

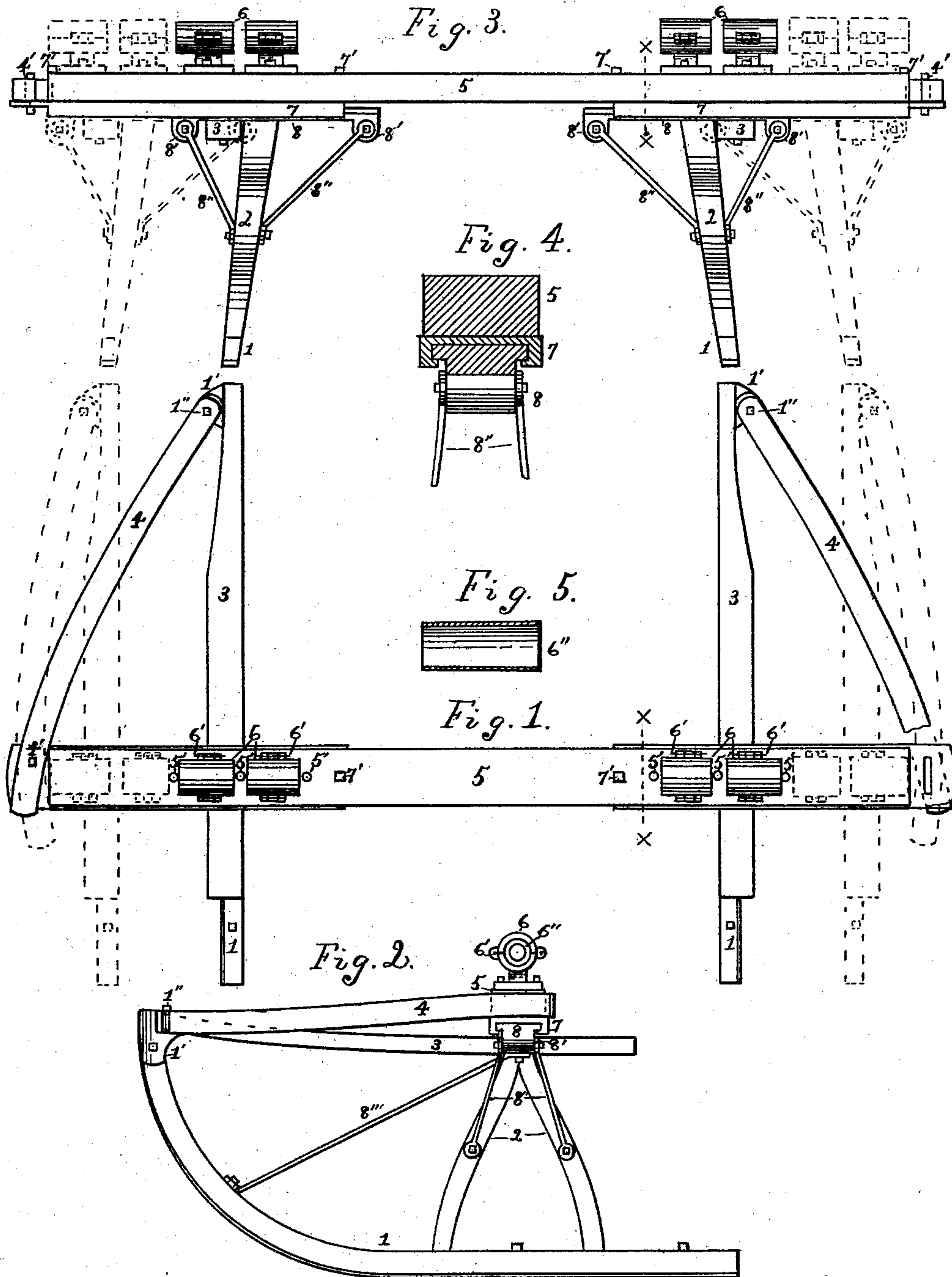
(No Model.)

H. J. SIMON.

SLEIGH.

No. 393,863.

Patented Dec. 4, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

HERMAN J. SIMON, OF PESHTIGO, WISCONSIN.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 393,863, dated December 4, 1888.

Application filed August 20, 1888. Serial No. 283,274. (No model.)

To all whom it may concern:

Be it known that I, HERMAN J. SIMON, a citizen of the United States, residing at Peshigo, in the county of Marinette and State of Wisconsin, have invented a new and useful Improvement in Sleigh-Bobs, of which the following is a specification.

My invention relates to improvements in sleigh-bobs for use under carriages of various kinds when it is desired to change their mode of movement from wheels to runners; and the object of it is to adapt them for use with carriages having axles differing in their length, in the diameter and length of their axle-journals, and also upon roads of wide or narrow track-gage. I attain these objects in the manner and by the construction shown in the drawings herewith presented.

Figure 1 is a plan view of a sleigh-bob embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a rear view of it. Fig. 4 is a detail sectional view, upon an enlarged scale, of the sleigh-beam connection and sleigh-beam upon the line $x x$ of Figs. 2 and 3; and Fig. 5 is a plan of a horizontal section of the bushing used in the axle-boxes.

Similar figures of reference indicate like parts in the several views.

1 represents the sleigh-runners, 2 the standards, 3 the raves, and 4 the fenders, all shown as formed of material known as "bent stock" and the beam 5 of a straight piece of wood. The material and the form of them here represented are not, however, essential qualities of my invention, as they may be of any material and form that are suited to the purpose for which the sleigh-bob is required.

6 indicates axle-boxes, and 7 and 8 the sliding attachment connecting the runners and their standards to the beam, and by means of which the width of their track-gage is changed. This device is formed of metal, (malleable iron is found to be adapted to the purpose,) but other material may be used, and is formed of two pieces, 7 and 8, the latter having tongues upon its edges fitting into corresponding grooves in the piece 7 and sliding freely therein. The piece 8 has at each of its ends ears 8', to which braces 8'' are connected, and extend to and are attached to the standards 2. A brace, 8''', also extends from the bow of the runner to the under side of rave 4, a

bolt passing through the brace and rave into the piece 8, thus firmly securing it.

The pieces 7 are secured by the bolts 7' 7'' 55 to the beam 5, and the pieces 8 being movable longitudinally therein the runners are easily adapted for tracks of wide or narrow gage, thus quickly changing the gage of the runners to fit city or country roads, as occasion demands.

Upon the forward ends of the runners are affixed castings 1' 1', to which the forward ends of the fenders 4 are hinged by the bolts 1'' 1''. Near their rear ends they are secured 65 to the end of the sleigh-beam by bolts 4' and 4', connecting them with the ends of the castings 7, the extension thereof being slotted, as shown at the right-hand side of Fig. 1, the fender being represented as broken off in order to give a view of the slot.

It is evident that slots in the ends of the fenders will permit a movement in their point of connection; or numerous holes in either the beam-extension or the fender would be equally 75 effective in making their connection in the different position the fenders assume as the runners are moved nearer to or farther from each other. In Figs. 1 and 3 the runners and fenders are indicated in dotted lines representing their position when extended to the extreme limit of the track-gage for which the sleigh-bob is adapted.

The beam 5 and piece 7 have numerous holes, 5' 5', which register with holes in the 85 sliding piece 8, and into which pins or tap-bolts are inserted for the purpose of retaining the runners at the desired width of gage.

Upon the beam 5 are two pairs of axle-boxes, 6 6, which are adapted to receive the 90 journals of a carriage-axle. They are constructed of metal, with the upper half or cap hinged to the lower half and secured in a closed position by the pins 6', or may be fastened in any other convenient method. Within 95 their bases are slotted holes, through which bolts pass and secure them to the beam 5, the slots therein permitting a slight movement in their longitudinal direction for the purpose of adapting them in position to any slight difference between it and the length or 100 position of the axle-journal to be placed therein. The axle-boxes are made larger than the journals intended therefor, and a bush-

ing, 6", of paper, leather, rubber, or other slightly-elastic material, and of the required thickness, provided for the axle-journal to rest upon, thus preventing unnecessary wear and the rattling noise incident to the contact of metallic surfaces having a slight movement one with the other.

Each pair of axle-boxes are adapted for being secured upon the beam 5 at points nearer to or farther from each other, as indicated by dotted lines in Figs. 1 and 3, thereby suiting their location for axles of different widths between their journals.

In making the boxes of large size in their bearings, as before described, they are the more easily adapted to the various sizes of axle-journals, both the thimble-skein and solid axles, the bushings, as described, producing a close fit with either. The axle-boxes can be a single one to each journal, if desired, in adapting the sleigh for any particular use.

I do not claim, broadly, a sleigh-bob having means for adapting its runners to tracks of different gage; neither do I claim one for use instead of wheels upon the axles of carriages, as they have heretofore been used; but

What I do claim, and desire to secure by Letters Patent, is—

1. In a sleigh-bob for application to carriage-axles in place of the wheels thereof, sleigh-beam connections consisting of two pairs of pieces, one piece of each pair being secured to each end of the sleigh-beam and the other to the runner-standard and rave and adapted to slide one within the other longitudinally with said beam, and means for securing them together at any fixed point in their length, whereby the runners may be secured at any determined distance from each other, substantially as described.

2. In a sleigh-bob having runners arranged for transverse movement to suit tracks of various gage, a sleigh-beam fender, its forward end and that of the sleigh-bob hinged together, and its rear end arranged for connection to the sleigh-beam in the different positions it assumes therewith in consequence of the transverse movement of the runners aforesaid, substantially as set forth.

3. In a sleigh-bob for application to carriages in place of the wheels thereof, sleigh-beam connections consisting of two pairs of pieces, one piece of each pair being secured to each end of the sleigh-beam and the other to the runner-standard and rave and adapted to slide one within the other longitudinally with said beam, and means for securing them together at any fixed point in their length, whereby the runners may be secured at any determined distance from each other, and beam-fenders, their forward end and that of the sleigh-bob hinged together and their rear ends arranged for connection to the end of the sleigh-beam in the different positions it assumes therewith in consequence of the trans-

verse movement of the runners, as described, all combined and operating substantially as described.

4. In a sleigh-bob for application to carriage-axles in place of the wheels thereof, the combination of a sleigh-beam and axle-boxes, the latter consisting of two pairs, one pair for each journal of the axle, the length of each pair being less than the length of the axle-journal, each axle-box consisting of box and cap, one hinged to the other and having means for securing them in a closed position, the boxes being adapted for being secured to the sleigh-beam at different points of its length and for their longitudinal adjustment thereon, whereby longitudinal movement of the axle therein may be prevented, substantially as set forth.

5. In a sleigh-bob for application to carriage-axles in place of the wheels thereof, the combination of a sleigh-beam and axle-boxes, the latter consisting of two pairs, one pair for each journal of the axle, the length of each pair being less than the axle-journal, each axle-box consisting of box and cap, one hinged to the other, and having means for securing them in a closed position, the boxes being adapted for being secured to the sleigh-beam at different points of its length and for their longitudinal adjustment thereon, whereby longitudinal movement of the axle therein may be prevented, and a bushing of slightly-elastic material adapted to be placed in each box and inclose the journal of a carriage-axle, substantially as described.

6. In a sleigh-bob for application to carriage-axles in place of the wheels thereof, the combination of the runners, the standards, the raves, and the beam, sleigh-beam connections consisting of two pairs of pieces, one piece of each pair being secured to each end of the sleigh-beam and the other piece to the runner-standard and rave and adapted to slide one within the other longitudinally with said sleigh-beam, and means for securing them together at any fixed point in their length, whereby the runners may be secured thereto at any determined distance from each other, and sleigh-beam fenders, their forward end and that of the sleigh-bob hinged together and their rear end arranged for connection to the ends of the sleigh-beam in the different positions they assume with it in consequence of the transverse movement of the runners, as described, and axle-boxes adapted for being secured upon the sleigh-beam at different points in its length and for their adjustment longitudinally thereon, and a bushing of slightly-elastic material adapted to inclose the axle-journal, be placed in the axle-boxes, and be secured therein, substantially as set forth.

HERMAN J. SIMON.

In presence of—

C. F. NEUMANN,
GEORGE SASMAN.