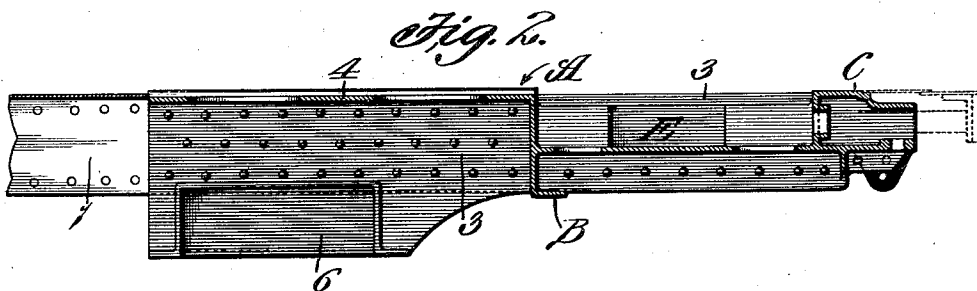
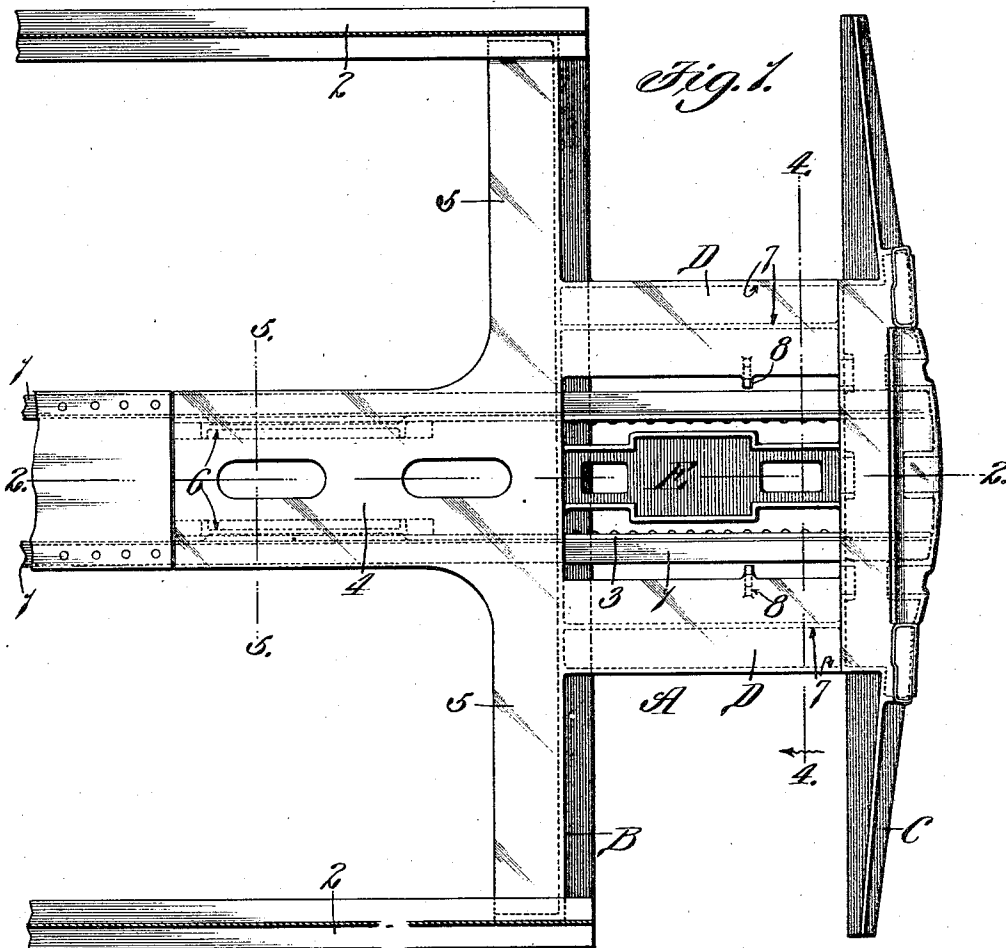


S. S. KNIGHT.
PASSENGER CAR UNDERFRAME.
APPLICATION FILED MAR. 16, 1912.

1,050,954.

Patented Jan. 21, 1913.

2 SHEETS—SHEET 1.



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Fig. 3.

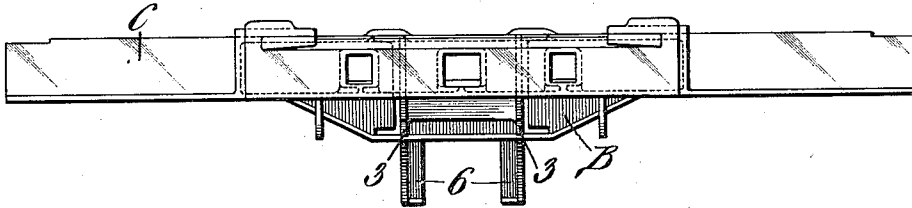


Fig. 4.

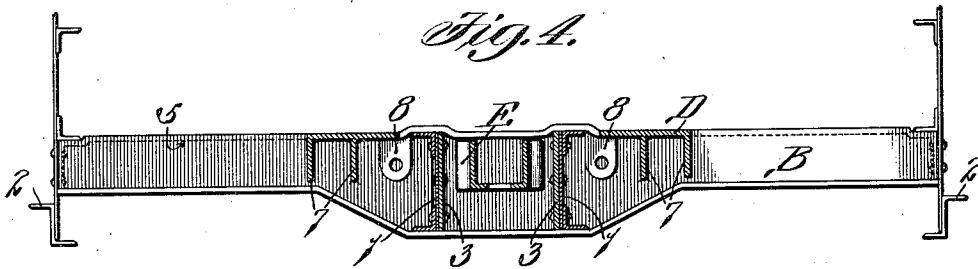
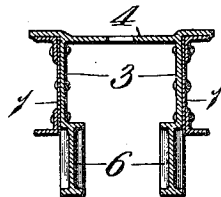


Fig. 5.



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UNITED STATES PATENT OFFICE.

SHERWOOD S. KNIGHT, OF WEBSTER GROVES, MISSOURI, ASSIGNOR TO SCULLIN-GALLAGHER IRON & STEEL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

PASSENGER-CAR UNDERFRAME.

1,050,954.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed March 16, 1912. Serial No. 684,130.

To all whom it may concern:

Be it known that I, SHERWOOD S. KNIGHT, a citizen of the United States, residing at Webster Groves, Missouri, have invented a certain new and useful Improvement in Passenger-Car Underframes, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to car underframes, and particularly to underframes for passenger cars.

One object of my invention is to provide a strong, serviceable and inexpensive passenger car underframe provided with continuous center sills that extend from end to end of the underframe, and cast metal end sections secured to said continuous center sills and each comprising a main end sill and a platform end sill.

Another object is to provide a passenger car underframe in which the main end sill and platform end sill at each end of the underframe are formed by a cast metal member provided with pockets for receiving certain elements of the buffing device and of the draft rigging.

Another object is to provide a passenger car underframe comprising continuous center sills extending from end to end of the underframe, and cast metal end sections separate and distinct from the body bolsters of the underframe and each comprising a main end sill, a platform end sill, and platform longitudinal sills all integrally connected together. And still another object is to provide a cast metal end section for passenger car underframes that can be applied easily to an underframe, either for the purpose of repairing the end portion of same or for converting an old passenger car underframe into an underframe of the type in which the main end sill and platform end sill are integrally connected together.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a top plan view of a portion of a passenger car underframe constructed in accordance with my invention; Fig. 2 is a vertical longitudinal sectional view taken on approximately the line 2—2 of Fig. 1; Fig. 3 is an end elevational view of said underframe; Fig. 4 is a

transverse sectional view taken on approximately the line 4—4 of Fig. 1, looking in the direction indicated by the arrow; and Fig. 5 is a transverse sectional view taken on approximately the line 5—5 of Fig. 1.

Referring to the drawings which illustrate the preferred form of my invention, 1 designates continuous center sills that extend from end to end of the underframe, and 2 designates side sills which terminate at the main end sills of the underframe, said center sills and side sills being of any preferred type and design and either built up or formed from commercially rolled members. The end portions of the underframe are formed by cast metal members A, each of which comprises a main end sill B, a platform end sill C, and integral portions to which the continuous center sills 1 are riveted or connected in any other suitable manner, the side sills 2 being connected to the main end sill B, as shown in Fig. 1. The cast metal end section A preferably comprises platform longitudinal sills D arranged between the main end sill B and platform end sill C and integrally connected to same, and also an integral portion E that forms a pocket for the buffing device, not shown, the pocket member E being arranged between the two platform longitudinal sills D, as shown in Fig. 1, and lying in approximately the same horizontal plane as said longitudinal sills, as shown in Fig. 4. The portions of the end section A to which the center sills 1 are connected, consist of vertically disposed webs 3 that commence at a point some distance inwardly from the main end sill B and extend throughout the entire length of said member A to the platform end sill C. As shown in Figs. 1, 2 and 3, the portions of the vertically disposed webs 3 that lie between the main end sill B and the body bolsters of the underframe, not shown, are connected together by an integral top cover plate 4 which preferably merges into a horizontally disposed flange 5 on the upper edge of the main end sill B, thus forming a substantially inverted channel-shaped portion integrally connected to the main end sill B, and so proportioned that it can be slipped longitudinally between the center sills 1 of the underframe, as shown in Fig. 5, the cover plate 4 of said portion being preferably made wide enough so that it will lap over the top flanges of the

center sills. The portions of the vertically disposed webs 3 that lie between the main end sill B and the platform end sill C form continuations of the portions of the vertical webs 3 that lie on the other side of the main end sill B and which form the sides of the inverted channel-shaped portion just described, the vertical transverse web of the main end sill B being slotted to receive the continuous center sills 1 of the underframe. As shown in Figs. 2, 3 and 5, the portion of the end section A that projects inwardly beyond the main end sill B, is provided with depending pockets 6 that cooperate with certain elements of the draft rigging, not shown, said pockets 6 being arranged in a lower horizontal plane than the center sills 1 of the underframe and being integrally connected to the vertically disposed webs 3 of the member A. The platform longitudinal sills D may be of any preferred cross sectional shape, those herein shown having a horizontally disposed top portion that merges into the top flange 5 of the main end sill B, and provided on their under sides with vertically disposed parallel ribs or webs 7 that are integrally connected to the platform end sill C and to the vertical web of the main end sill B. The platform end sill C is provided with openings for receiving the various elements of the buffing device that project inwardly beyond the platform end sill, and the platform longitudinal sills D are provided with integral perforated lugs 8 that receive the stems of the buffing device, not shown.

A car underframe of the construction above described is exceptionally strong and is inexpensive to manufacture as the entire end section of the underframe is formed by a cast metal member which is so designed that it can be slipped longitudinally onto the ends of the center sills which extend continuously from end to end of the underframe. Said cast metal members are separate and distinct from the body bolsters of the underframe, and each of said members is provided with integral portions or pockets that cooperate with certain elements of the buffing device and of the draft rigging. The cast metal members A which form the end sections of the underframe are supported throughout their entire length by the continuous center sills of the underframe to which they are securely riveted or connected in any other suitable manner, and in view of the fact that said cast metal end sections are so designed that they can be slipped onto the ends of the center sills, an underframe of this design can be repaired quickly and easily. Furthermore, such a construction makes it possible to apply cast metal end sections to the center sills of an old underframe and thus convert it into an underframe of the type in which the main end sill

and platform end sill at each end of the underframe are integrally connected together.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A passenger car underframe comprising continuous center sills, and cast metal end sections separate and distinct from the body bolsters of the underframe and each comprising a main end sill, a platform end sill, and portions that integrally connect said main end sill and said platform end sill and to which the center sills are secured.

2. In a passenger car underframe, cast metal end sections, each of which comprises a main end sill and a platform end sill that are integrally connected together, and center sills that pass through and beyond said main end sill and are secured to said platform end sill.

3. A passenger car underframe comprising center sills, a platform end sill and a main end sill having integral portions that are secured to said center sills, said portions projecting inwardly beyond the inner margin of said main end sill and outwardly to said platform end sill.

4. A passenger car underframe having a cast metal end section comprising a main end sill and a platform end sill integrally connected together, said main end sill being slotted or constructed in such a manner that the center sills of the underframe can pass through same.

5. A passenger car underframe having a cast metal end section comprising a main end sill and a platform end sill integrally connected together, said main end sill being slotted or constructed in such a manner that the center sills of the underframe can pass through same, and said cast metal end section having integral portions to which the center sills are connected.

6. A passenger car underframe having a cast metal end section comprising a main end sill, a platform end sill, and vertically disposed webs arranged between said end sills which are adapted to be connected to the center sills of the underframe.

7. A passenger car underframe having center sills that project beyond the bolster points of the underframe, a cast metal end section comprising a main end sill and a platform end sill, integral means which ties said end sills together, and a substantially inverted channel-shaped part projecting inwardly from said main end sill to a point beyond the inner margin of same for receiving the center sills of the underframe.

8. A cast metal end section for passenger car underframes, comprising a main end sill and a platform end sill integrally connected together, and integral vertically disposed webs for securing said end section to the cen-

ter sills of the underframe, said webs extending inwardly from said platform end sill to a point beyond said main end sill.

9. A cast metal end section for passenger car underframes comprising a main end sill and a platform end sill and constructed in such a manner that it can be slipped longitudinally onto the center sills of an underframe, said main end sill being cut away to permit the passage of said center sills through same.

10. A cast metal end section for passenger car underframes comprising a main end sill, a platform end sill, and vertically disposed webs connecting said end sills together and projecting inwardly beyond the main end sill for cooperating with the center sills of the underframe, the main end sill having openings through which said center sills pass.

11. A passenger car underframe comprising center sills that project beyond the bolster-points of the underframe, a cast metal end section comprising a main end sill and a platform end sill, vertically disposed webs integrally connected to said end sills and

connected to the center sills of the underframe, the main end sill having openings through which said center sills pass, a top cover plate integrally connected to the portions of said webs that project inwardly from the main end sill and merging into a flange on the upper edge of said main end sill, platform longitudinal sills connected to said end sills, and integral pockets that form part of said end sections.

12. In a passenger car underframe, cast metal end sections, each of which comprises a main end sill, a platform end sill, and vertically disposed webs that connect said main end sill and said platform end sill together, and center sills that project beyond said main end sills and are connected to said vertically disposed webs.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 11th day of March 1912.

SHERWOOD S. KNIGHT.

Witnesses:

WM. G. BRIDGEMAN,
HARRY C. DREIBUSS.