No. 650,195. Patented May 22, 1900.

M. B. SCHAFFER.

HAND CAR.

(Application filed Feb. 3, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

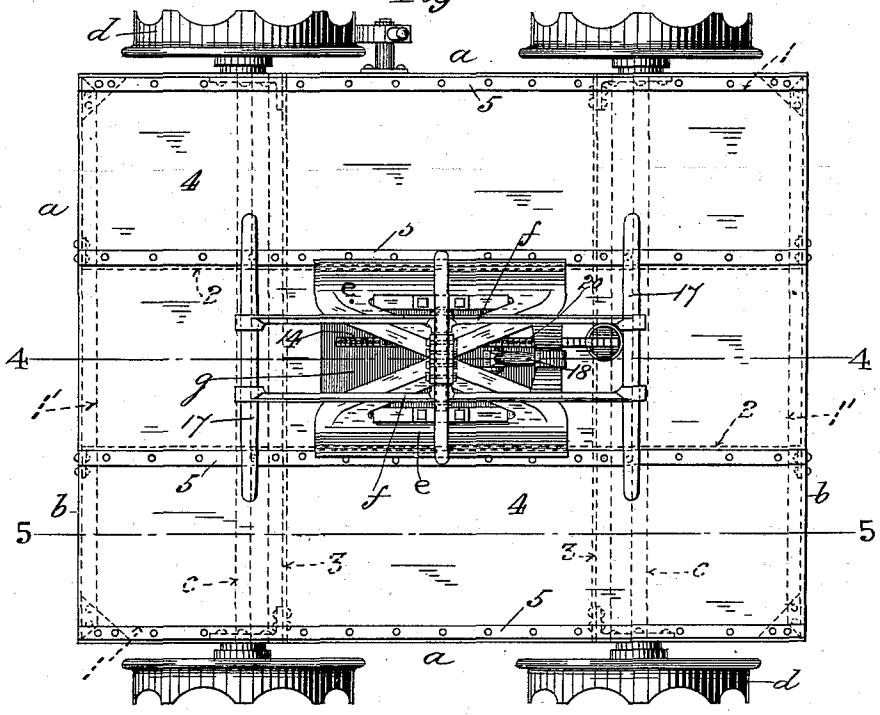
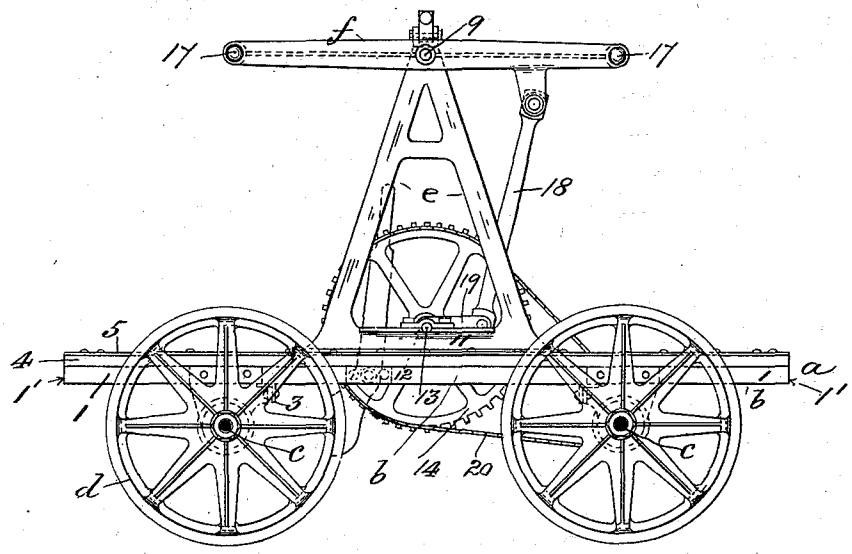


Fig. 2.



Witnesses
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Fig. 3.

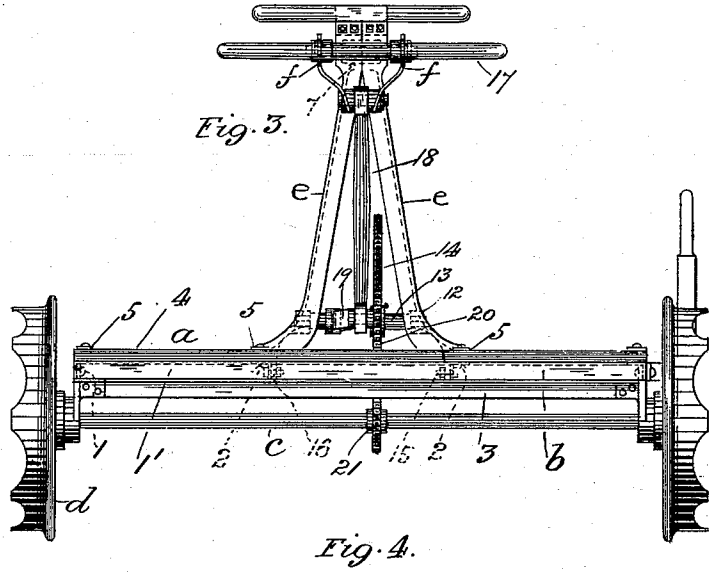


Fig. 4.

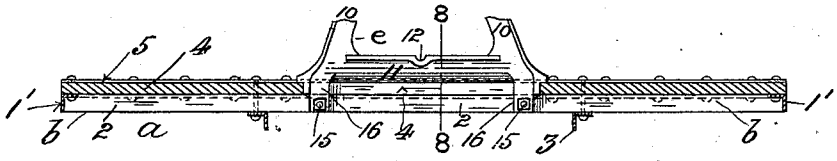


Fig. 5.

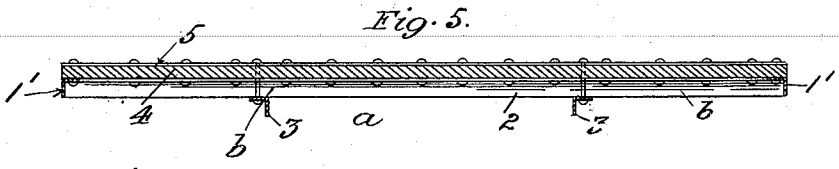


Fig. 7.

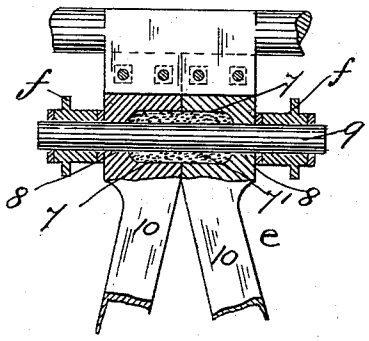


Fig. 6.

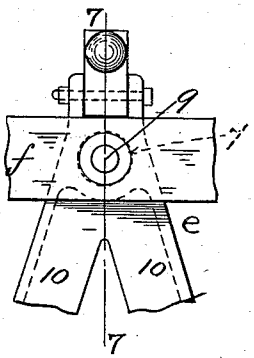
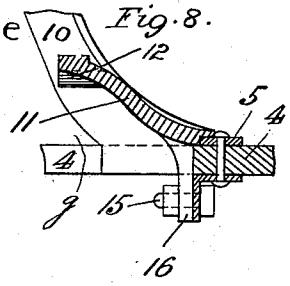


Fig. 8.



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UNITED STATES PATENT OFFICE.

MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 650,195, dated May 22, 1900.

Application filed February 3, 1900. Serial No. 3,809. (No model.)

To all whom it may concern:

Be it known that I, MORSE B. SCHAFFER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Hand-Cars, of which the following is a specification.

My invention relates to a railroad hand-car, and has for its objects to produce a hand-car of strong, simple, and light construction which can be readily placed on and off the track and to reduce the space heretofore occupied by the standards and walking-beam on the car.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 represents a top plan of my improved hand-car; Figs. 2 and 3, a side and an end elevation, respectively, thereof; Fig. 4, a longitudinal vertical section through the car-bed on line 4 4 in Fig. 1, showing the base of one of the standards fixed thereto for the walking-beam; Fig 5, a similar view on line 5 5 in Fig. 1; Fig. 6, a side view, on an enlarged scale, corresponding to Fig. 2 of the upper part of one of the standards with the walking-beam, broken away, pivoted thereto; Fig. 7, a transverse vertical section thereof on line 7 7 in Fig. 6; and Fig. 8, a cross-section, on an enlarged scale, through the base of the standard on line 8 8 in Fig. 4.

Like letters and numerals of reference denote like parts in all the figures.

In an ordinary hand-car the car-bed consists of a timber framing having side and end sills, center sills, needle-beam, floor-timbers, and floor, and to this framing are fixed the upright standards, between which, at the top, is pivoted the walking beam or lever, with its handles and appendages for operating the car. By this arrangement the car-bed is rendered heavy and cumbersome, and the room on the car is restricted, owing to the space taken up by the upright standards for receiving the entire width of the walking-beam pivoted between them at the top.

In my improved hand-car the car-bed *a* consists, preferably, of a rectangular-shaped angle iron or steel framing *b*, having its sides 1 and ends 1′ riveted or otherwise connected together, with their horizontal legs or flanges in the same plane, as shown. The sides 1 and ends 1′ are arranged at or contiguous to the corresponding outer edges of the car-bed *a*, the ends 1′ being tied together intermediately to the sides 1 by longitudinal angle-bars 2, having their horizontal legs alined to those of the sides 1 and ends 1′. The sides 1 are connected to each other and to the angle-bars 2 by transverse angle-bars 3, arranged at a suitable distance apart beneath the sides 1 and angle-bars 2, adjacent to the axles *c* of the car-wheels *d*; or the framing *b*, in lieu of being in separate parts, as described, may be made integral throughout. On the frame thus constructed is laid the floor 4, and on the floor 4 are placed along the car-bed *a* and immediately over the sides 1 and angle-bars 2, respectively, flat bars 5, through which and through the floor 4 and the sides 1 and bars 2 and 3 pass rivets 6, by which the floor 4 and entire frame *b* are firmly secured together, the whole forming a compact, rigid, light, and durable car-bed.

The wheels *d* may be mounted on their axles *c* in the usual manner, but preferably in combination with ball-bearings, as described in Letters Patent of the United States granted to me December 13, 1898, No. 615,753, for an improvement in hand-cars.

On the car-bed *a* at its central part and longitudinally therewith are mounted opposite to each other two preferably A-shaped standards *e*, which in lieu of being upright and parallel to each other, as in the ordinary hand-car, are preferably curved toward each other at the base and thence inclined upward toward each other to their top portions, where they meet and bear against each other on their inner faces, which are in alinement thereat, preferably with the longitudinal center line of the car-bed *a*. Each standard *e* is formed in its meeting face with a pocket or recess 7, having in its rear or recessed end a central cylindrical hole 8, which passes horizontally through the standard *e* thereat. The pockets 7 and holes 8 are respectively in alinement and form a bearing for the pin 9, which passes through the holes 8 and projects beyond the outside of each standard *e*. On the projecting portions of the pin 9 are pivoted the opposite sides, respectively, of the walk-

ing beam or lever *f*, the space within the pockets 7 around the pin 9 being filled with Babbitt metal or other suitable material or packing 7′. By this arrangement the standards *e* are rendered compact and occupy considerably-less space than the ordinary standards, thereby increasing the room on the car and insuring greater safety to the operators when running at a high speed.

The legs 10 of each standard *e* are preferably L-shaped in cross-section and united to each other at the base by a web 11, on the upper part of which midway between the legs 10 is formed the bearing 12, which receives the corresponding journaled end of the axle 13 of the sprocket-wheel 14.

Each standard *e* is secured at its base 11 to the car-bed *a* at the sides of the hole *g*, formed through the floor 4, by bolts 15, which pass through ears or lugs 16, depending from the base 11, and through the vertical leg or flange of the adjacent angle-bar 2, the bottom of the base 11 overlapping the bar 5 and floor 4 thereat.

The walking-beam *f* is provided with the usual operating-handles 17 and connected by the pitman 18 with the crank 19 of the sprocket-wheel axle 13, having its bearings 12 in the standards *e*, as before mentioned. The sprocket-wheel 14 engages by the sprocket-chain 20 with the sprocket-pinion 21, which is fixed, preferably, on the forward axle *c* of the car, all the said parts of the driving-gear being of the ordinary construction and needing no further description.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a hand-car, a car-bed composed of longitudinal and transverse angle-bars fixed together in the same horizontal plane and having a floor thereon, flat bars laid on the floor immediately over, and corresponding in length to, the longitudinal angle-bars, and means for securing the said flat bars and floor to the angle-bars, substantially as described.

2. In a hand-car, the combination with the car-bed, of two opposite standards inclined upward toward each other and meeting at their top portions, a recess in the meeting face of each standard, and a hole opening centrally from the inner end of the recess to the outside of the standard, the said holes and recesses being alined to each other respectively, and the said holes adapted to receive the pivot-pin of the walking-beam, the space within the recesses around the said pin containing a suitable packing, substantially as described.

MORSE B. SCHAFFER.

Witnesses:
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