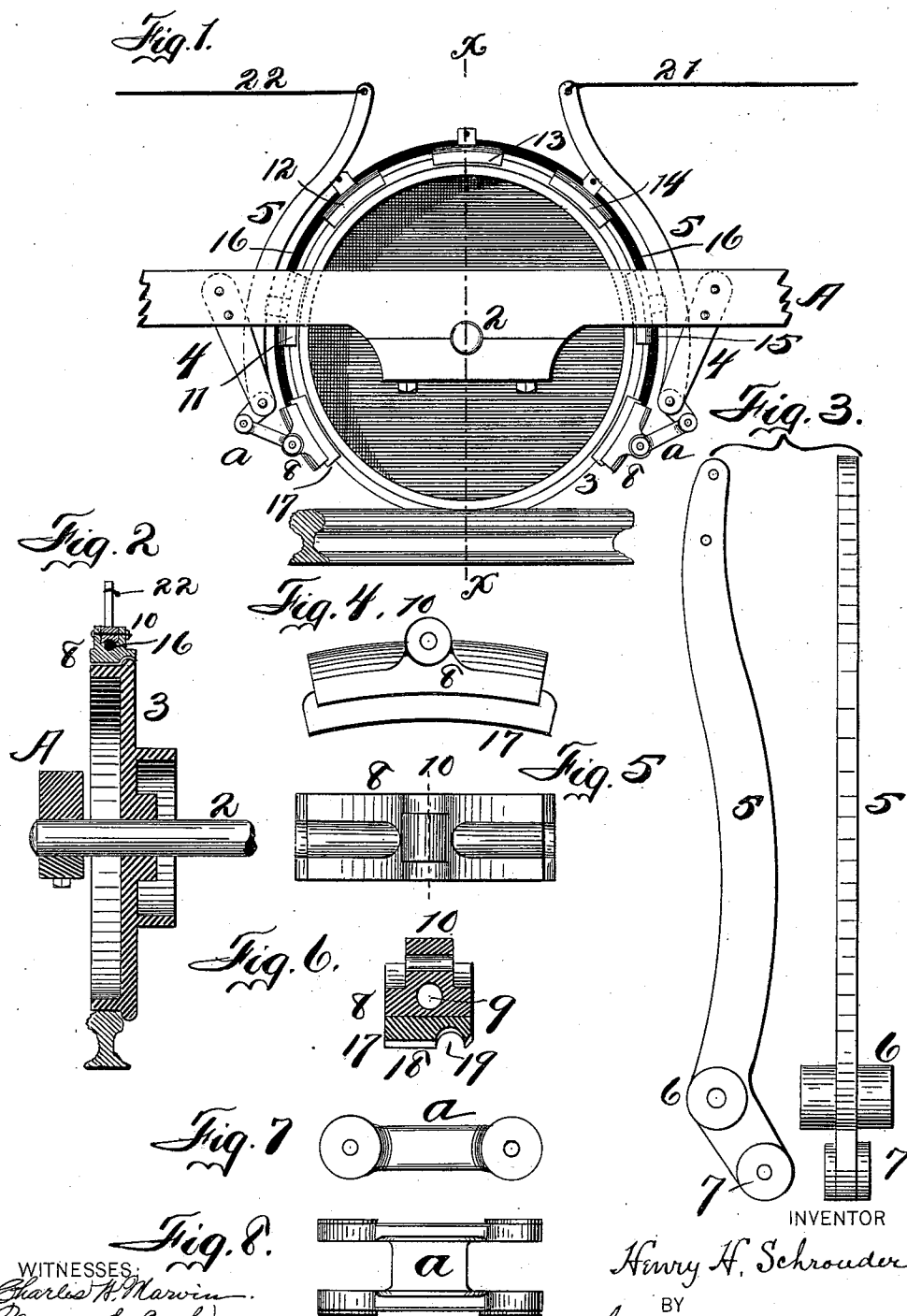


(No Model.)

H. H. SCHROUDER.
CAR BRAKE.

No. 564,226.

Patented July 21, 1896.



WITNESSES:
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UNITED STATES PATENT OFFICE.

HENRY H. SCHROUDER, OF SYRACUSE, NEW YORK.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 564,226, dated July 21, 1896.

Application filed March 23, 1896. Serial No. 584,376. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. SCHROUDER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Car-Brakes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to car-brakes.

My object is to produce an improved brake in which multiple brake-shoes are mounted upon a suitable rod or cable and a part of them are connected to or are engaged by levers which for a portion of their length are curved upon arcs substantially concentric with the car-wheel and of somewhat greater radius, said levers being pivoted upon bearings carried by the truck-frame, suitable brake-rods being connected to said levers and each adapted to be operated to draw one lever in toward the wheel to grip part of the shoes directly onto the wheel and at the same time compress the spring and throw the brake-block or shoe upon the lever against the wheel and the friction will create a strain upon the cable and draw all of the other shoes tightly against the wheel, thus multiplying both the areas of brake-surface and the points of the contact, the separate shoes cooperating.

My invention consists in the several novel features of construction and combinations of elements hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a car-wheel brake and part of a truck-frame and rail. Fig. 2 is a vertical section thereof on line *x x*. Fig. 3 shows a side and an edge elevation of a brake-lever. Fig. 4 is an enlarged side elevation of a brake block and shoe. Fig. 5 is a top plan thereof. Fig. 6 is a cross-section thereof. Fig. 7 is a side elevation of a link connecting said lever to a brake-block. Fig. 8 is a top plan thereof.

A represents part of a truck-frame, in which a shaft 2 is journaled in any suitable manner, and 3 is a wheel upon said shaft or axle. Fulcrum-bars 4 are secured to said frame and levers 5 are pivotally mounted thereon by bolts through the bosses 6, and suitable links

a and bolts through them and through the bosses 7 connect said levers to brake-blocks 8. These brake-blocks are bored out or cored out longitudinally, as at 9, are provided with bosses 10, transversely bored, and 11 12 13 14 15 are intermediate brake-blocks strung upon and secured to a suitable rod or cable 16, the ends of which are secured in the blocks 8. Upon each block a shoe 17 is suitably and removably secured, having a tread 18 and a wheel-flange-receiving concavity 19. The upper ends of said levers are connected to suitable brake rods or chains 22 in such a manner as to draw said levers outwardly from the wheel when strain is applied to throw the shoe 8 against the wheel.

Each lever is curved or concaved upon an arc substantially concentric with the wheel, so that when, for instance, the lever on the right is operated by the rod 22 it forces the block 8 on that side against the wheel, creating a frictional strain, which at the same time draws the blocks 15, 14, 13, 12, and 11 against the wheel and also block 8 on the left and thus multiplies the frictional area of the brake by the multiplication of the blocks and their distribution around the wheel in this manner by applying strain to one lever. Each and every one of the multiple blocks are applied to brake the wheel.

The blocks 11, 12, 13, 14, and 15 can be suitably connected to the levers, or in such relation thereto that they will bear against them and force them against the wheel.

The rod or cable should be of such material that when the brake-lever is released it will by its stiffness or resiliency, or both, duly lift, raise, or separate the blocks from the wheel.

Suitable springs of ordinary construction can be suitably connected to said levers to throw them inwardly when the strain is removed and throw the brake-blocks away from the wheel.

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

1. The combination with a truck-frame and a wheel upon an axle suitably journaled therein, of multiple brake-blocks, a cable to which they are secured at its ends and at intermediate points, and brake-levers mounted in bearings upon said frame and upon opposite sides of said wheel, whereby said blocks

are applied to the wheel by the operation of either lever.

2. The combination with a truck-frame and a wheel upon an axle suitably journaled
5 therein, of multiple brake-blocks mounted upon and connected by a cable, in combination with levers pivoted upon bearings upon the truck-frame and on opposite sides of the wheel, and "links" connecting each lever to
10 a brake-block, whereby each lever operates to apply its brake-block to the wheel and thereby apply all of them independently of the other lever.

3. The combination with a wheel and a
15 truck-frame in which its axle is suitably jour-

naled, of multiple brake-blocks longitudinally bored, a cable inserted through said blocks and to which they are secured at the ends and at intermediate intervals and angular brake-levers pivoted upon fulcra,
20 mounted upon said frame and connected to the end brake-blocks, and means to operate said levers.

In witness whereof I have hereunto set my hand this 12th day of March, 1896.

HENRY H. SCHROUDER.

In presence of—

C. W. SMITH,

HOWARD P. DENISON.