

No. 627,540.

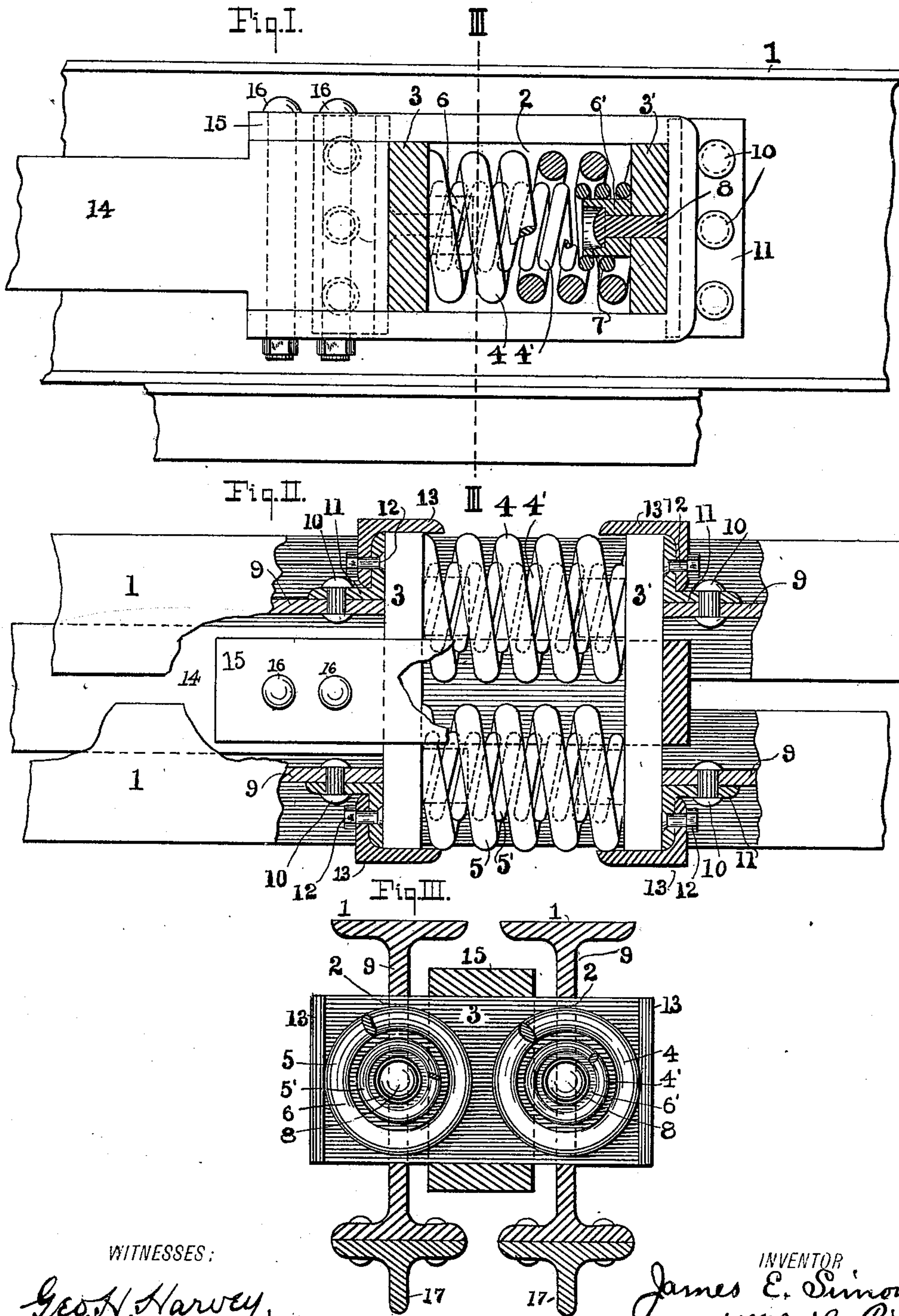
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J. E. SIMONS.

DRAFT RIGGING.

(Application filed Sept. 10, 1898.)

(No Model.)



WITNESSES:

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DRAFT-RIGGING.

SPECIFICATION forming part of Letters Patent No. 627,540, dated June 27, 1899.

Application filed September 10, 1898. Serial No. 690,632. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. SIMONS, a citizen of the United States of America, and a resident of McKees Rocks, Allegheny county, Pennsylvania, have invented certain new and useful Improvements in Draft-Riggings, of which the following is a specification.

Figure I in the accompanying drawings is a side elevation, partly in section. Fig. II is a plan view with the flanges of the I-beams partly broken away. Fig. III is a cross-section on line III III of Fig. I.

In draft-riggings as heretofore ordinarily constructed the strain occasioned by compression has been transmitted by the draw-bar to sets of springs. Through these springs the strain has been transmitted to follower-plates which abut at their ends against braces or lugs fastened to the sides of the sills. One of the serious objections to the construction just described is that the car-sills receive the strain in an angling direction and with considerable leverage, which tends to tear off the braces or lugs. Another type of construction embodies the use of a separate metal draft-rigging having two side plates between which the springs are located, said draft-rigging being secured at its rear end to the end of a subsill. Besides possessing other disadvantages this construction is necessarily expensive and complex.

The purpose of my invention is to devise a location for the springs in slots or openings in the sills themselves, so that the strain which they receive may be transmitted immediately and directly along the longitudinal central axis of the car-sills. By this method of construction the strongest part of the car construction receives the stress and on straight lines.

My invention is applicable both to cars having metallic or wooden sills, and I have illustrated the same in connection with a car having its two sills made of I-beams; but I do not intend to limit my application to such use of metallic sills, as it would be feasible to cut away wooden sills and locate the springs in similar relation thereto.

In the several views which make part of this specification, 1 1 are two I-beams, which form the sills on the car and usually extend

the whole length thereof. At or near the ends of said beams a slot 2 is cut in their web. This cutting away affords an opening for the spring follower-plates 3 3', between which are compressed four cushioning-springs 4 4' and 5 5'. These springs are held in position by nipples 6 6', each having a recess 7, in which is seated a rivet 8, attaching said nipple to its respective follower-plate.

Fastened to the web 9 9 of the I-beams by rivets 10 10 are bracing angling irons 11. Secured to said angle-irons 11 by means of bolts 12 are the guides 13 13 for the follower-plates 3 3'.

To the shank of the draw-bar 14 the yoke 15 is attached by means of bolts 16 16. These yokes inclose the spring follower-plates 3 3'.

17 17 are suitable reinforcements riveted to the under side of the I-beams 1 1 to compensate for the metal removed in slotting the webs of said I-beams. These reinforcements may extend to any desired length.

It will now be apparent that when the car is in use and operating the strain or compression received by the springs from either of the follower-plates 3 3' will be immediately and directly transmitted in straight lines to the webs or center of the I-beams and by them transmitted the whole length of the car. In other words, the strain will be received squarely along the longitudinal axis of the car-sills, which is the part and the direction best adapted to resist such shock. The main object of the braces 11 is to give a wider bearing to receive the pressure of the follower-plates than would be afforded by the narrow web alone, and thus keep the follower-plates in better alinement. It will be observed that each pair of springs acts upon the web of its own respective beam and that all four of the springs act simultaneously and always in transmitting every strain, so that I secure the total resistance of four springs to resist each stress.

Like all constructions of this character many minor mechanical changes may be made by the skill of the car-builder while still appropriating the peculiar features of my invention, and I therefore do not limit myself in the broader claims appended to the exact features shown in the drawings.

Having described my invention, I claim—

1. In draft-riggings, the combination of recessed and slotted car-sills, springs moving therein and operatively connected to the draw-bar, so that the strain received by said springs will be transmitted along the longitudinal axis of said sills.
2. In draft-riggings, a combination of two I-beam car-sills, having their webs slotted at or near the ends of said I-beams; springs suitably moving in said slotted webs and operatively connected to the draw-bar, so that the strain received by said springs will be transmitted along the webs of said I-beams.
3. In draft-riggings, a combination of two I-beam car-sills, having their webs slotted at or near the ends of said I-beams; springs suitably moving in said slotted webs and operatively connected to the draw-bar, so that the strain received by said springs will be transmitted along the webs of said I-beams and reinforcements along the length of said I-beams to compensate for the slotting of the webs.
4. In draft-riggings, a combination of two I-beam car-sills, having their webs slotted at or near the ends of said I-beams; a yoke secured to the rear end of the draw-bar shank; spring follower-plates adapted to slide in said yoke and in the slotted webs and springs suitably moving between said follower-plates and in the slots of the sills so that the strain re-

ceived by said springs will be transmitted along the webs of said I-beams.

5. In draft-riggings the combination of I-beam car-sills having their webs slotted at or near their ends; angle-braces bolted to said webs; a yoke secured to the rear end of the draw-bar shank; spring follower-plates adapted to move within said yoke and within the slots of the I-beams and bear against the webs of said I-beams and the angle-braces bolted thereto and springs suitably mounted between said follower-plates and in the slots of the sills so that the strain or compression received by said springs may be transmitted along the webs of said I-beams.

6. In draft-riggings, the combination of I-beam car-sills having their webs slotted at or near their ends; angle-braces bolted to said web at the ends of said slot; guide-pieces secured to said angle-braces; a yoke attached to the rear end of the draw-bar shank; spring follower-plates adapted to move within said yoke and within the slots of the webs and springs suitably secured between said follower-plates, in the slots of said sills.

Signed by me this 7th day of September, 1898.

JAMES E. SIMONS.

Witnesses:

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