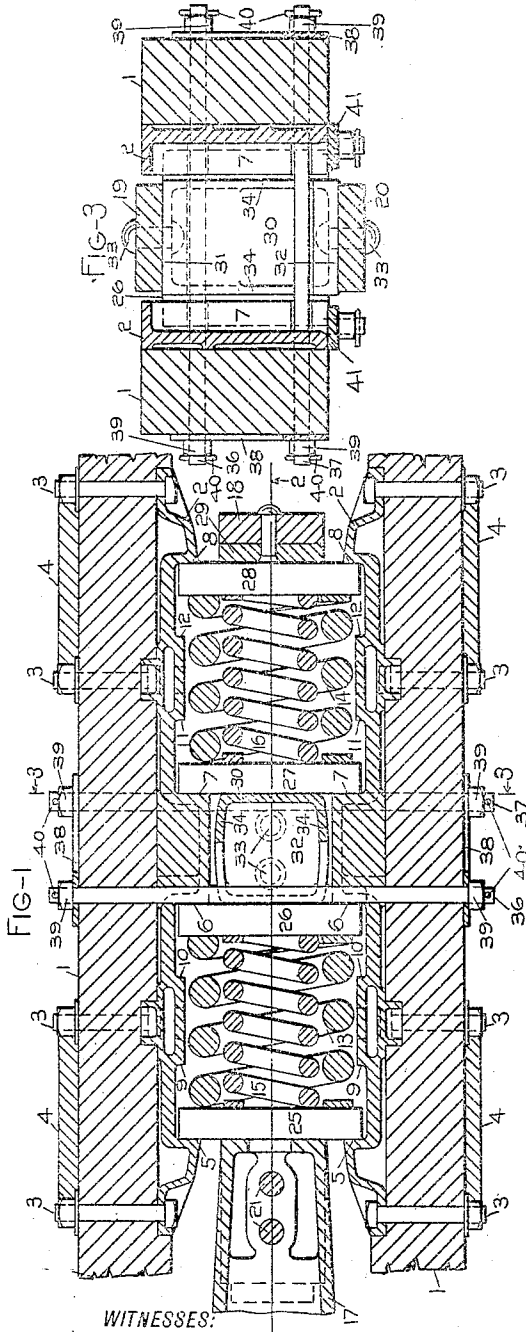


J. R. MITCHELL.
TANDEM SPRING DRAFT RIGGING.
APPLICATION FILED JAN. 16, 1911.

1,056,200.

Patented Mar. 13, 1913.

2 SHEETS—SHEET 1.



WITNESSES:

Calvin B. Patch
H. W. Munday

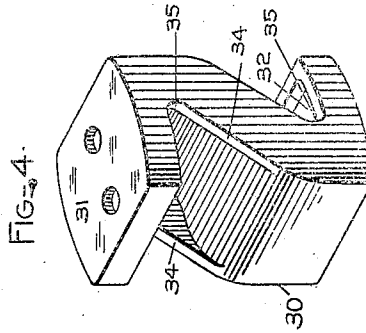
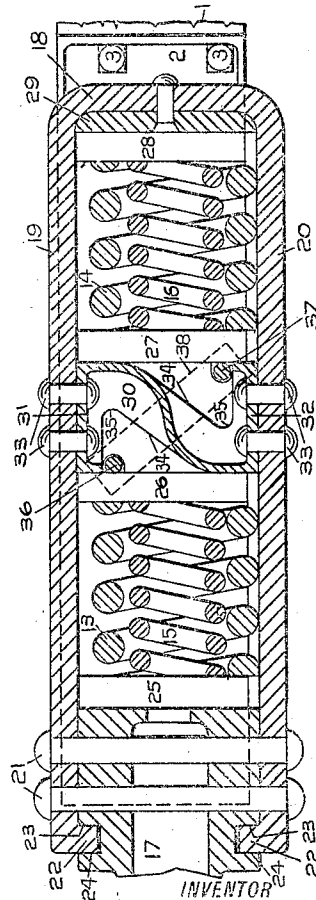


FIG-2



INVENTOR

John R. Mitchell

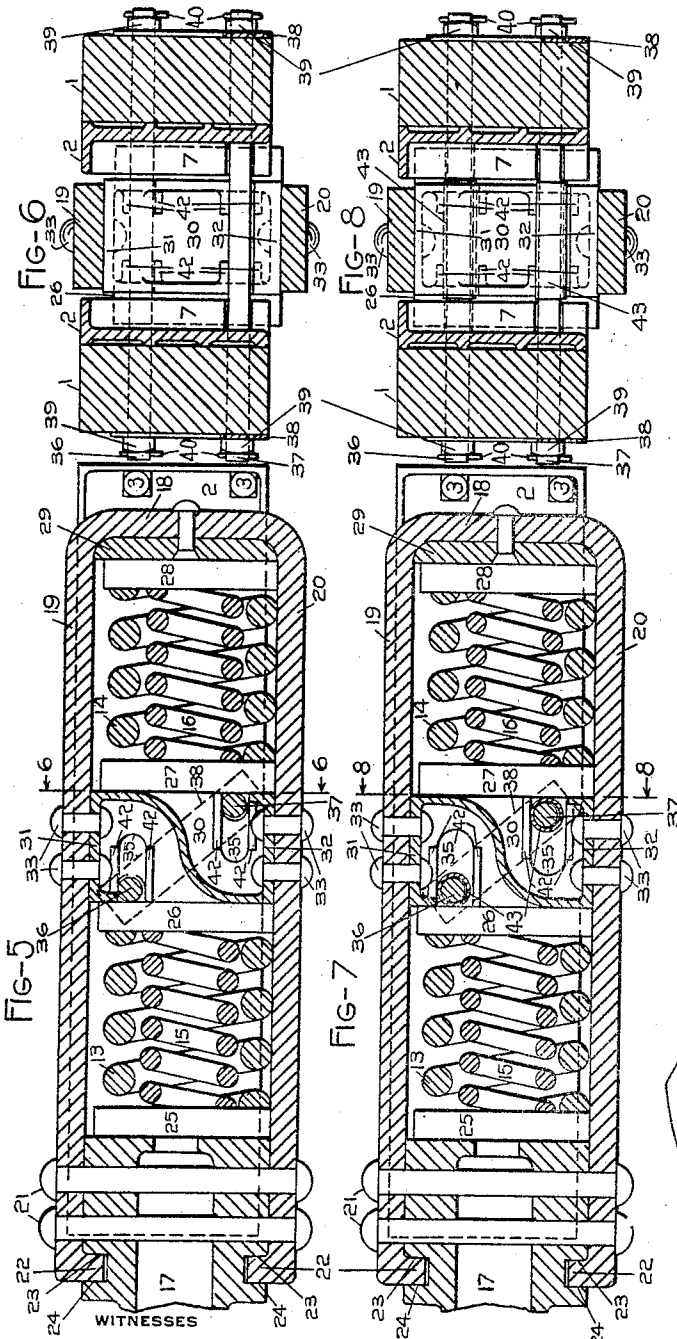
BY
Munday, Evans, Aldrich & Clarke
HIS ATTORNEYS

J. R. MITCHELL.
TANDEM SPRING DRAFT RIGGING.
APPLICATION FILED JAN. 16, 1911.

1,056,200.

Patented Mar. 18, 1913.

2 SHEETS-SHEET 2.



Calvin B. Patch
H. M. Munday.

INVENTOR
John R. Mitchell

By
Munday, Evans, Aderick & Clarke
His Attorneys

UNITED STATES PATENT OFFICE.

JOHN R. MITCHELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM H. MINER, OF CHICAGO, ILLINOIS.

TANDEM-SPRING DRAFT-RIGGING.

1,056,200.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed January 16, 1911. Serial No. 602,838.

To all whom it may concern:

Be it known that I, JOHN R. MITCHELL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Tandem-Spring Draft-Rigging, of which the following is a specification.

My invention relates to improvements in draft rigging for railway cars.

The object of my invention is to provide an improved construction of tandem spring draft rigging by means of which the intermediate thimble or abutment block which is secured to the upper and lower limbs of the draft yoke for engagement with the two intermediate followers of the tandem spring draft rigging may be more securely fixed to the draft yoke than in the constructions heretofore in use; in which the center sills, draft timbers or other draft members of the car frame to which the side plates or stop castings are secured may be centrally and efficiently tied together and reinforced against danger of buckling or breakage; and by which the bottom tie-plate which heretofore customarily has been secured to the lower edges of the side plates or stop castings may be dispensed with and the draft rigging as a whole simplified in construction, and at the same time rendered extremely strong, efficient and durable.

My invention consists in the means I employ to practically accomplish this object or result, as herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a central, horizontal section of a tandem spring draft rigging embodying my invention. Fig. 2 is a vertical, longitudinal section on line 2—2 of Fig. 1. Fig. 3 is a cross section on line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of the intermediate thimble or abutment block of the draft yoke. Fig. 5 is a detail vertical section illustrating a modification. Fig. 6 is a cross section on line 6—6 of Fig. 5. Fig. 7 is a detail, vertical, longitudinal section, showing a further modification, and Fig. 8 is a vertical section on line 8—8 of Fig. 7. Fig. 9 is a detail, perspective view of the thimble or abutment block shown in Figs. 7 and 8.

In the drawing, 1 represents the center sills, draft timbers or other draft members

of the car frame to which the side plates, cheek plates or stop members 2 are secured by bolts 3, which pass through bearing bars or plates 4 on the upright outer faces of the draft members 1. The stop members 2 have main stops 5, 6, 7 and 8 for the followers to abut against and also limiting stops or shoulders 9, 10, 11, 12, which, by engagement with the followers, limit the extent to which the tandem springs 13, 14 and 15, 16 may be compressed.

17 is the draw-bar, 18 the draft yoke having the customary upper and lower limbs 19 and 20 and secured to the draw-bar by rivets 21 and interengaging gibs 22 on the draft yoke and shoulders 23, 24 on the draw-bar.

25, 26, 27 and 28 are the followers extending horizontally through the draft yoke and adapted to engage the main and limiting stop shoulders of the stop members or cheek plates 2. The front follower 25 abuts against the rear end of the draw-bar and the rear follower 28 is actuated by the draft yoke or the filler plate 29 at its rear end.

30 is the intermediate thimble or abutment block which fits between and actuates the two intermediate followers 26, 27. This intermediate thimble 30 is preferably of a general Z shape and is provided with horizontal webs or members 31, 32 which fit against the upper and lower limbs 19, 20 of the draft yoke and are adapted to be very firmly and securely connected together by short rivets 33 which extend simply through the limb of the draft yoke and the adjacent horizontal web 31 of the intermediate thimble. The horizontal webs or legs 31, 32 of the thimble, in connection with the diagonally extending member 34 of the thimble form notches or slots 35 to receive and accommodate central tie rods 36, 37, one just beneath the upper leg 31 of the thimble and the other just above the lower horizontal leg 32 of the thimble, and both of which extend through the center sills, draft timbers or draft members 1, 1 of the car frame and thus serve to centrally tie the same together and prevent all danger of their buckling or breaking under the enormous strains to which they are subjected in the practical use of the draft rigging.

The ties or rods 36, 37 extend through diagonally arranged bearing bars or plates 38 which fit on the outer upright faces of

the draft members 1, 1. The central ties or draft member connecting rods 36, 37 also serve or may serve to support the draft rigging between the draft members 1, 1 and thus enable me to entirely dispense with the customary bottom tie plate which heretofore has been removably attached to the lower edges of the stop castings or cheek plates 2, 2. The central ties or connecting rods 36, 37 between the draft members 1, 1 are preferably furnished with threaded nuts 39 and keys or cotters 40 at each end. The slots or notches 35 in the intermediate thimble 30 permit the draw-bar, draft yoke and connecting thimble 30 to move back and forth longitudinally as required. These horizontal and longitudinally extending slots or notches 35 being each open at one end, also permit the draft rigging to be removed from the center sills by simply removing the lower removable longitudinally extending guides 41, 41 from the stop castings or cheek plates 2 and removing the tie rods 36, 37.

In the construction shown in Figs. 5 and 6 and 9, the lower removable guides 41, 41 of the cheek plates or stop castings 2 are omitted and the central tie rods 36, 37 are alone employed to support the draft rigging between the draft members 1, 1 of the car frame. As shown in these figures, the slots or notches 35 are formed with parallel upper and lower walls and the intermediate thimble is provided with upper and lower horizontal flanges 42 and give a more extended bearing against the transverse tie rods 36, 37.

In the modified construction shown in Figs. 7 and 8, the tie rods 36, 37 are surrounded by spacer thimbles or sleeves 43 which serve to protect the tie rods from wear as the draft yoke and its intermediate thimble 30 reciprocate back and forth the sleeves 43 also serving as anti-friction rollers.

I claim:—

1. In a tandem spring draft rigging, the combination with the draft members of a car frame, and stop members secured thereto, of a draw-bar, draft yoke, tandem arranged springs and followers, of an intermediate thimble extending between the upper and lower limbs of the draft yoke and having upper and lower horizontally extending webs secured to the upper and lower limbs of the draft yoke by short rivets, each extending through one of said webs and one

limb of the draft yoke, and central tie rods extending through the draft members of the car frame and the stop members secured thereto and said intermediate thimble, said intermediate thimble having longitudinal slots to receive and accommodate said central tie rods and permit the draw-bar and draft yoke to move back and forth as required, each of said tie rods being normally located adjacent an end of a web, substantially as specified.

2. In a tandem spring draft rigging, the combination with the draft members of the car frame and stop members secured thereto, of a draw-bar, draft yoke, tandem arranged springs and followers, of an intermediate thimble secured to the draft yoke and provided with longitudinally extending slots to receive and accommodate central tie rods, and central tie rods extending through the draft members of the car frame, substantially as specified.

3. In a tandem spring draft rigging, the combination with the draft members of a car frame and stop members secured thereto, of a draw-bar, draft yoke, tandem arranged springs and followers, of an intermediate thimble extending between the upper and lower limbs of the draft yoke and having upper and lower horizontally extending webs secured to the upper and lower limbs of the draft yoke by short rivets, each extending through one of said webs and one limb of the draft yoke, said intermediate thimble being of a general Z shape and having upper and lower slots adapted to receive and accommodate transversely extending central tie rods of the draft members, substantially as specified.

4. In a draft rigging, a draft yoke having an intermediate single piece thimble having portions secured to both limbs of the yoke and provided with a longitudinally extending slot to receive a transversely extending tie rod, substantially as specified.

5. In a draft rigging, a draft yoke having an intermediate thimble secured thereto and provided with a longitudinally extending slot to receive a transversely extending tie rod, said thimble having horizontal flanges at the upper and lower edges of said slot, substantially as specified.

JOHN R. MITCHELL.

Witnesses:

EDMUND ADcock,
H. M. MUNDAY.