

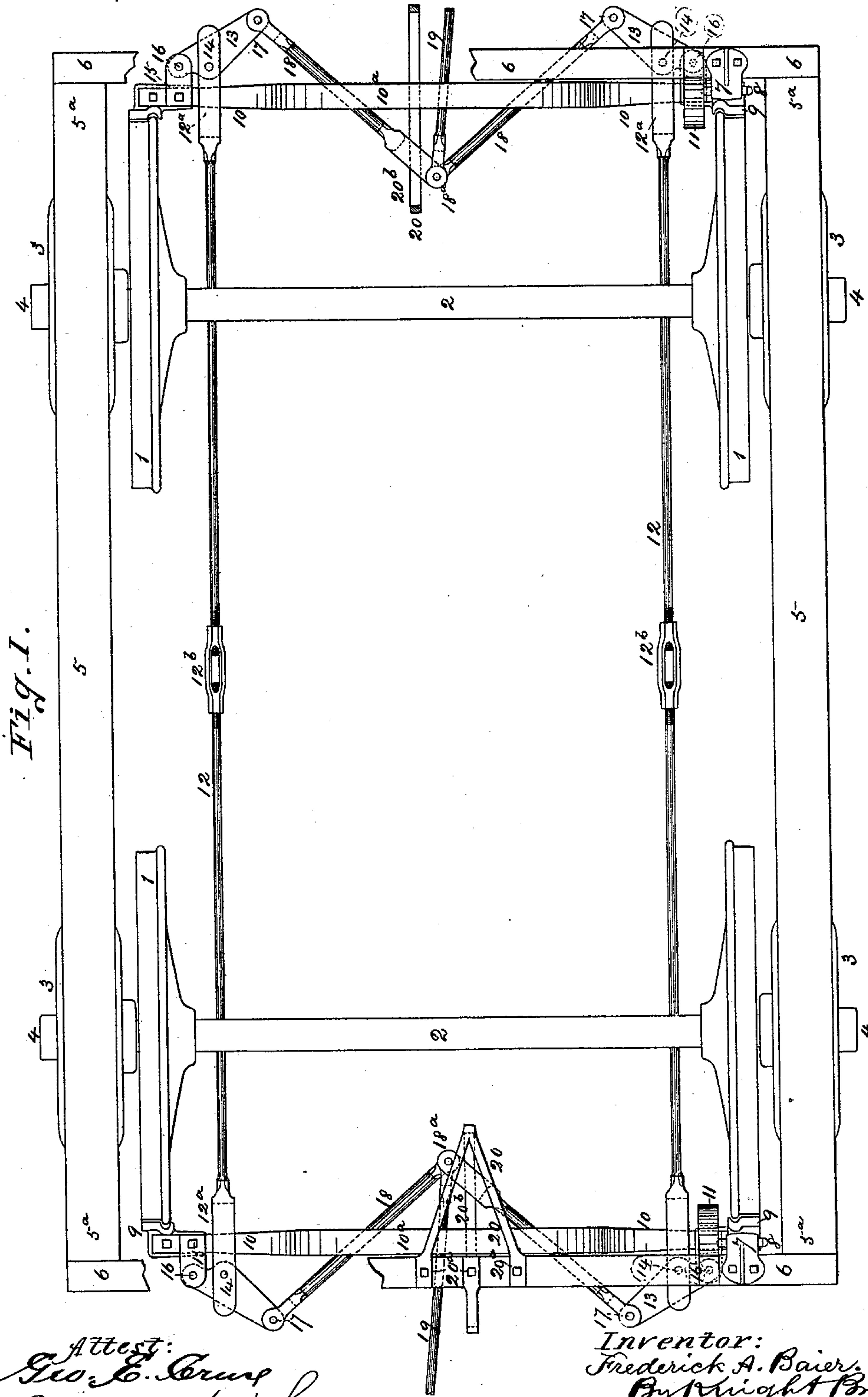
(No Model.)

2 Sheets—Sheet 1.

F. A. BAIER.
CAR BRAKE.

No. 478,902.

Patented July 12, 1892.



Attest:
Geo. E. Crump
Edward R. Knight

Inventor:
Frederick A. Baier.
By Knight Bros.
Atty.

(No Model.)

2 Sheets—Sheet 2.

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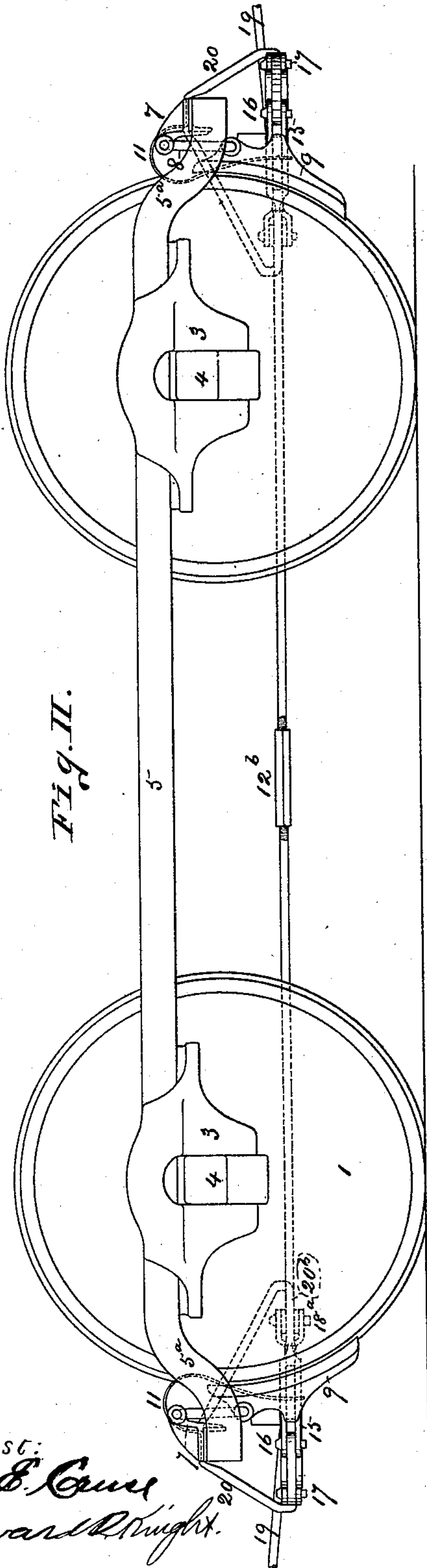


Fig. II.

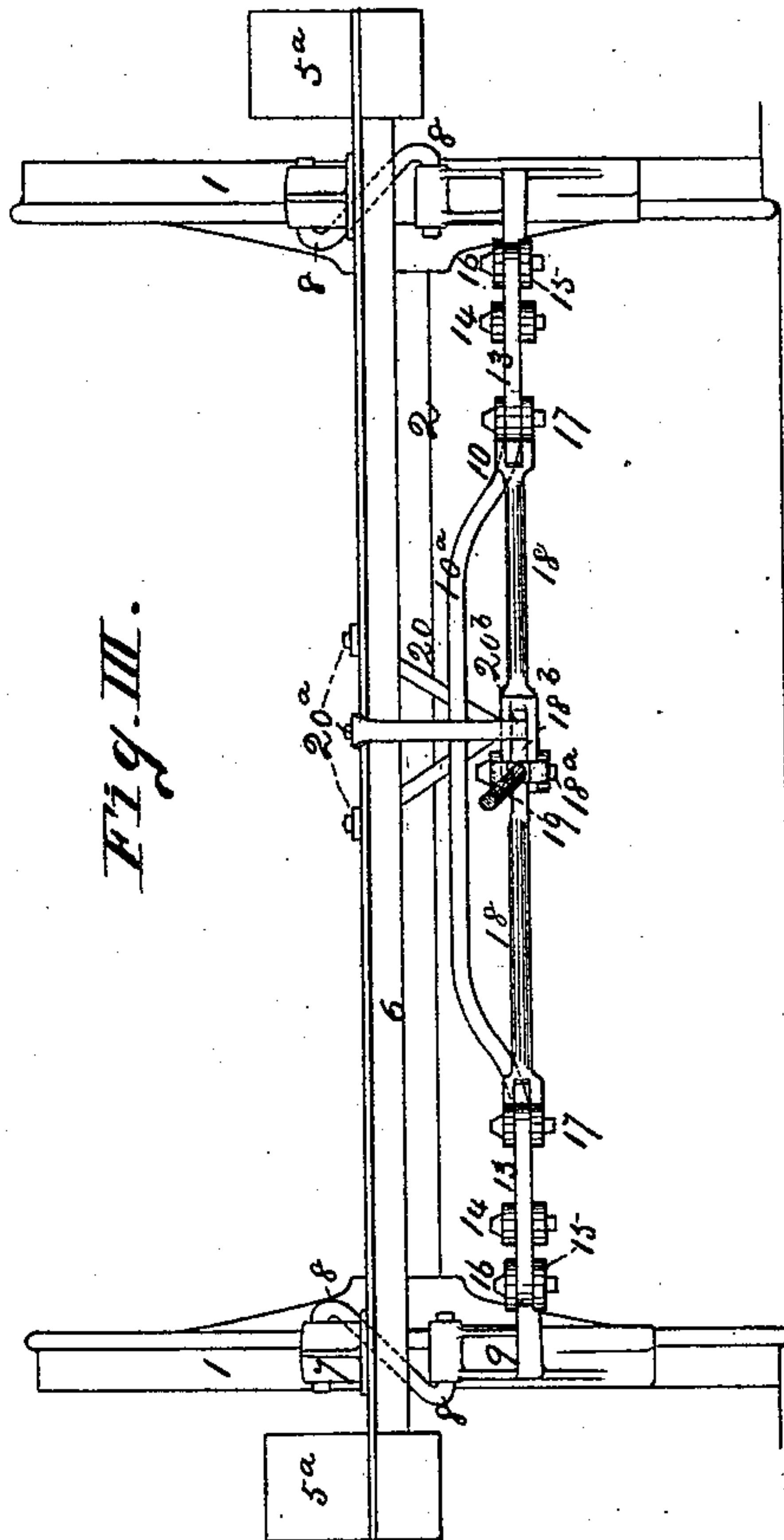


Fig. III.

Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

FREDERICK A. BAIER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE BROWNELL CAR COMPANY, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 478,902, dated July 12, 1892.

Application filed March 21, 1892. Serial No. 425,798. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. BAIER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This brake is intended more especially for street-cars, but is claimed for other cars.

The novel features are set forth in the claims.

Figure I is a top view of a car-truck with my brake applied thereto. Fig. II is a side elevation of the same. Fig. III is an end elevation.

1 are the wheels; 2, the axles; 3, the pedestals in which work the oil-boxes 4. 5 are the side bars of the truck turned down at the ends 5^a and connected with the end bars 6. The end bars 6 carry brackets 7, to which the brake-shoes 9 are hung by S-formed links 8. The shoes 9 are secured to ends of the brake-bar 10. 11 are springs acting to force the brake-shoes away from the wheels.

No novelty is claimed in the parts above described.

The brake-operating mechanism is similar at each end of the car, a description of such mechanism at one end applying equally to the other.

12 are rods running from one brake-bar to the other, but not directly connected to the brake-bars, except that they have slotted ends 12^a, in which slots the brake-bars work in the movement of the brake-shoes to and from the wheels. Thus the rods 12 are supported on the brake-bars.

12^b are screw-couplings in the rods 12.

13 are levers fulcrumed at 14 to the rods 12 and preferably having bearings in the slots, as shown.

15 are brackets fixed to the brake-bar and pivoted at 16 to the outer ends of the levers. The inner ends of the levers are pivoted at 17 to the toggle-bars 18, which extend backwardly and inwardly and are pivoted together and to the rod 19 at their rear ends 18^a. The toggle-bars are on the same level as the ends of the brake-bar, and the latter is arched upward at its central part 10^a to give place for the toggle-bars.

20 is a spider, whose ends 20^a are fixed to the end bars of the truck. The spider has a horizontal guide-bar 20^b, that passes through a slot 18^a of one of the toggle-bars 18, and thus serves to support the ends of these bars with that of the rod 19. The rod 19 is connected by a usual winding-chain with a hand-shaft of the usual or any suitable construction. As the rod 19 is pulled outward (in direction indicated by the arrow) the brake-shoes are pushed against the wheels with increasing force as the shoes move toward the wheels, owing to the increasing obtuseness of the angle formed by the toggle-bars 18 at their point of connection.

It will be seen that the brakes will be applied at both ends of the car simultaneously.

The principle of applying all the brakes at once is in common use and it will be understood that no novelty is claimed for the same.

I claim as my invention—

1. The combination, in a car-brake, of the toggle-rods 18, hinged together and to the pull-rod 19, brake-bars 10, the connecting-rods 12, extending from one brake-bar to the other, and levers 13, fulcrumed to the rods 12 and connected at the ends with the toggle-rods 18 and the brake-bar, substantially as set forth.

2. The combination, in a car-brake, of the toggle-rods 18, levers 13, and brake-bar 10 of the spider 20, adapted to support and guide the ends of the toggle-bars, substantially as set forth.

3. The combination, in a car-brake, of the rods 12, slotted at the ends 12^a, the brake-bars 10, working in the slots, levers 11, also working in said slots and pivoted to the rods and the brake-bars, toggle-rods 18, connected together and to the levers 13, and a draw-rod connected to the toggle-rods at their points of connection with each other.

4. The combination, in a car-brake, of the toggle 18, the levers 13, rods 12, and a brake-bar arched at its middle over the toggle, substantially as and for the purpose set forth.

FREDERICK A. BAIER.

Witnesses:

ELLA B. WELSH,
C. W. JOSLIN.