

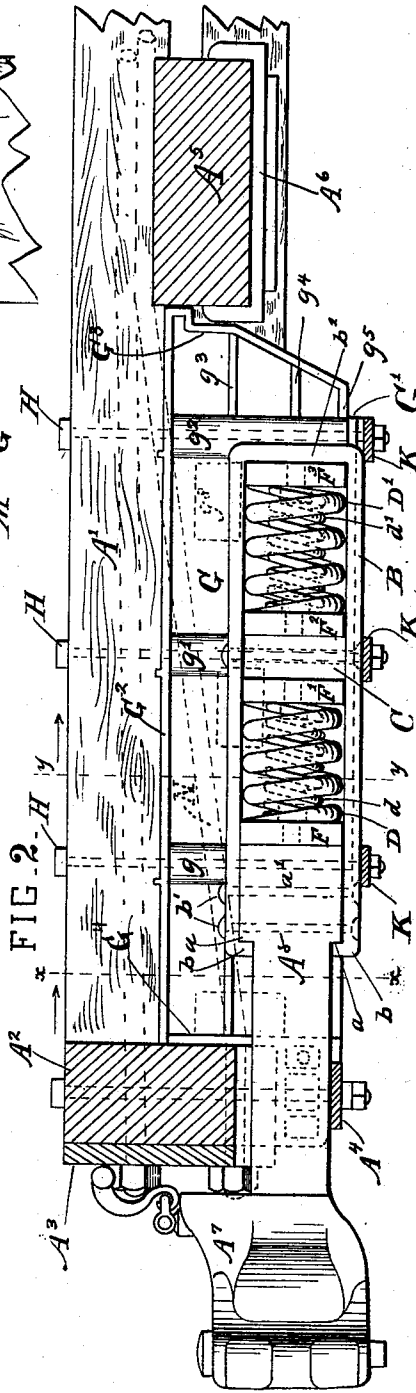
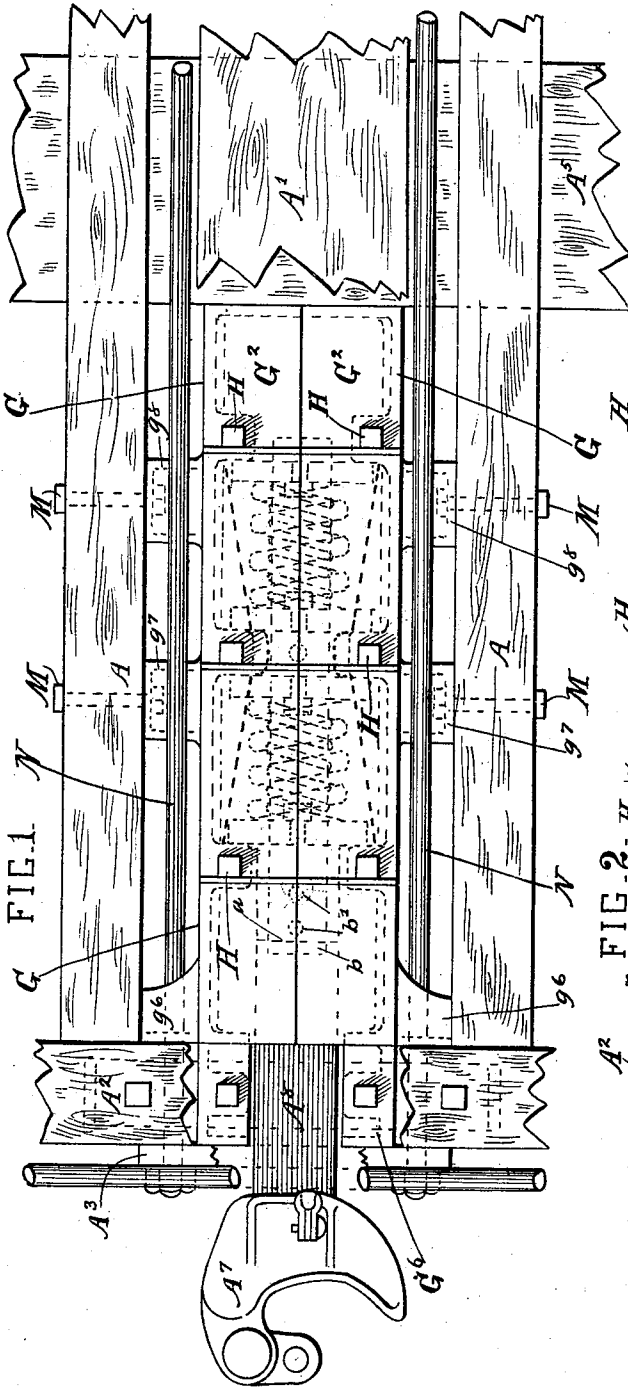
W. H. MINER.

TANDEM SPRING DRAFT RIGGING FOR LOCOMOTIVE TENDERS.

(No Model.)

(Application filed Feb. 24, 1900.)

2 Sheets—Sheet 1.



WITNESSES:
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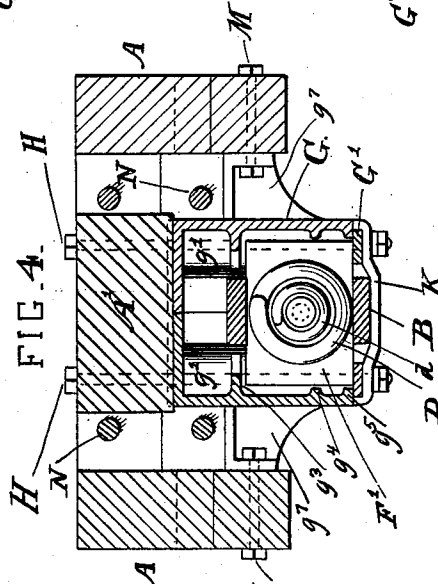
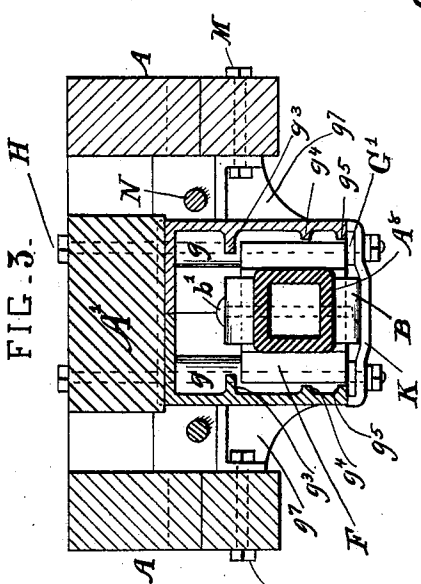
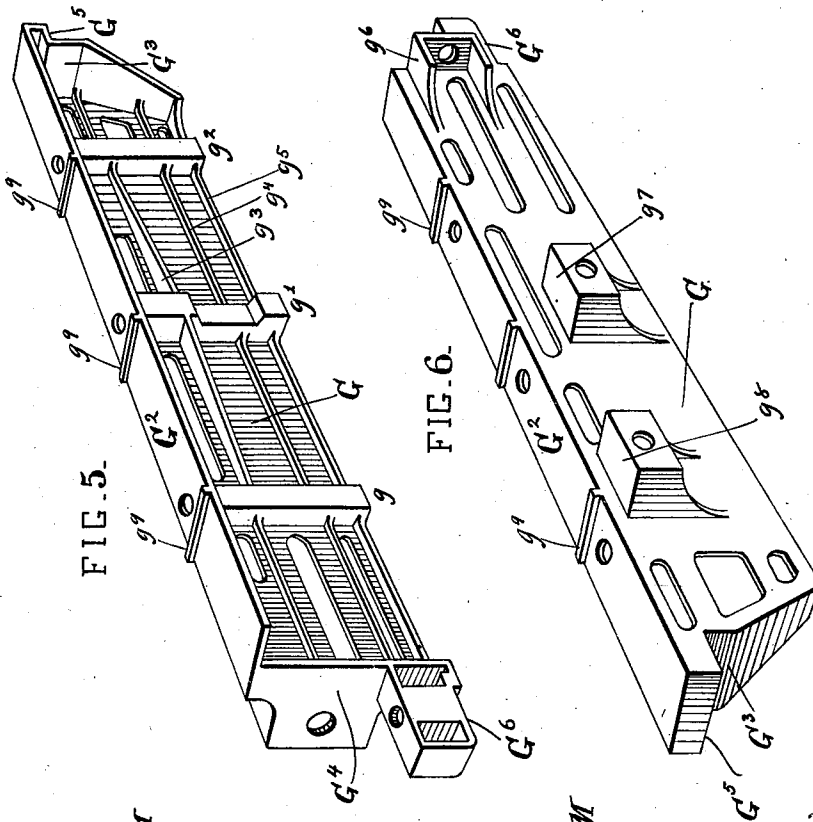
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(Application filed Feb. 24, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

WILLIAM H. MINER, OF CHICAGO, ILLINOIS.

TANDEM-SPRING DRAFT-RIGGING FOR LOCOMOTIVE-TENDERS.

SPECIFICATION forming part of Letters Patent No. 668,656, dated February 26, 1901.

Application filed February 24, 1900. Serial No. 6,359. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MINER, 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 for Locomotive-Tenders, of which the following is a specification.

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

My invention is an improved tandem-spring draft-rigging specially designed for use upon locomotive-tenders.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and specified in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of a tandem-spring draft-rigging embodying my invention. Fig. 2 is a side elevation, partly in longitudinal section, showing the draw-bar, springs, and followers, and one of the stop castings or casings. Fig. 3 is a vertical cross-section on the line xx of Fig. 2. Fig. 4 is a vertical cross-section on the line yy of Fig. 2, and Figs. 5 and 6 are perspective views of one of the stop castings or casings, showing the opposite faces thereof.

In the drawings similar letters of reference indicate like parts throughout all the figures.

In said drawings, $A A$ are draft-timbers or center sills, between and below which the draft-rigging is arranged, and A' the central longitudinal beam or sill, below which the draft-rigging is arranged. A^2 is the cross or end sill of the tender. A^3 is the buffer-plate or face-plate of the end sill, A^4 the front carry-iron, A^5 the body-bolster, and A^6 the center plate on the bolster, A^7 the coupler, and A^8 the draw-bar. All these parts are or may be of the usual or customary construction.

B is the pocket-strap of the draft-rigging, the same having bent ends or shoulders $b b$ engaging the shoulders $a a$ at the rear end of the draw-bar and which is secured rigidly to the draw-bar by the rivets b' .

C is the abutment-block, secured between the upper and lower members of the pocket-strap by the rivets c .

$D d D' d'$ are the tandem-arranged springs

between the followers $F F'$ and $F^2 F^3$. The squared rear end a' of the draw-bar abuts against the front follower F , the abutment-block C abuts against the middle followers $F' F^2$, and the transverse rear end b^3 of the folded or bent pocket-strap abuts against the rear follower F^3 .

$G G$ are the stop castings or casings. Each of these stop-castings is furnished with three stops $g, g',$ and g^2 for the ends of the four followers to abut against and also with a guide-flange g^3 , which fits above the followers and serves as the upper guide therefor, and with longitudinal strengthening-ribs $g^4 g^5$, the inner edges of which bear against the ends of the followers and serve as end guides therefor, as well as to strengthen the stops $g g' g^2$ and the stop-casting as a whole. The lower guide for the followers G' is made in a separate piece from the stop-casting and is removably secured thereto by bolts. Each of the stop-castings is also furnished with an integral top plate G^2 and integral end plates $G^3 G^4$, the former abutting against the body-bolster A^5 and the latter against the end cross-sill A^2 . The rear edge of the stop-casting G is furnished with an offset G^5 to receive the flange of the center plate A^6 , and the front end thereof is provided with an integral projection G^6 , fitting under the end sill A^2 and receiving the front carry-iron A^4 . On their outer or opposite faces each of the stop-castings G is provided with box-shaped lateral projections or extensions $g^6 g^7 g^8$ to fit or abut against the vertical face of the draft-timbers $A A$, and thus bring the two stop-castings near together, so that short or ordinary length followers may be used notwithstanding the wide distance apart at which the draft-timbers $A A$ are necessarily placed in tenders, while at the same time the portion of my new and improved stop-casting which extends above the upper guide-flange g^3 serves to bring the recesses or channels for the followers to reciprocate in to the required level for the draw-bar and draft-rigging and also at the same time enables the upper face-plate G^2 of the stop-casting to abut directly against the lower face of the central sill A' , so that it can be rigidly and firmly secured thereto by bolts H , which pass through said sill A' , the stop-castings, the lower guides G' , and the cross-

bars K. The top or upper face-plates G^2 of the stop-castings abut directly together at their inner or meeting edges and are also provided with cross-ribs g^9 , which are let into grooves cut in the central sill A, and thus more securely anchor the stop-castings in place against the great pulling and buffing strains which are transmitted through the draw-bar, springs, and followers. As the two stop-castings G G abut directly together at their upper face-plates G^2 G^2 the bolts M, which secure them to the side sills A A, serve to rigidly and firmly anchor the stop-castings to the side sills notwithstanding the fact that the side sills are wide apart and the fact that the main body of each stop-casting is located some distance from each side sill by reason of the lateral projections or extensions g^6 g^7 g^8 , and as my stop-castings are not only thus firmly bolted to the side sills A A and central longitudinal sill A', but also abut directly at their ends against the end sill A² and the body-bolster A⁵, it will be readily understood by those skilled in the art that my stop-castings are united to the frame of the car or tender with very great strength and firmness, and also owing to my new and peculiar construction my stop-castings themselves each possess very great strength and rigidity, as the top or upper integral plate, in connection with the upper integral guide-flange g^3 for the followers and the longitudinal ribs g^4 g^5 , not only gives great strength to the stop-casting as a whole, but directly braces and strengthens each of the stops g g' g^2 .

N N are the tie-rods, which extend through the tender or car from end sill to end sill. The lateral projection or extension g^6 at the end of the stop-castings are furnished with holes or openings for these tie-rods to pass through.

The middle stop g' of each stop-casting is made a little deeper or to project out laterally a little farther than the end stops g^2 at the portions g^{10} g^{10} thereof, just above and just below the followers, which portions are engaged by the side edges of the draw-bar extension or pocket-strap B, so that the draw-bar and the pocket-strap may turn or swing laterally on the projections of these middle stops as a pivot as required when the train is passing around curves. The end stops g g' limit the extent of this laterally swinging or turning movement of the draw-bar and pocket-strap.

I claim—

1. In a tandem-spring draft-rigging for locomotive-tenders, the combination with the draft-timbers and a central longitudinal sill between the draft-timbers, the end sill and body-bolster, of a pair of stop-castings abutting at one end against the end sill and at the other against the body-bolster and provided with three stops and upper and lower guides for the followers, and an integral top plate above the upper guide fitting against the central longitudinal sill, the top plates of said

stop-castings abutting directly together at their meeting edges, and each of said stop-castings being furnished with lateral projections or extensions fitting against the draft-timbers, a draw-bar, a pocket-strap, two tandem-arranged springs, and followers at both ends of both springs, substantially as specified.

2. In a draft-rigging, the combination with the draft-timbers, end sill and body-bolster, of a pair of draw-bar stop-castings fitting between and secured at their backs to the draft-timbers and abutting at one end against the end sill and at the other against the body-bolster, substantially as specified.

3. In a draft-rigging, the combination with the center sills or draft-timbers, of a pair of stop-castings fitting between said sills or timbers and having lateral extensions or projections at their backs abutting against the draft-timbers and provided with integral top plates abutting together at their edges, substantially as specified.

4. In a draft-rigging, the combination with the draft-timbers, of a central longitudinal sill between the draft-timbers, and a pair of stop-castings fitting between and secured at their backs to said draft-timbers furnished with integral top plates above the upper follower-guides abutting together at their meeting edges and secured to said central longitudinal sill, substantially as specified.

5. In a draft-rigging, the combination with the draft-timbers, of a central longitudinal sill between the draft-timbers, and a pair of stop-castings furnished with integral top plates above the upper follower-guides abutting together at their meeting edges and secured to said central longitudinal sill, each of said stop-castings having lateral projections or extensions fitting against the draft-timbers, substantially as specified.

6. In a draft-rigging, the combination with the draft-timbers and end sill, of a pair of stop-castings fitting between and secured at their backs to said draft-timbers and abutting against the end sill and provided each with an integral projection or extension fitting under the end sill to receive the front carry-iron of the draw-bar, substantially as specified.

7. In a draft-rigging, the combination with the draft-timbers and central longitudinal sill, of a pair of draw-bar stop-castings secured by vertical bolts to the central longitudinal sill and by horizontal bolts to the draft-timbers, substantially as specified.

8. In a draft-rigging, the combination with the draw-bar, pocket-strap, tandem-arranged springs and followers at both ends of both springs, of a pair of stop-castings having each three stops for the followers to abut against, the middle stop at its portions above and below the follower-guides being deeper than the end stops to form pivots for the draw-bar and pocket-strap to swing or turn laterally upon, substantially as specified.

9. A draw-bar stop-casting G, having inte-

5 gral stops g, g', g^2 , an upper follower-guide g^3 and an integral top plate G^2 projecting from the same face or side of said stop-casting as said guide g^3 , and provided with a lower removable guide-plate G' for the followers, substantially as specified.

10 10. A draw-bar stop-casting furnished at its front end with an integral projection or extension for receiving the front carry-iron and provided with integral stops g, g', g^2 , upper integral guide g^3 and integral top plate G' projecting from the inner face of said stop-casting and the lateral extensions or projections g^6, g^7, g^8 , projecting from the opposite or
15 outer face of said stop-casting, substantially as specified.

11. A draw-bar stop-casting having integral

stops on one face for the followers, and integral lateral extensions or projections g^6, g^7, g^8 , and a tie or brace rod extending through said projection g^6 , substantially as specified. 20

12. The combination with a pair of stop-castings G, G , each having integral stops g, g', g^2 , upper integral guide g^3 , and integral top plate G' above said guide g^3 and projecting from the same side of said stop-casting as guide g^3 , of removable lower guide-plates G^2 , and cross-bars K , substantially as specified. 25

WILLIAM H. MINER.

Witnesses:

H. M. MUNDAY;
EDMUND ADCOCK.

DISCLAIMER.

668,656.—*William H. Miner*, Chicago, Illinois, now of Chazy, N. Y. TANDEM-
SPRING DRAFT-RIGGING FOR LOCOMOTIVE-TENDERS. Patent dated February
26, 1901. Disclaimer filed May 31, 1917, by the patentee.

Enters this disclaimer—

“To claim 2 of said specification, which is in the following words, to wit:

“2. In a draft-rigging, the combination with the draft-timbers, end sill and body-bolster, of a pair of draw-bar stop-castings fitting between and secured at their backs to the draft-timbers and abutting at one end against the end sill and at the other against the body-bolster, substantially as specified.”

[*Official Gazette, June 5, 1917.*]