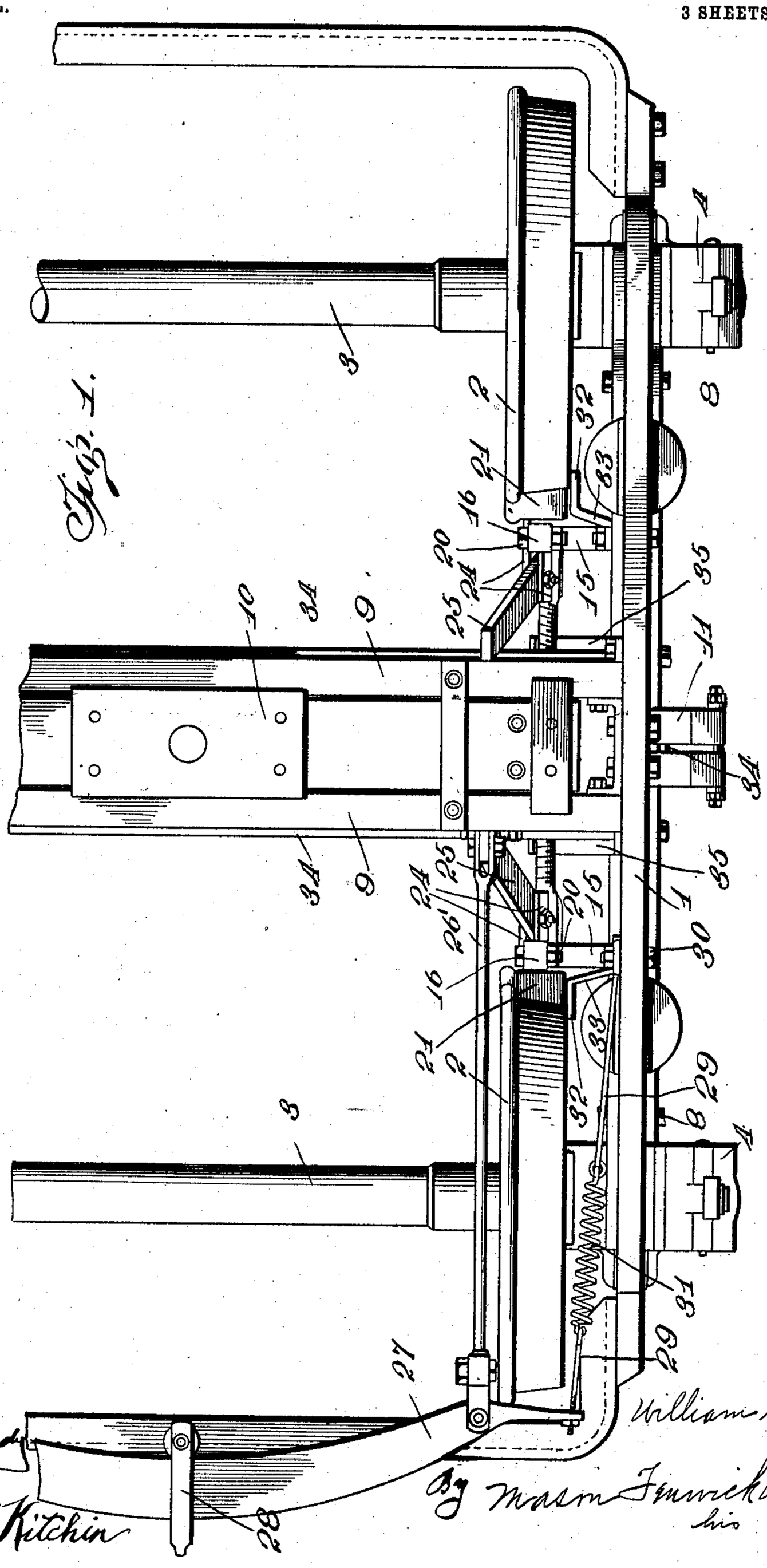
No. 757,345. PATENTED APR. 12, 1904.

W. G. PRICE.

BRAKE RIGGING.

APPLICATION FILED OCT. 30, 1903.

NO MODEL. 3 SHEETS—SHEET 1.



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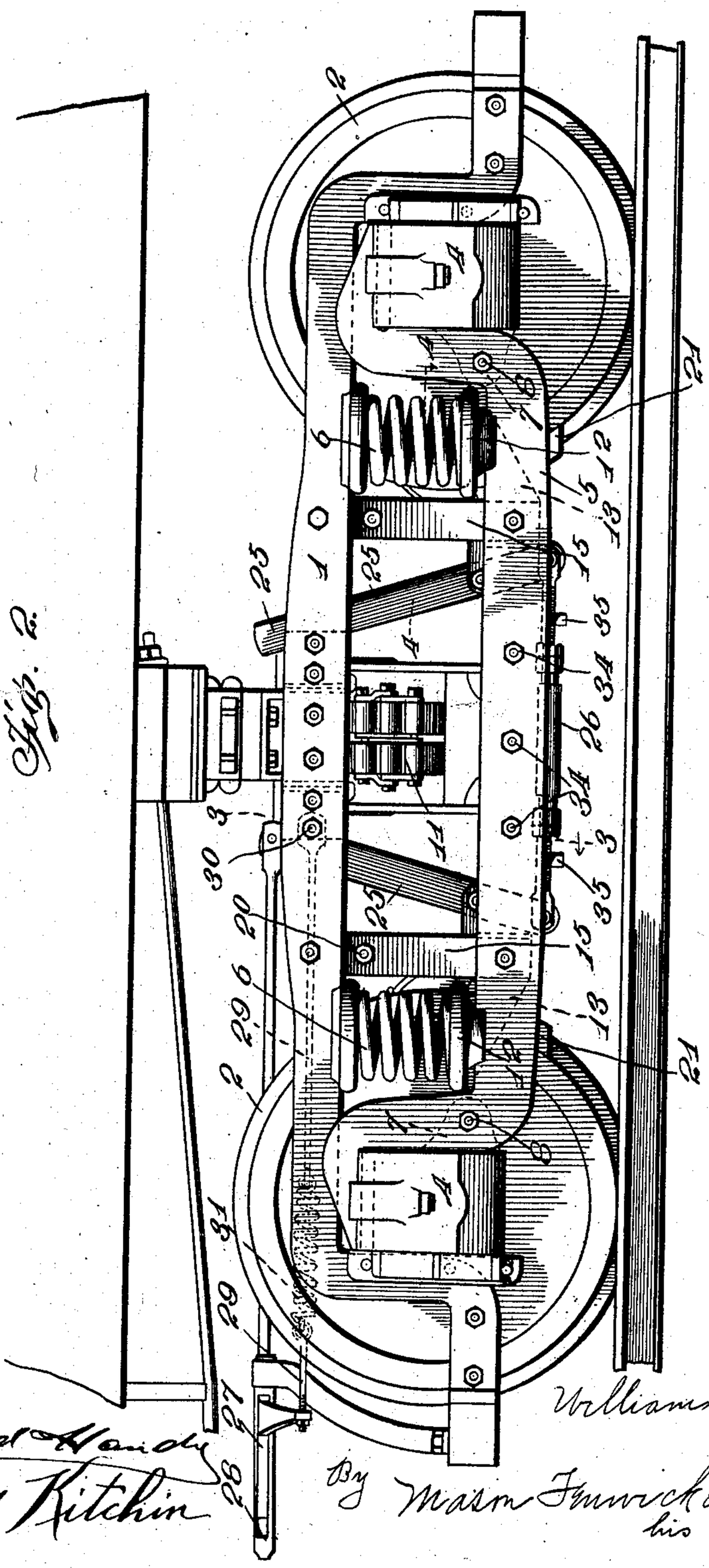
NO MODEL.

3 SHEETS—SHEET 2.

Fig. 2.



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NO MODEL. 3 SHEETS—SHEET 3.

Fig. 3.

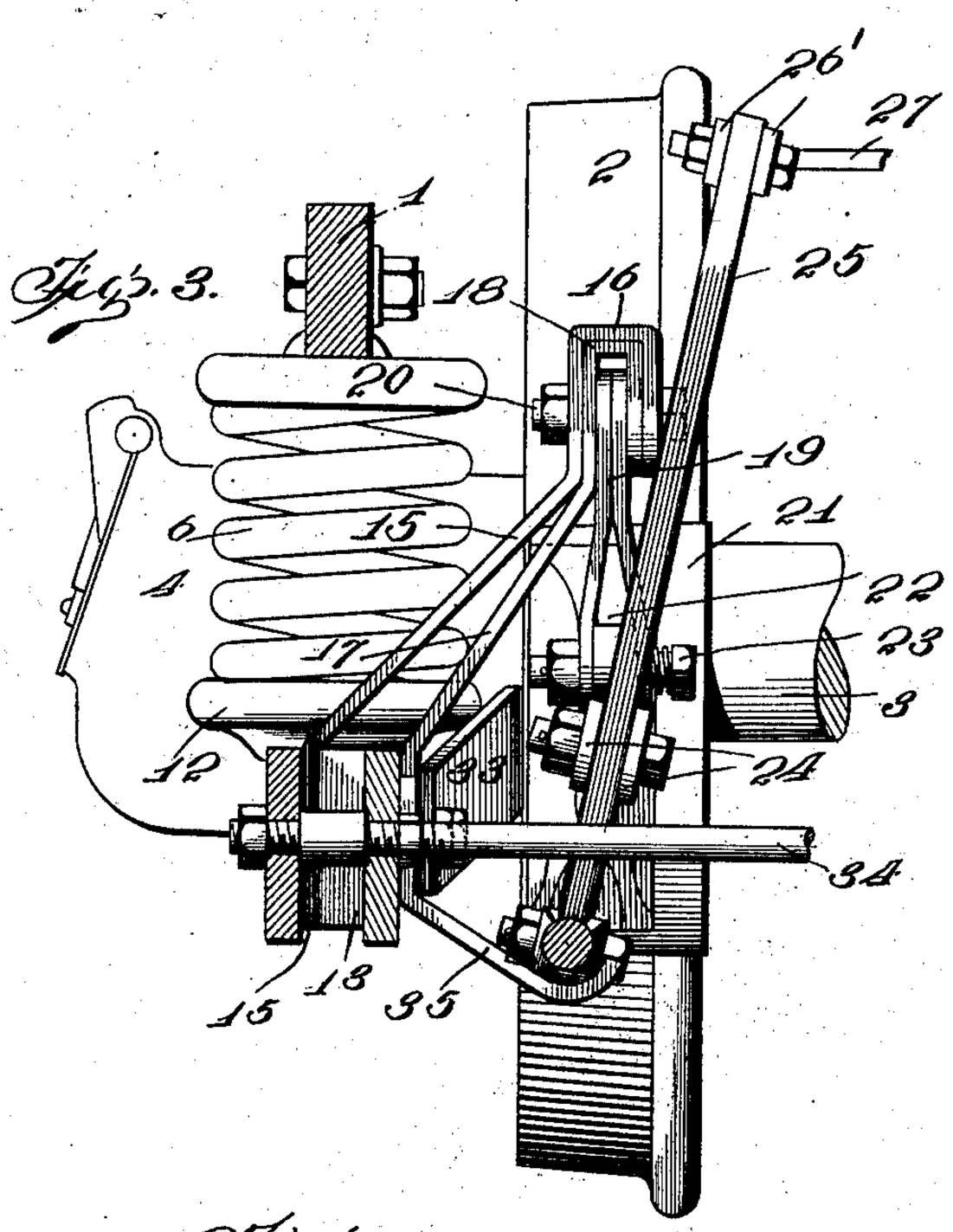
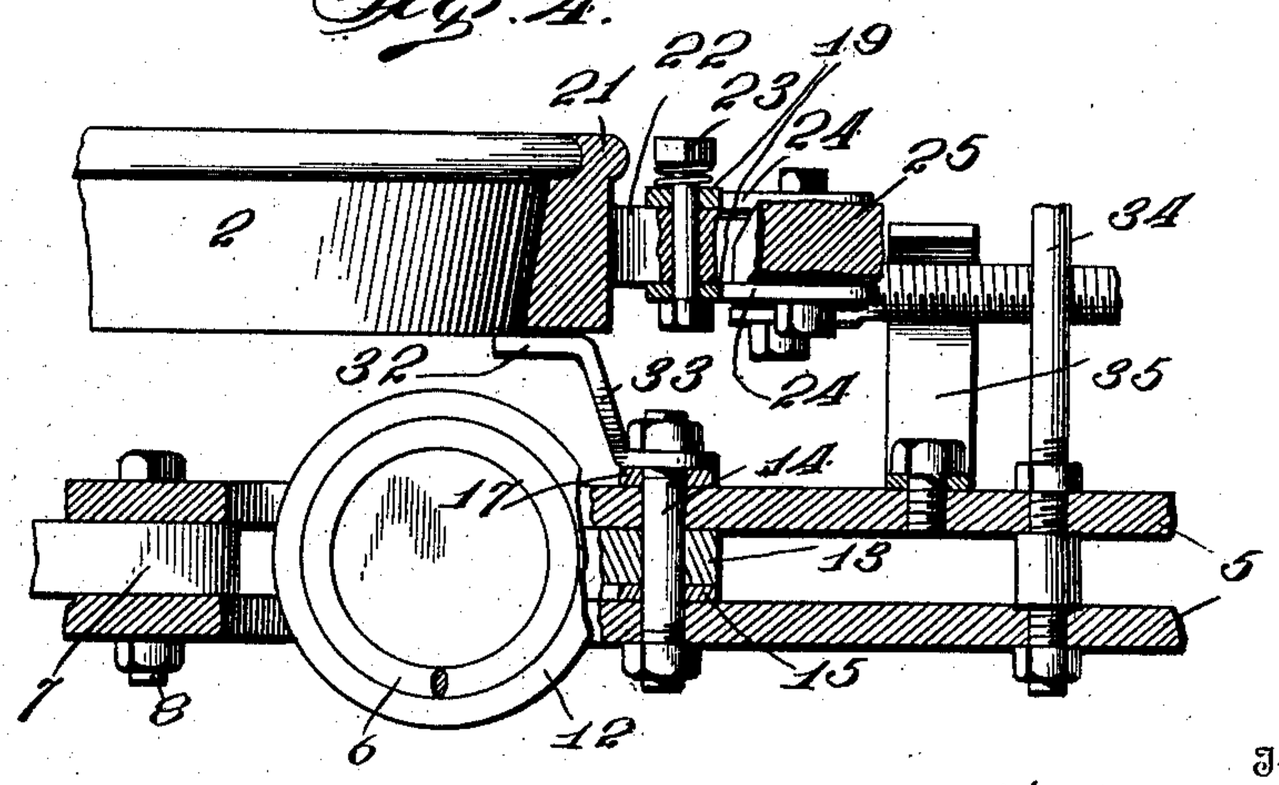


Fig. 4.



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No. 757,345. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM G. PRICE, OF NEW YORK, N. Y.

BRAKE-RIGGING.

SPECIFICATION forming part of Letters Patent No. 757,345, dated April 12, 1904.

Application filed October 30, 1903. Serial No. 179,213. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. PRICE, a citizen of the United States, residing at New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Brake-Rigging; 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.

This invention relates to improvements in car-trucks, and particularly to brake-rigging therefor.

The object in view is the supporting and disposing of a brake-rigging in such manner as to minimize or totally overcome vibrations due to the application of brake-shoes.

A further object is the support of a brake-rigging in such manner as to obviate the necessity for the interposition of springs for carrying the same, whereby the brake-shoes may be maintained at a given fixed height.

A further object is attained by the mounting of the present improved rigging in such manner as to enable the removal of the truck-frame bodily without interfering with or deranging said rigging.

With these and further objects in view the invention consists in combination, with a car-truck frame and wheels, of equalizer-bars connecting the axles of said wheels and a brake-rigging carried by said bars.

It still further consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a top plan view of a portion of car-truck provided with a brake-rigging embodying the features of the present invention. Fig. 2 represents a view in side elevation of the same. Fig. 3 represents a vertical transverse section taken on the plane of line 3 3 of Fig. 2. Fig. 4 represents an enlarged fragmentary horizontal section taken on the plane of line 4 4 of Fig. 2.

The bolster of the common types of car-trucks is usually cushioned in such manner as to absorb as much of the vibration of the truck as possible to prevent jarring and shaking of the car carried thereby, but, as is well known, the application of the brakes usually occasions sufficient vibrations to be felt in the car despite the interposed cushions, and by the present invention I contemplate obviating the vibrating of the frame of a car-truck by the supporting of the brake-rigging independently thereof, as will be seen from the accompanying drawings, in which—

1 indicates the frame of a car-truck, preferably of the type illustrated in applications for patents previously filed by me. Wheels 2 2 carry said frame by means of their axles 3 3, journal-boxes 4, and equalizer-bars 5, connecting said boxes and provided with cushioning-frames 6 6, upon which the said frame 1 rests, each set of boxes 4 at one side of the frame being provided with an interposed equalizer-bar 5, consisting of parallel plates spaced apart at each end by a lug 7, carried by the respective boxes 4, said plates being secured together by bolt 5 8, extending therethrough and through the lugs 7. The ends of each bar 5 are bent and rest upon the upper surface of the boxes 4, the plates constituting each of said bars having their ends spaced apart a distance sufficient for permitting vertical movement of the respective side frame making up the general frame 1 between the said plates. Arranged transversely of and secured to the frame are transoms 9 9, between which is supported a car-body-supporting bolster 10 upon cushioning-springs 11, supported by said transoms. As the opposite sides of the frame 1 and the surrounding parts are exact duplicates, I have illustrated but one side, and the description of the same will be applicable to the other.

Each of the springs 6 is supported in a suitable seat 12, resting upon bar 5 and provided with a depending flange or lug 13, filling the space between the plates of said bar and extending laterally from said seat and retained in position by means of a bolt 14. That portion of each of lugs 13 surrounding bolt 14 is slightly narrower than the space between the plates forming bar 5, and a bracket 15 is interposed between the lug and the outer of said plates, said bracket extending in an inclined plane upwardly and inwardly and being

formed at its upper end with a hook 16. A similar bracket 17 surrounds the inner end of bolt 14, with its lower end resting against the inside face of the inner plate of bar 5, and said bracket extends upwardly and is formed with a hook 18, fitting snugly within the hook 16, a link 19 being pivotally supported within said hooks by a bolt 20, extending therethrough. The lower end of each link 19 supports a brake-shoe 21 by means of its web 22, pivotally connected to said link by a bolt 23, passed through the lower end of said link and web. A jaw projects from each of the webs 22 and consists of links 24 24. Extending between and pivotally connected to each set of links 24 is an operating-lever 25, the lower ends of each set of operating-levers 25 on one side of the frame being pivotally connected together by a suitable turnbuckle 26, whereby actuation of one lever is designed to actuate the other in an opposite sense. One of the levers 25 has its upper end left free to contact with one of the transoms 9, and to the upper end of the other of said levers is connected a draw-bar 26, said bar at its forward end pivotally engaging one end of an evener-bar 27, any suitable draft device 28 being applied to said evener for actuating the same. A rod 29 connects the end of evener 27 to the frame 1 by bolt 30, a spring 31 being interposed in the length of said rod for normally retaining the evener-bar in position for supporting the brake-shoes out of contact with the wheels 2.

Each brake-shoe 21 is held against lateral play in one direction by means of the flange of the given wheel 2 and is retained against lateral movement in the opposite direction by the flat portion 32 of bracket 33, carried by the inner end of bolt 14. The equalizer-bars 5 on the opposite sides of the frame are bound together and held against lateral movement independently of each other by means of tie-rods 34 34. A bracket 35 is secured to each bar 5 near each end of each turnbuckle 26, and each of said brackets has its lower end extended beneath and curved about the turnbuckle for receiving and supporting the same in case of accident to the brackets 15 and 17 or other supporting parts.

In operation the evener-bar 27 is drawn forwardly, whereby the upper end of the lever 25, to which the bar 26′ is attached, is moved forwardly, applying its respective shoe to the wheel 2, and swinging on the bolt connecting the same, with links 25 as a fulcrum, moves the turnbuckle 26 and the lower end of the opposite lever 25 rearwardly for applying the shoe actuated by the last-mentioned lever.

Aside from the advantage gained by the positioning of the brake-rigging in the preventing of vibration I accomplish a further obviously desirable advantage in the omission of the common brake-beam. By the use of the evener-bar the brake-shoes may all be applied simultaneously without the necessity of a connecting brake-beam between the same.

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

1. The combination with a frame, of a car-truck and an equalizer-bar, comprising a plurality of parallel members separately formed, of a brake-shoe hung from a laterally-projecting bracket supported by said bar.

2. The combination with a truck-frame and an equalizer-bar therefor, comprising a plurality of members connected together, of brake mechanism, and means for supporting the same connected with said equalizer-bar intermediate the ends thereof.

3. The combination with a truck-frame and a plurality of members comprising equalizer-bars therefor, at each side thereof, of means connecting said bars, and brake mechanism supported by said bars intermediate the ends thereof.

4. The combination with the frame of a truck and equalizer-bars therefor, each bar comprising a plurality of connected members, of means for preventing lateral separation of said bars, brake-shoe-supporting means supported by said connected members, and a brake-shoe hung from each of said bars.

5. The combination with a truck-frame and equalizer-bars therefor, each bar comprising a plurality of members, of a tie-rod projected through, and connecting said bars, and means on said tie-rod for preserving the separation of said members.

6. The combination with a truck-frame and equalizer-bars therefor, of a brake-rigging supported between the members comprising said bars independently of said frame.

7. The combination with a truck-frame and an equalizer-bar therefor, comprising a plurality of substantially parallel members, of a bracket a part of which is supported between the members of said bar, and brake mechanism supported by said bracket.

8. The combination with a truck-frame and an equalizer-bar therefor, comprising a plurality of substantially parallel members, of a bracket a part of which is secured between the members of said bar, and a brake-shoe supported by said bracket.

9. The combination with a truck-frame, of an equalizer-bar carried thereby, a bracket supported by said bar, a hook formed on said bracket, a link pivoted within said hook, and brake mechanism carried by said link.

10. The combination with a truck-frame, of an equalizer-bar carried thereby, a bracket supported by said bar between the members thereof, a link pivoted to said bracket, a shoe pivotally connected to said link, and means for swinging said link.

11. The combination with a truck-frame, of equalizer-bars therefor, and beamless brake-rigging carried by said bars

12. The combination with a truck-frame and wheels supporting the same, of an equalizer-bar connecting said wheels, and beamless brake-rigging supported by said bar and disposed between said wheels.

13. The combination with supporting-wheels and a truck-frame carried thereby, of a brake-rigging for said wheels, an equalizer-bar and laterally-extending brackets thereon for supporting said brake-rigging.

14. The combination with supporting-wheels and a truck-frame carried thereby, of brake-shoes, means for supporting the same, levers for actuating said shoes, a draw-bar for actuating said levers extending on one side of one of said wheels, and a release-spring extending on the other side of said wheels.

15. The combination with wheels and a truck-frame supported thereby, of brake mechanism for said wheels, a draw-bar for actuating said brake mechanism extending on one side of one of said wheels, a release-spring extending on the other side of said wheel, and an evener-bar engaged by said draw-bar and actuated by said release-spring.

16. The combination with supporting-wheels and a truck-frame carried thereby, of an equalizer-bar connecting said wheels, a brake-shoe for one of said wheels, and a bracket extending from said equalizer-bar and limiting said shoe against lateral play.

17. The combination with supporting-wheels and a truck-frame carried thereby, of a brake-shoe for one of said wheels, means for applying said shoe to said wheels, and a laterally-projecting bracket carried by said equalizer-bar for limiting said shoe against lateral play.

18. The combination with a truck-frame and an equalizer-bar therefor, of a brake mechanism carried by said bar, and a bracket carried by said bar and extending beneath said mechanism.

19. In a truck for vehicles having equalizer-bars, brake-shoes, brake-heads, and brake-hangers, a brake-rigging carried by said bars intermediate the ends thereof, the said brake-heads being connected to the brake-hangers.

20. The combination with a truck-frame, of equalizer-bars therefor, a brake-head, a brake and a laterally-extending bracket therefor, said brake-head being connected to the hanger, the hanger being connected to the bracket, and the bracket being connected with the equalizer-bars.

21. The combination with a truck-frame having equalizer-bars therefor, of a brake-shoe-supporting bracket, a part of the said bracket being clamped between the equalizer-bars.

22. The combination with a truck-frame having equalizer-bars therefor, and a brake-shoe-supporting bracket, a part of the said bracket being secured between the members comprising said equalizer-bars.

23. The combination with a truck-frame having equalizer-bars and spring-seats therefor, of a brake-rigging having a bracket and clamp therefor, the said clamp being formed integral with the said spring-seats.

24. The combination with a truck-frame of eqalizer-bars therefor, a brake-hanger, a brake-bracket, and a brake-head, the brake-head being directly connected to the said hanger, the said hanger directly connected to the said bracket and the said bracket directly connected to said equalizer at a point between the wheels.

25. In a truck for vehicles, wheels, side frames, equalizer-bars, brake-shoes, brake-heads, brake-hangers and brackets therefor, a brake-rigging carried by said bars at points between the wheels, the said brake-heads being connected with the said brake-hangers.

26. The combination with a truck-frame, of equalizer-bars therefor, and brake-rigging having live and dead levers carried by said bars at points between the wheels of a given truck.

27. The combination with a truck-frame, of equalizer-bars therefor, brake-rigging supported by said bars, and means on said bars to prevent lateral shifting of said brake-rigging.

28. The combination with a truck-frame, of equalizer-bars therefor, a beamless brake-rigging supported by said bars, and means on said bars to prevent lateral shifting of said brake-rigging.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM G. PRICE.

Witnesses:
EMELINE RUTTER,
AMELIA M. KONSTANZER.