No. 776,814. PATENTED DEC. 6, 1904.

A. STUCKI.

TRUSSED CAR BOLSTER.

APPLICATION FILED JUNE 16, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

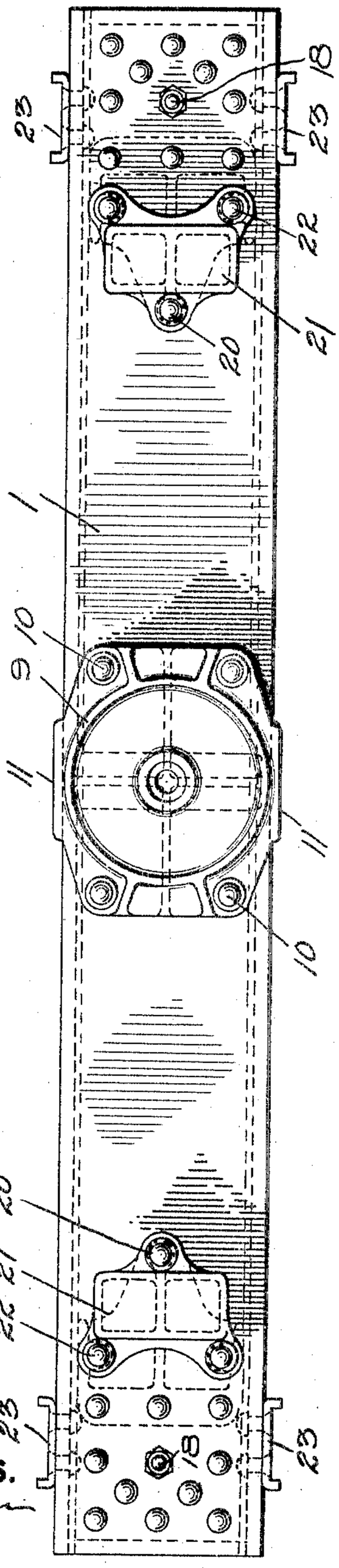


FIG. 1

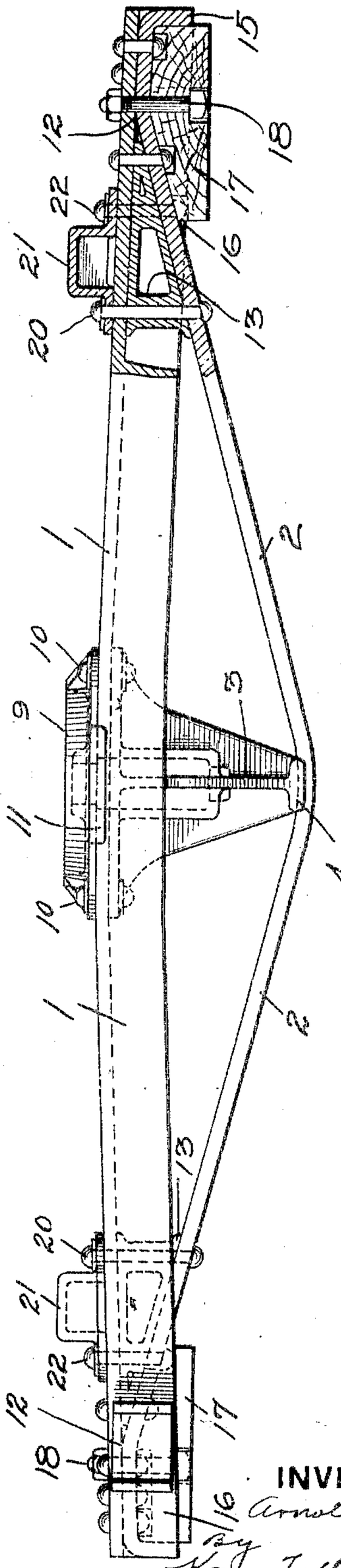


FIG. 2

WITNESSES.

J. R. Kellen

G. Kremer

INVENTOR.

Arnold Stucki.

by Kelly, Fuller & Hunter

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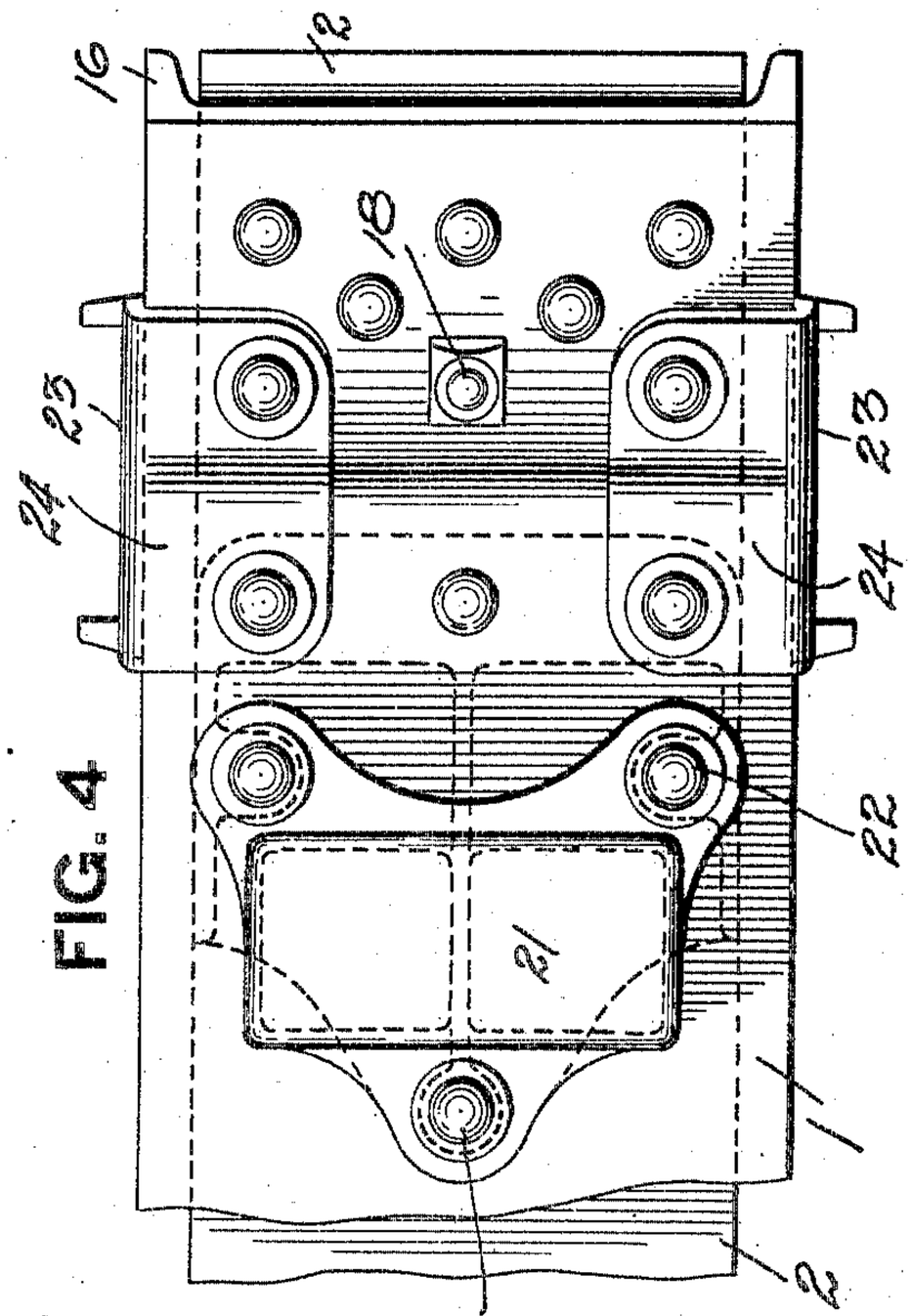


FIG. 4




FIG. 3

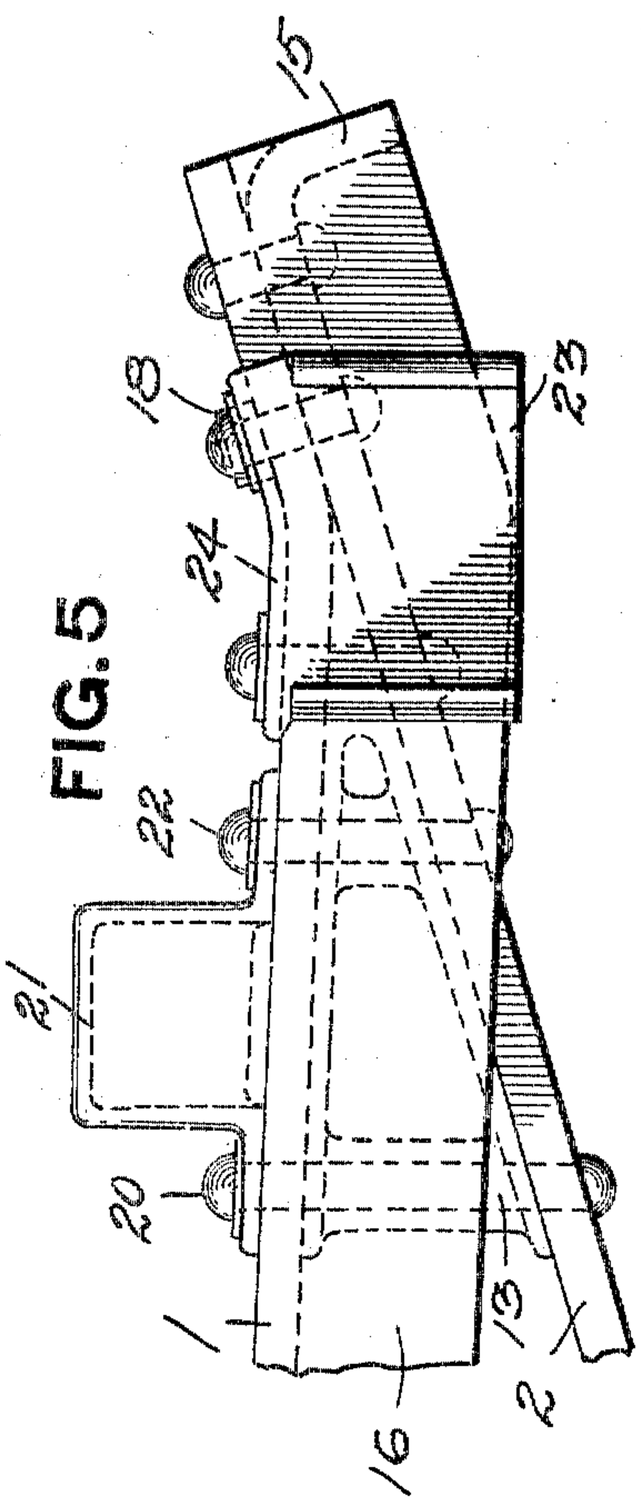


FIG. 5

WITNESSES.

J. R. Keller

G. Kremer

INVENTOR.

Arnold Stucki,

By Kay, Foster & Hunter,

His Attys.

No. 776,814. Patented December 6, 1904.

# UNITED STATES PATENT OFFICE.

ARNOLD STUCKI, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR TO STANDARD STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## TRUSSED CAR-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 776,814, dated December 6, 1904.

Application filed June 16, 1904. Serial No. 212,891. (No model.)

*To all whom it may concern:*

Be it known that I, ARNOLD STUCKI, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trussed Truck-Bolsters; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to bolsters for railway-trucks and the like, and more especially to bolsters of the trussed type.

The object of my invention is to provide a bolster of this character which is simple of construction and which possesses a large degree of strength in proportion to its weight.

In the accompanying drawings, Figure 1 is a plan view of my improved bolster. Fig. 2 is a side view of the same, partly in section. Fig. 3 is a central transverse section through the same; and Figs. 4 and 5 are respectively plan and side views of the end portion of the bolster, showing a modification.

This bolster is of the trussed type having a compression member 1, which is formed of a section of rolled channel-beam placed with the flanges vertically so as to secure vertical stiffness, a tension member 2, which is formed of a flat plate, and a strut 3, separating the compression and tension members at their middle portions. The strut 3 is shown as a casting fitting within the channel of the compression member and has its lower end resting upon the tension member. At its lower end it is provided with lips or flanges 4, which take against the edges of the tension member so as to hold the parts in place without riveting at this point. The strut is provided with a socket 5 for receiving the king-pin and with webs 6 projecting laterally and other webs 7 projecting longitudinally of the bolster. On top of the compression member above this strut is placed the center-bearing plate 9, and rivets 10 are driven through the same and the compression member and strut, thus securing all these parts together. The center-bearing plate is also provided with lugs or lips 11, bearing against the edges of the compression member to take the strain coming from end shocks, thus preventing the rivets from being sheared off.

The compression member 1 is slightly arched or cambered and the tension member 2 is bowed at its middle where it passes over the strut. Thence it extends upwardly and meets the compression member at the ends of the latter, being secured thereto by suitable rivets. The tension member meets or joins the compression member at a point 12, which is at the center of the truck-springs. This is done so that the two members will be spread sufficiently far apart at the inside of the springs where the bending moment is considerable. In the angle between the tension and compression members is placed a filling-block 13, which is secured in place by suitable rivets.

From the point 12 out to the end of the bolster the tension and compression members extend parallel either with the compression member extending straight and the tension member bent, as in Fig. 2, or with the tension member extending out straight and the compression member bent upwardly, as in Fig. 5. The arrangement in Fig. 2 is preferred, as it gives a better support for the spring-seat and more clearance for the truck top arch-bar under which it is to pass.

The end of the tension member is bent downwardly to form a lip 15, this extending down substantially to the lower edges of the side flanges 16 of the compression member. In this way a pocket is formed for receiving a wooden block 17, which forms a seat for the truck-springs, this block being held in place by a suitable bolt 18. By reason of the pocket formed at the end of the bolster it is possible to use the wooden block alone, thus dispensing with the usual cast or pressed pocket applied to most forms of trussed bolsters. As a result the weight of the bolster is materially decreased.

The rivets for securing the tension and compression members together are preferably placed staggered and decrease in number from the end toward the middle, as shown in plan view, Figs. 1 and 4, a single rivet 20 being used at the extreme inside. As a result the

strength of the members is not reduced to the same extent that they would be if more than one rivet were placed in the inside transverse line. The tension member 2 is a thin plate of substantially the width of the compression member. As a result it will not be weakened by the rivet-holes to the same extent as a narrower and thicker plate would be. The side bearings 21 are formed as castings and are secured in place by rivets 20 and 22, which also serve as a means for securing the spacing-piece 13 in place. The column-guides or chafing-plates 23 are shown as a pressed plate and may be secured in place either by riveting through the side flanges of the compression member, as shown in Fig. 1, or they may be provided with a horizontal lip 24, resting on top of the compression member and secured in place by two of the rivets which serve to unite the tension and compression members. The bolster as a whole has all of the advantages of ordinary trussed bolsters—that is, the material is located in the chords of the truss and little or none of it at the neutral axis, where it would do no good. The tension and compression members are ordinary rolled members which can be easily secured and require only slight bending to bring them to the necessary shape. The castings are all simple and the parts are united by rivets, so that no special machinery and practically no skilled labor is necessary to construct the bolster. The use of a channel compression member located with its flanges turned downwardly and having the tension member provided with a downturned lip at its end forms a pocket with practically no additional weight or labor, and this enables the use of a wooden spring-block without the usual casting employed on bolsters of this kind. The weight of the bolster is materially reduced by this arrangement.

What I claim is—

1. A trussed bolster comprising a tension member, a compression member, one of said members having its ends bent downwardly to form pockets for a spring-seat and the other of said members being of channel form and extending out to the ends of the bent member and having its flanges directed downwardly to form the sides of the pockets, a strut, and suitable connecting means.

2. A trussed bolster comprising a compression member of channel form having its flanges directed downwardly, a strut, a tension member passing under said strut and having its ends fitting between the flanges of the compression member and its extreme ends bent downwardly and substantially in line with the ends of the compression member to form pockets, suitable connecting means, and blocks forming spring-seats held in the pockets formed at the ends of the bolster.

3. A trussed bolster comprising a tension member, a compression member, a strut, said tension and compression members being separated at their middles by the strut and having their ends in contact and extending parallel, and securing means passing through the parallel ends, one of said members having its ends bent down to form pockets for a spring-seat.

4. A trussed bolster comprising a tension member, a compression member, a strut, said tension and compression members being separated at their middles by the strut and having their ends in contact and extending parallel, securing means passing through said parallel ends, one of said members having its ends bent downwardly to form pockets, and wooden blocks held in place by said downturned ends.

5. A trussed bolster comprising a tension member, a compression member, one of said members being of channel form and having its flanges directed downwardly and the other of said members having its ends bent downwardly to form pockets for the spring-seat, a strut, said tension and compression members being separated at their middles by the strut and having their ends in contact and extending parallel, and securing means passing through said parallel ends.

6. A trussed bolster comprising a compression member of channel form having its flanges directed downwardly, a strut, a tension member separated at its middle from the compression member by the strut and having its ends extending parallel with the ends of the compression member and fitting between the flanges of said compression member, securing means passing through the parallel ends of said tension and compression members, said tension member having its extreme ends bent downwardly, and blocks forming spring-seats held in the pockets formed by the flanges of the compression member and downbent ends of the tension member.

In testimony whereof I, the said ARNOLD STUCKI, have hereunto set my hand.

ARNOLD STUCKI.

Witnesses:
GEORGE H. RANKIN,
F. W. WINTER.