(No Model.)

D. CRONIN.

CAR BRAKE.

No. 438,433. Patented Oct. 14, 1890.

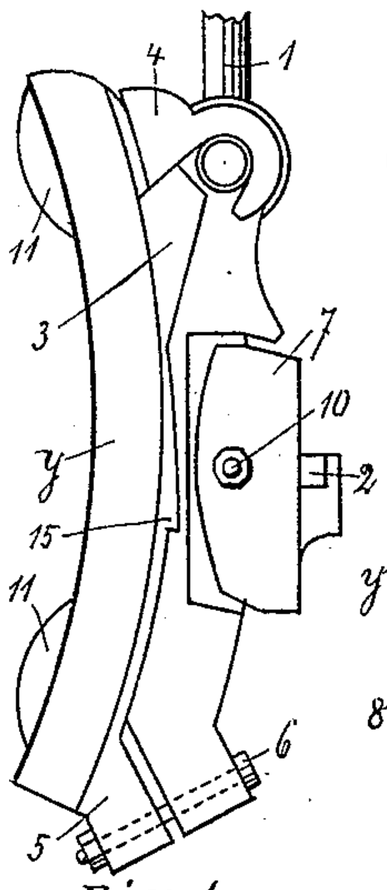

Fig: 1.

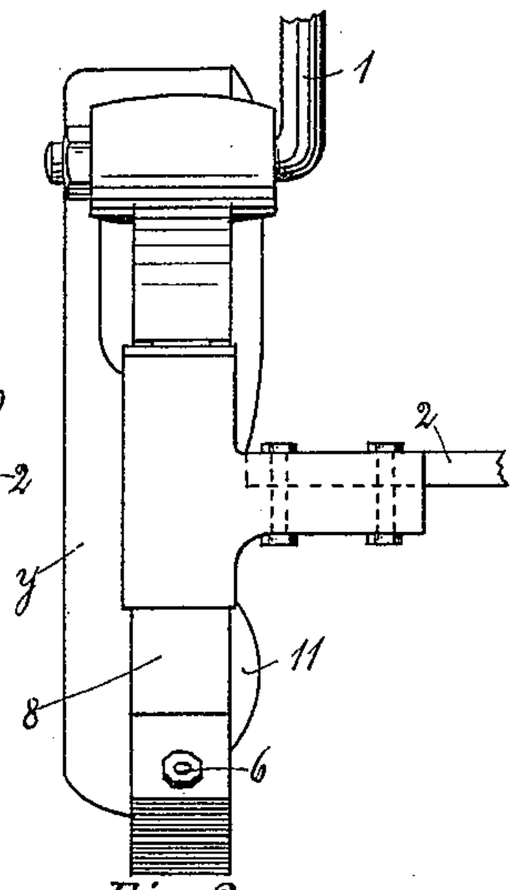

Fig 2.

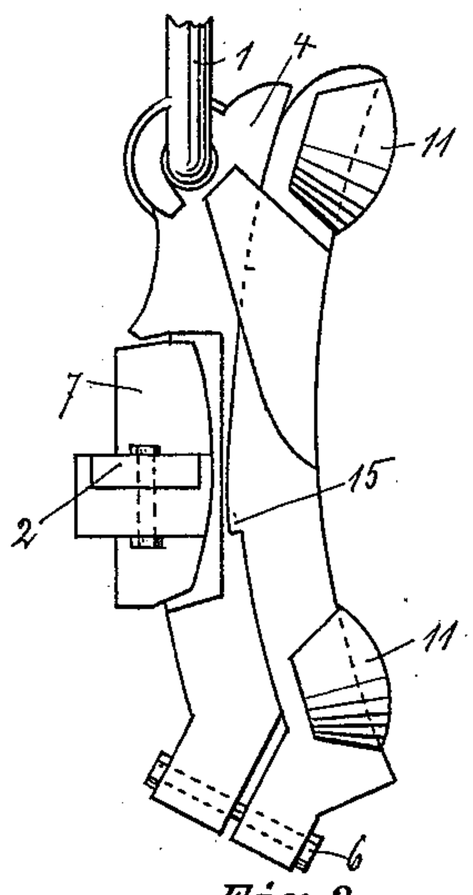

Fig: 3.

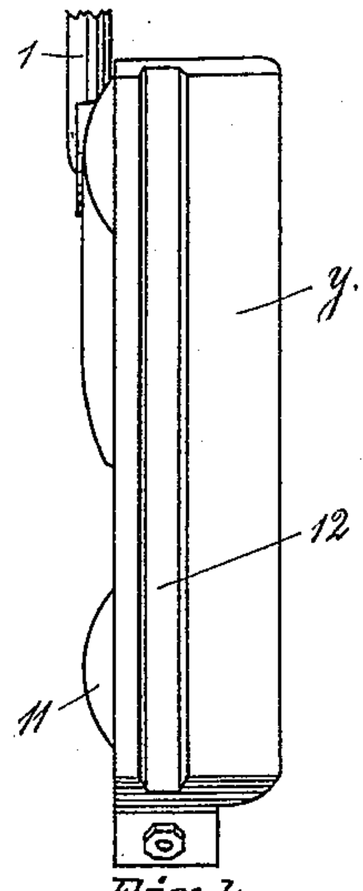

Fig: 4.

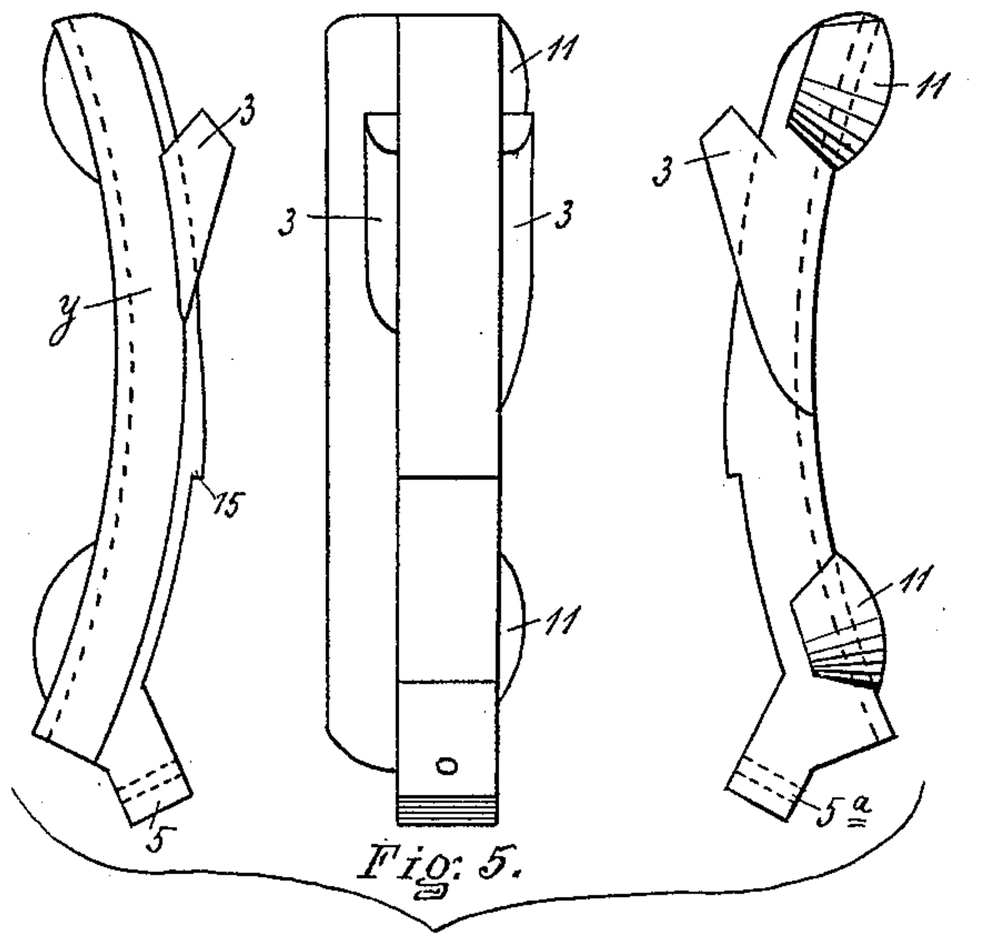

Fig: 5.

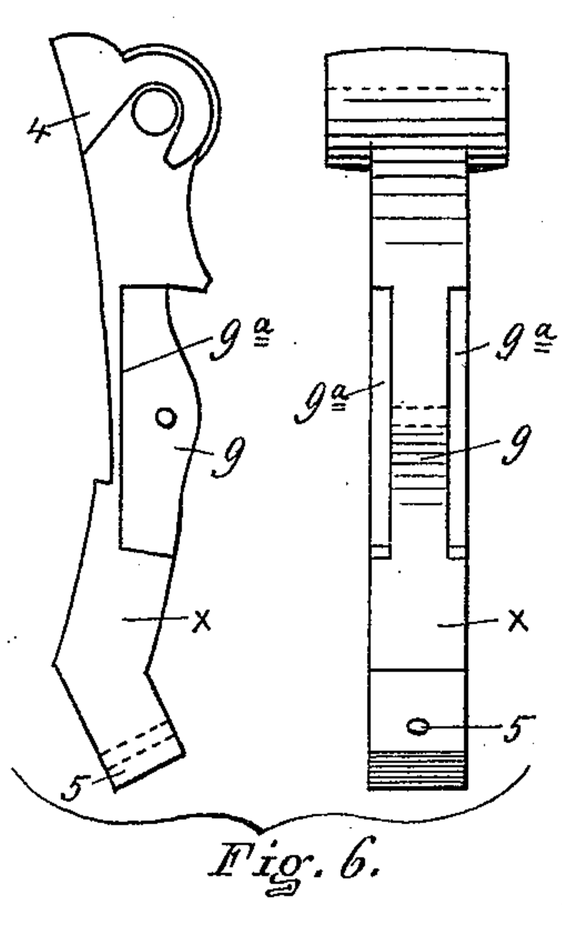

Fig. 6.

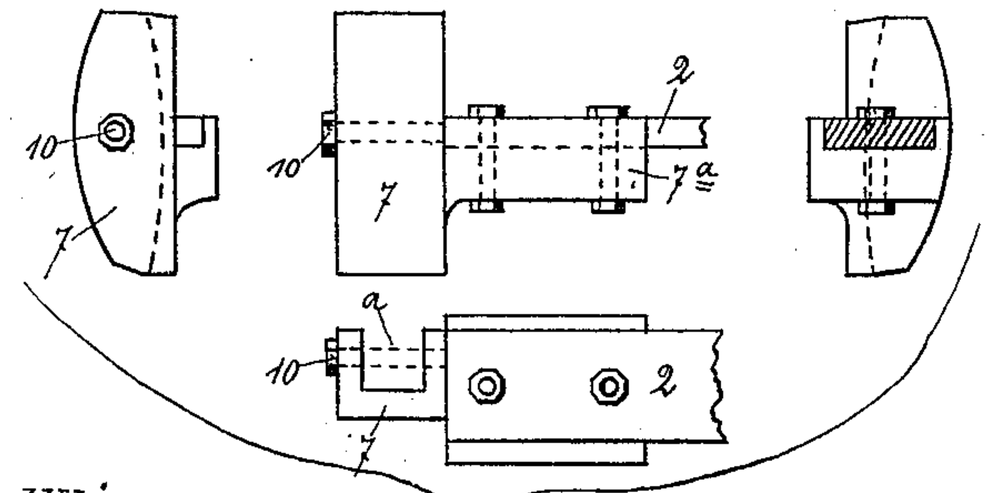

Fig. 7.

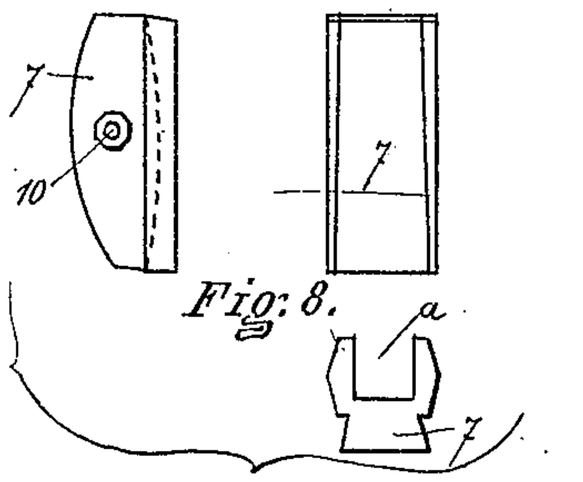

Fig: 8.

WITNESSES.
Rich. George.
M. E. Robinson

INVENTOR.
Daniel Cronin
By Ruley & Perry Attys

UNITED STATES PATENT OFFICE.

DANIEL CRONIN, OF UTICA, NEW YORK, ASSIGNOR OF ONE-HALF TO CHARLES A. DURRENBECK AND WILLIAM E. DURRENBECK, BOTH OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 438,433, dated October 14, 1890.

Application filed February 24, 1890. Serial No. 341,381. (No model.)

To all whom it may concern:

Be it known that I, DANIEL CRONIN, of the city of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 and figures of reference marked thereon, which form part of this specificaton.

My invention relates to an improvement in car-brakes.

In the drawings which accompany and form a part of this specification, and in which similar letters and figures of reference refer to like parts in the several figures, Figure 1 shows a side view of a brake-shoe and hanger involving features of my invention. Fig. 2 shows a rear view of the same parts shown in Fig. 1. Fig. 3 shows an inside view of the same parts shown in Fig. 1. Fig. 4 shows a front view of the shoe, being that portion adapted to bear upon the wheel or as seen from the right of Fig. 3. Fig. 5 shows edge views of each edge of the false shoe and rear view of the same. Fig. 6 shows a side and rear view of the shoe-frame. Figs. 7 and 8 show details of construction relating to the manner of securing the shoe to the brake-beam.

Referring more specifically to the reference-numerals marked on the drawings, 1 indicates the rod or link by which the shoe is supported from the body of the car or the truck-frame.

2 indicates the brake-beam, which extends from the brake-shoe on one side of the car or truck to its mate on the opposite side.

x indicates the shoe or shoe-frame, which is supported by link 1 from the car and is provided with inclined shoulder 4 upon each side, behind which upwardly-inclined projections 3 on the false or wearing shoe *y* are adapted to engage. Through the lower end of false shoe *y* and shoe-frame *x* are provided bolt-perforations 5 and 5ª, respectively, which incline upward, and through which pass the bolts 6, for securing the false shoe *y* to the main or frame shoe *x*. The bolts 6, being inclined upward substantially parallel with the faces of lugs 3, have a tendency to crowd the false shoe upward on the main shoe, and thus secure the false shoe rigidly thereon.

Secured to the brake-beam 2, I provide a block 7, having a vertical slot *a*, adapted to receive projecting rim 9 of the main or frame shoe. The rear edge of projecting rim 9 is rounded, adapted to bear upon the bottom plane face of the groove *a*, and the face of the block 7 is rounded, adapted to bear upon the plane surface 9ª at either side of rim 9 on the shoe-frame. Through the block 7 and rim 9 passes a bolt 10 for securing the block to the shoe, and so as to admit of a rocking motion of the shoe with reference to the block and the brake-beam. On the false shoe I provide ears 11 11, adapted to facilitate the shoe in finding its place on the wheel, and in the false shoe may be provided a groove 12 to receive the flange of the wheel. I also provide upon the false shoe *y* a shoulder 15, adapted to engage upon a corresponding opposing shoulder on the shoe-frame and prevent the false shoe from sliding down when the bolt 6 becomes slightly loose, and thus allowing the lugs 3 to become disengaged from the shoulder 4.

The block 7 may be secured to the brake-beam 2 by being provided on its back with a wedge-shaped dovetail, as shown in Fig. 8, adapted to be introduced into a similar wedge-shaped dovetailed slot in a block secured to the brake-beam, or the block may be formed, as shown in Fig. 7, with a projection 7ª, to which the brake-beam may be bolted, as shown in Fig. 7.

The use or operation of the device will be readily understood, the particular features to which it may be well to call especial attention being in the construction of the block 7 and shoe *x*, whereby the shoes upon either side of the car will adapt themselves to their work, and thus produce an even friction and wear throughout the entire length of the wearing or false shoe, and the manner of securing the false shoe to the main or frame shoe is such that the false shoe may be entirely worn out throughout its entire length before the main shoe will come in contact with the wheel

and receive wear or injury. If the false shoe is worn out while on the road, the upper portion will drop out from its connection with the main shoe and the lower portion will swing around on the bolt 6 out of the way without interfering with the action of the brake or endangering or straining it. It is evident that the construction herein described may be modified or changed in several particulars without departing from the spirit of my invention.

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

1. In a car-brake, the combination of the hanger, the shoe, the brake-beam, and the block 7, secured to the beam, having a rounded bearing-face adapted to engage upon a plane surface 9^a of the brake-shoe, whereby the shoe is permitted to conform to the wheel and the pivotal point of the shoe to the beam or block, which is brought close up to the face of the shoe, substantially as set forth.

2. The combination, in a car-brake, of a hanger, the shoe, the brake-beam, and the block 7, slotted to embrace a projection on the shoe and having a rounded face bearing upon a flat surface on the shoe, whereby the shoes mounted on the brake-beam may be permitted to conform independently to the respective wheels which they engage, substantially as set forth.

3. The combination, in a car-brake, of the hanger-shoe having a rounded projection 9 and a plane bearing-surface 9^a, the brake-beam, and the block 7, secured to the brake-beam, slotted to receive the projection 9, and having a rounded face to bear upon the plane face 9^a of the shoe, whereby the brake-shoes mounted upon the brake-beam may independently conform to the respective wheels which they engage, substantially as set forth.

4. The combination, in a car-brake, of the main or frame shoe having shoulders 4 and inclined perforation 5, of a false or wearing shoe *y*, having upwardly-inclining projections 3, adapted to engage under projections 4, an upwardly-inclined perforation 5^a, and a bolt 6, substantially as set forth.

5. The combination, in a car-brake, of the main or frame shoe *x*, having shoulders 4, of the false or wearing shoe *y*, having upwardly-inclined lugs 3, adapted to engage behind shoulders 4, and shoulder 15, adapted to engage on a corresponding opposing shoulder in the main shoe, of the bolt 6, inclining upward substantially parallel with the face of lugs 3, for securing the false shoe to the main shoe, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

DANIEL CRONIN.

Witnesses:
EDWIN H. RISLEY,
WILLIAM E. DURRENBECK.