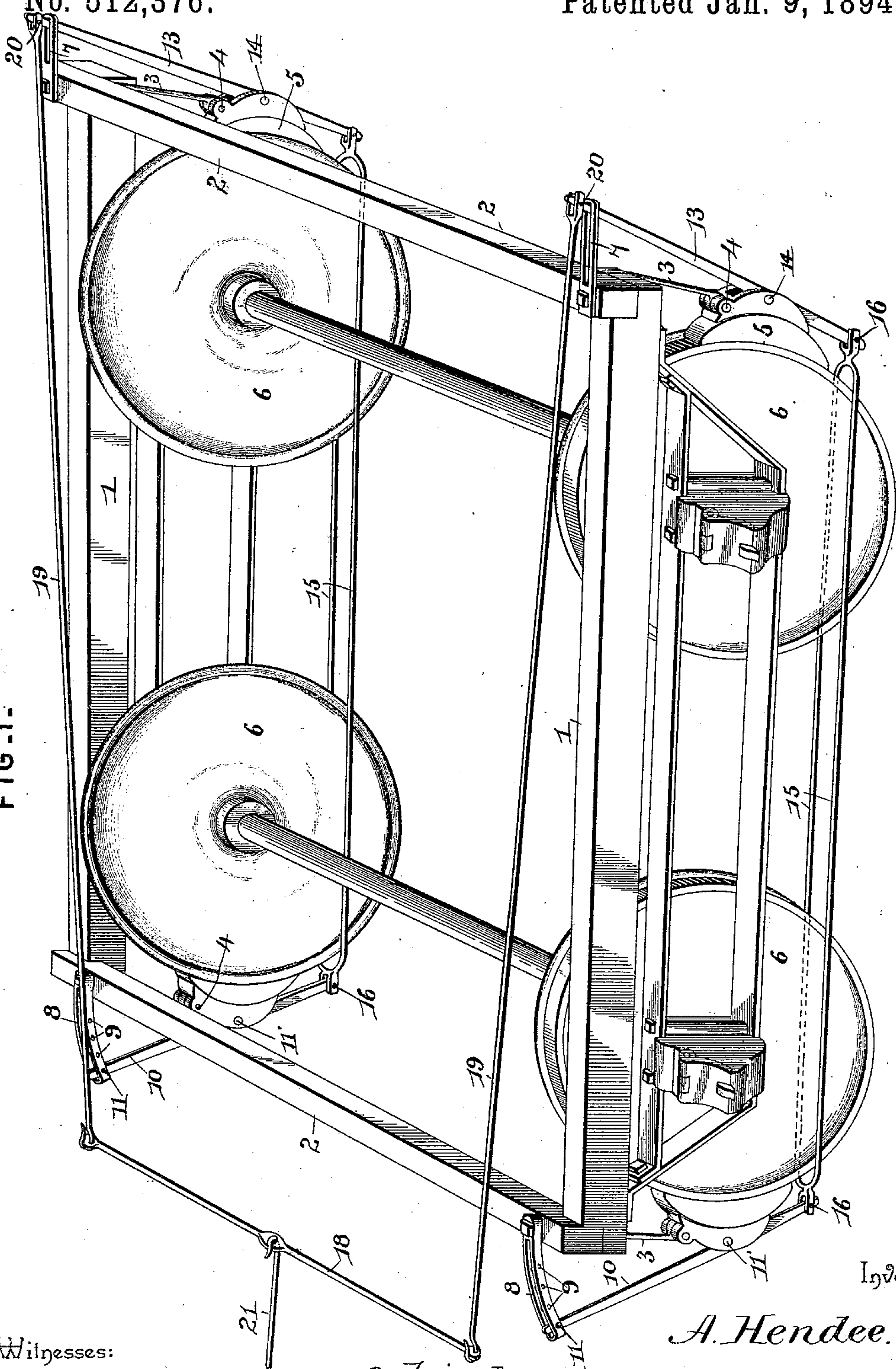


A. HENDEE.
CAR BRAKE.

No. 512,376.

Patented Jan. 9, 1894.

FIG. 1.



Inventor:

A. Hendee.

Witnesses:

Jas. H. McLaughlin.

W. S. Duval.

By *his* Attorneys.

C. A. Snow & Co.

(No Model.)

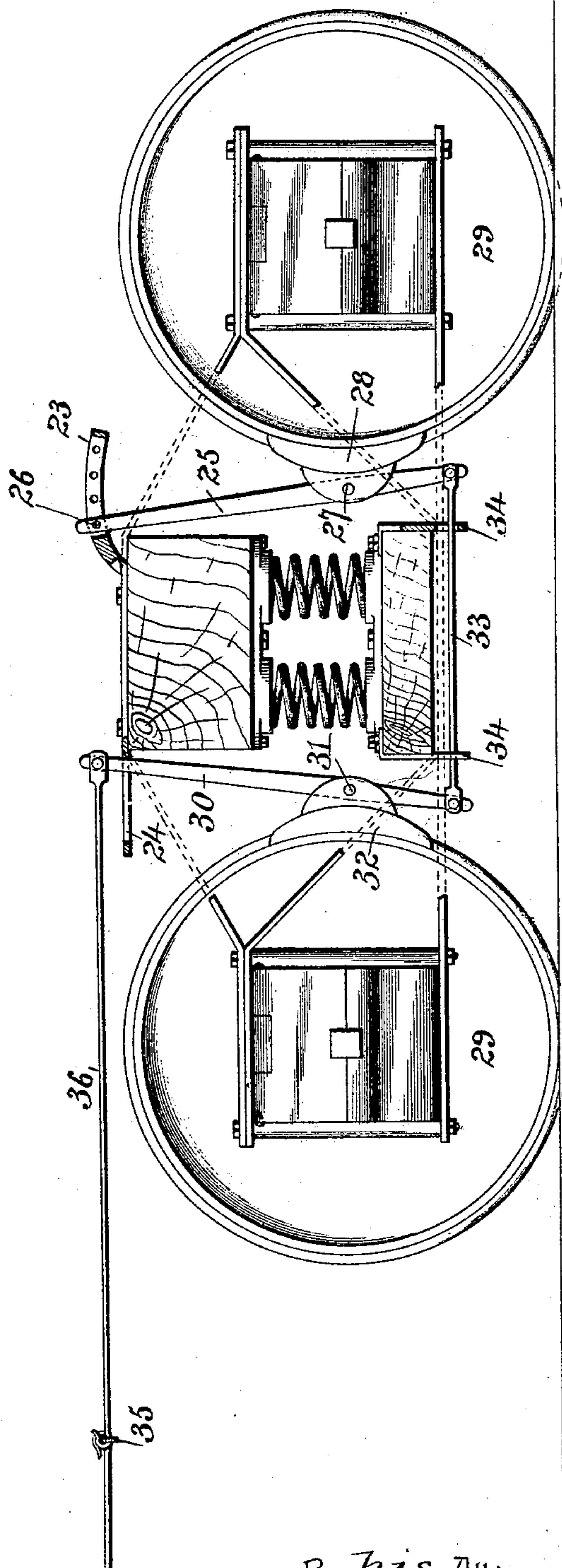
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A. HENDEE.
CAR BRAKE.

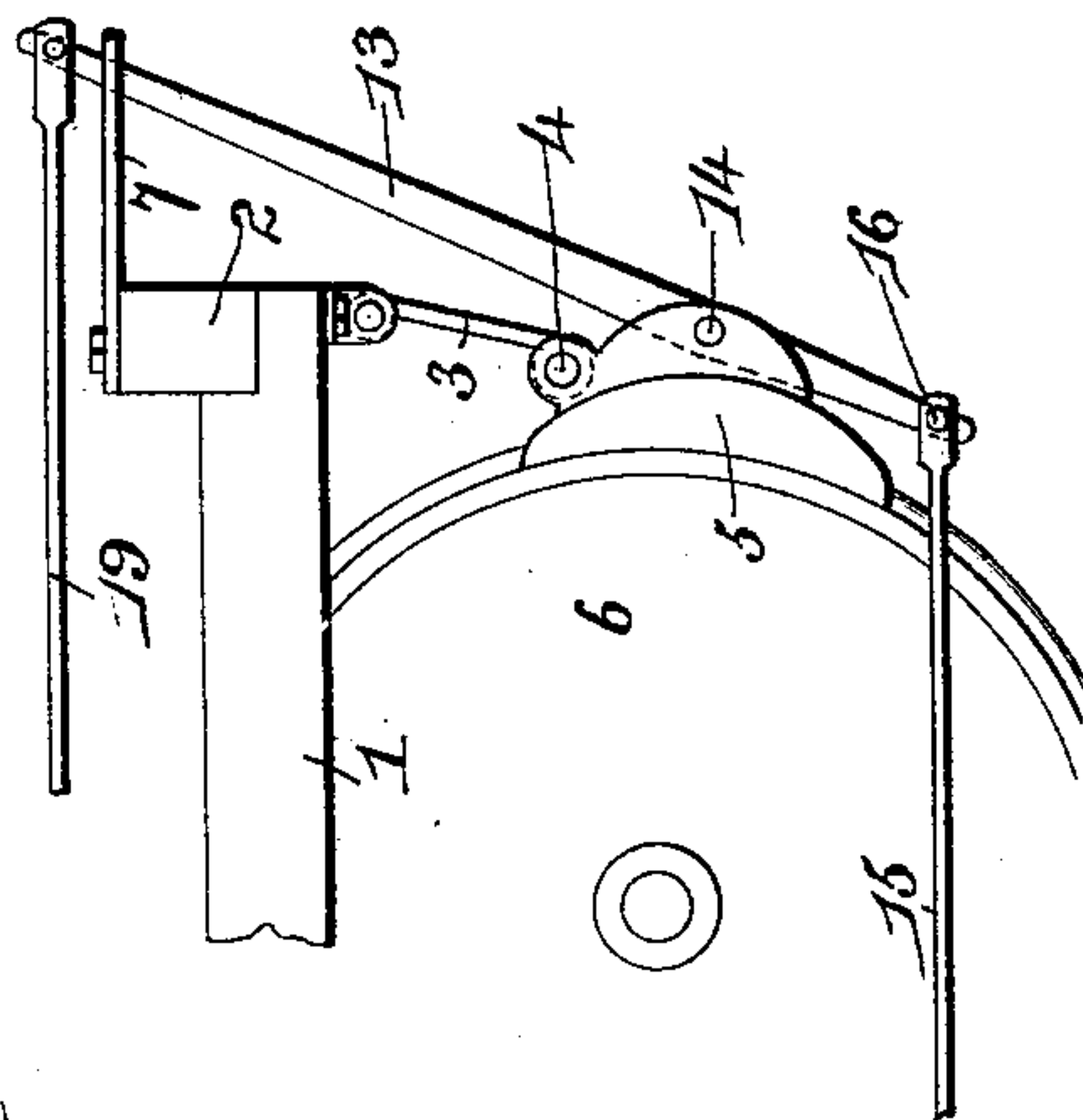
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F16-21



F16.3:



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Witnesses

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UNITED STATES PATENT OFFICE.

ALONZO HENDEE, OF COLUMBUS, OHIO.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 512,376, dated January 9, 1894.

Application filed October 18, 1893. Serial No. 488,505. (No model.)

To all whom it may concern:

Be it known that I, ALONZO HENDEE, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Beamless Car-Brake, of which the following is a specification.

My invention relates to improvements in car-brakes; the objects in view being to produce a brake that will embody simplicity of construction, durability, efficiency, and strength, and which shall obviate the necessity of employing the usual brake-beams that are constantly becoming broken and dropping upon the rails of the track, often causing serious accidents.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a car-truck embodying my invention. Fig. 2 is a side elevation of a modified construction thereof. Fig. 3 is a side elevation of one end of the truck shown in Fig. 1.

Like numerals of reference indicate like parts in all the figures of the drawings.

The truck in the present instance comprises the opposite longitudinal sills 1, and end or cross-sills 2, forming the rectangular truck-frame upon which is supported the body of the car, not shown. Loosely connected to the opposite cross-beams 2 at the ends thereof are hanger-rods 3, whose lower ends are pivotally connected, as at 4, with brake-shoes 5, designed to be swung inward together with the rods and against the treads of the wheels 6. From one of the cross-beams 2 there extends a horizontal guide-frame 7, and from the opposite beam 2 there extends a bracket 8, the same being slotted longitudinally and provided with opposite perforations 9. A lever 10, is, by means of a pivot pin 11, adjustably and pivotally connected in the perforations 9 of the bracket 8, and is between its ends pivoted as at 11' to the outside of the adjacent brake-shoe. A second or companion lever 13 is pivoted at 14 between its ends to the outer side of the opposite brake-shoe and at its upper end moves in the guide-frame 7. The

lower ends of the two levers 10 and 13 are connected at each side of the wheels by the connecting-rods 15 whose ends are bolted at 16 pivotally to the levers.

18 designates an equalizing-bar, whose terminals form connecting-rods 19, the same being provided at their rear ends with loops 20 which loosely engage with the levers 13 above the guide-frames 7. The equalizing-bar 18 is, through the medium of a connecting rod 21, connected to the usual cylinder-lever, (not shown,) of any ordinary brake-system. The operation of this brake-mechanism will be obvious, in that draft applied to the bar draws the upper ends of the levers 13 at opposite sides of the truck forward and causes the lower ends, through the medium of the connecting-rod 15 to draw the lower ends of the levers 10 inward or backward, in which manner it will be seen that both brake-shoes are applied effectually to their respective wheels. Through the medium of the adjusting-bolt 11 it will be seen that the brakes may be made to act more quickly upon the wheels, in that they may be brought closer thereto.

In the drawings I have illustrated the application of my invention and the embodiment of its principle, in that class of car brakes, in which the brake-shoes are located between the wheels of a truck in lieu of being applied to the outer sides of the end wheels as previously described. In such case I employ the perforated bracket 23 and the slotted guide-frame 24, the same as in the previous instance, but locate them above the wheels and between the same upon any suitable timber. The upper end of the brake-lever 25 is pivoted as at 26 to the said slotted and perforated bracket, and at 27 between its ends to the brake-shoe 28, which is designed to ride against the tread of the wheel 29. In the slotted frame 24 there moves the upper end of the brake lever 30, which between its ends is pivoted as at 31 to the brake-shoe 32. The two levers 25 and 30 are connected by means of an intermediate connecting-rod 33 whose ends are pivoted to the ends of said levers, and which between its points of pivot move in transversely aligning eyes formed in depending hangers 34, which serve as guides for the said rod. The equalizing-bar 35, the same as before, is also em-

ployed, and has its terminals 36 connected to the upper ends of the brake-levers 30. It will be seen that draft applied to the equalizing-rod will swing the upper ends of the levers 30 forward, causing the shoe carried by the levers to be swung in contact with the wheels. The lower ends of the levers 30 will, through the medium of connecting-rods 33 force the levers 25 toward the opposite wheel, which is borne upon by the companion shoe.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very simple and most efficient brake-mechanism, which may be applied with little exertion and with great power to the surfaces of the wheels against which the brake-shoes are snugly bound.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

1. In a beamless car-brake, the combination with a truck and its wheels, of brake-shoes for the wheels, brake-levers pivoted between their ends to the shoes, a connecting-rod between the lower ends of said levers, means for pivotally supporting one of said levers upon the truck-frame, and the U-shaped equalizing frame having its terminals connected loosely with one set of levers, substantially as specified.

2. In a beamless car-brake, the combination with a truck, and its wheels, of brake-shoes for the wheels, brake-levers pivoted between their ends to the shoes, a connecting-rod between the lower ends of said levers, means

for adjustably and pivotally connecting the upper end of one of said levers to the truck-frame, and means for applying power to the opposite lever, substantially as specified.

3. In a beamless car-brake, the combination with the truck-frame and the wheels, of the slotted perforated bracket at one end of the frame, the guide-frame at the opposite end of the frame, the loose hangers depending from the ends of the truck-frame, the shoes pivotally connected to the hangers, the levers pivoted between their ends to the shoes, one of said levers passing at its upper end through the guide-frame and the other through the guide-bracket, a pin removably pivoting one of said levers to said guide-bracket, a pair of connecting-rods between the lower ends of the brake-levers, and means for applying draft to that lever passing through the guide-frame, substantially as specified.

4. In a car-brake, the combination with the truck-frame, of the opposite wheels, of opposite brackets at one end of the frame, and opposite guides at the opposite end of the frame, levers pivoted in the brackets and located in the guides, connecting-rods between the lower ends of the lever, brake-shoes loosely hung from the truck-frame and pivoted to the levers between the ends of the latter, and an equalizing-frame of U-shape having its terminals connected to the upper ends of those levers projecting through the guides, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALONZO HENDEE.

Witnesses:

B. W. TYLER,
E. G. DEMING.