between said stationary and movable blocks, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK HENSLEIN, JR.

Witnesses:
ROBT. M. HOLLAND,
W. R. FOLSOM.