

(No Model.)

J. M. MARIS.
BOLSTER FOR RAILWAY CARS.

No. 601,270.

Patented Mar. 29, 1898.

FIG. 1.

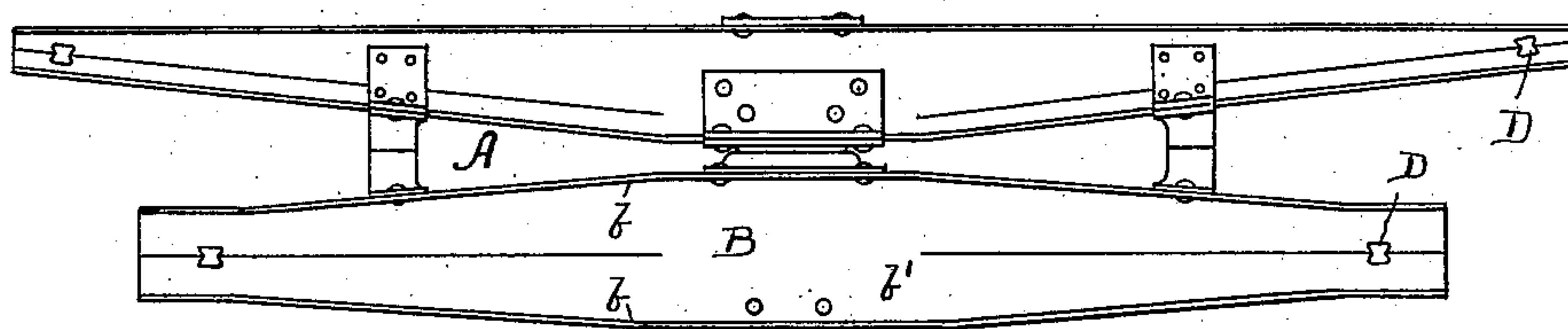


FIG. 2.

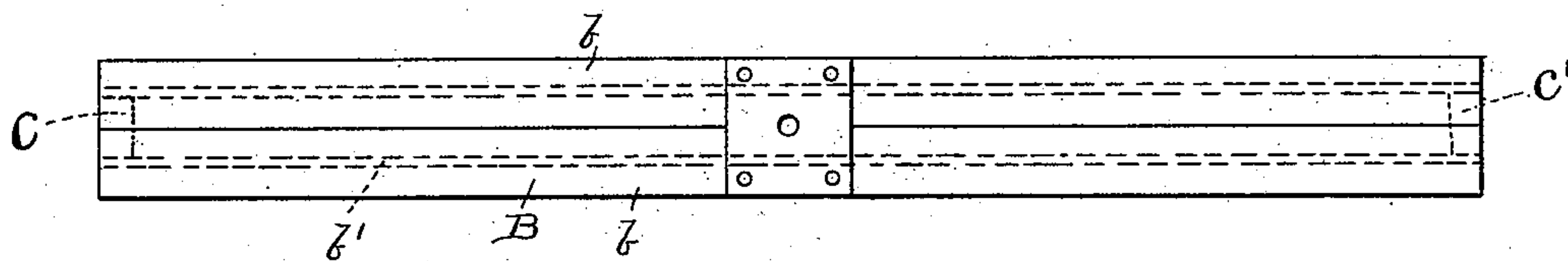


FIG. 3.

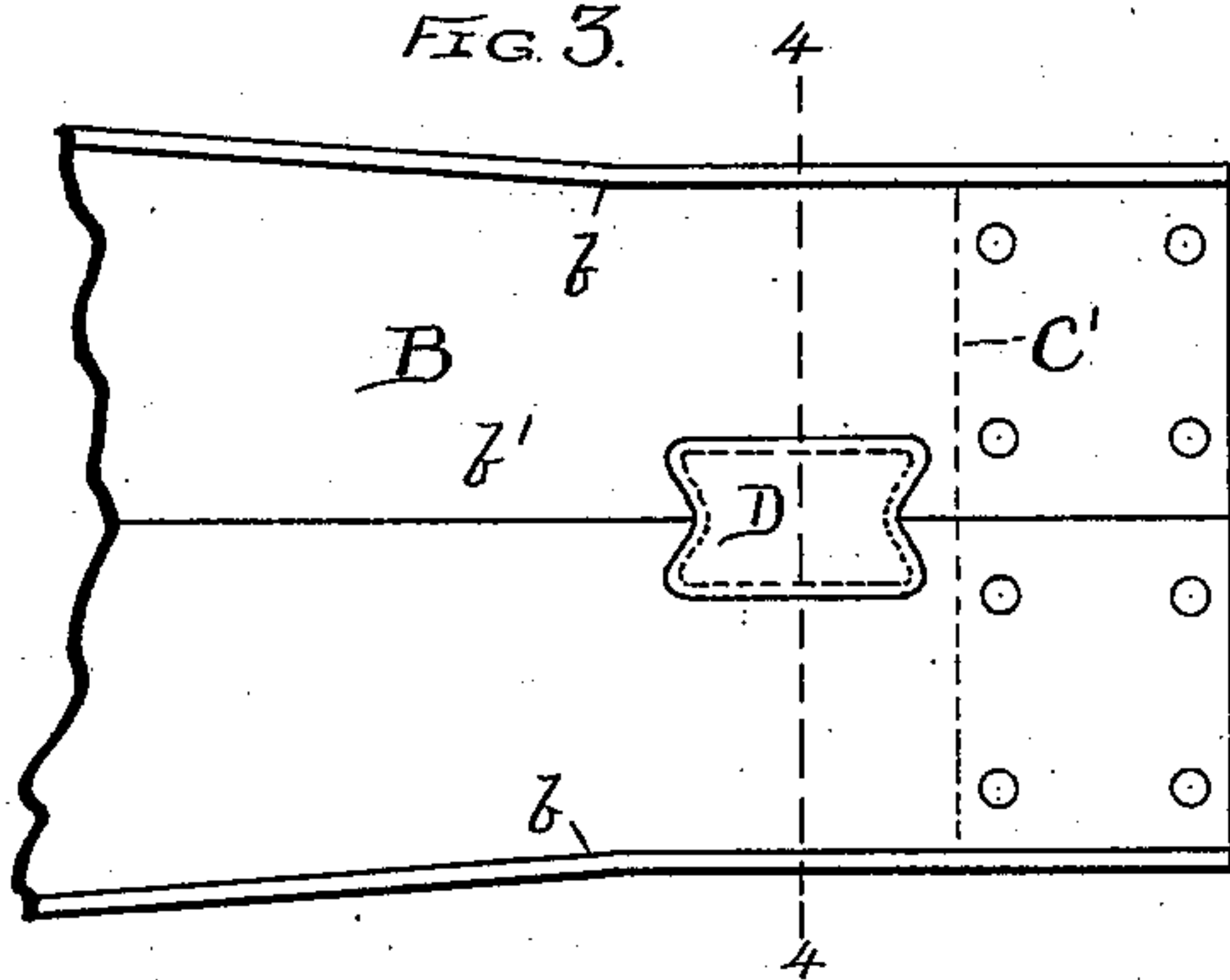


FIG. 4.

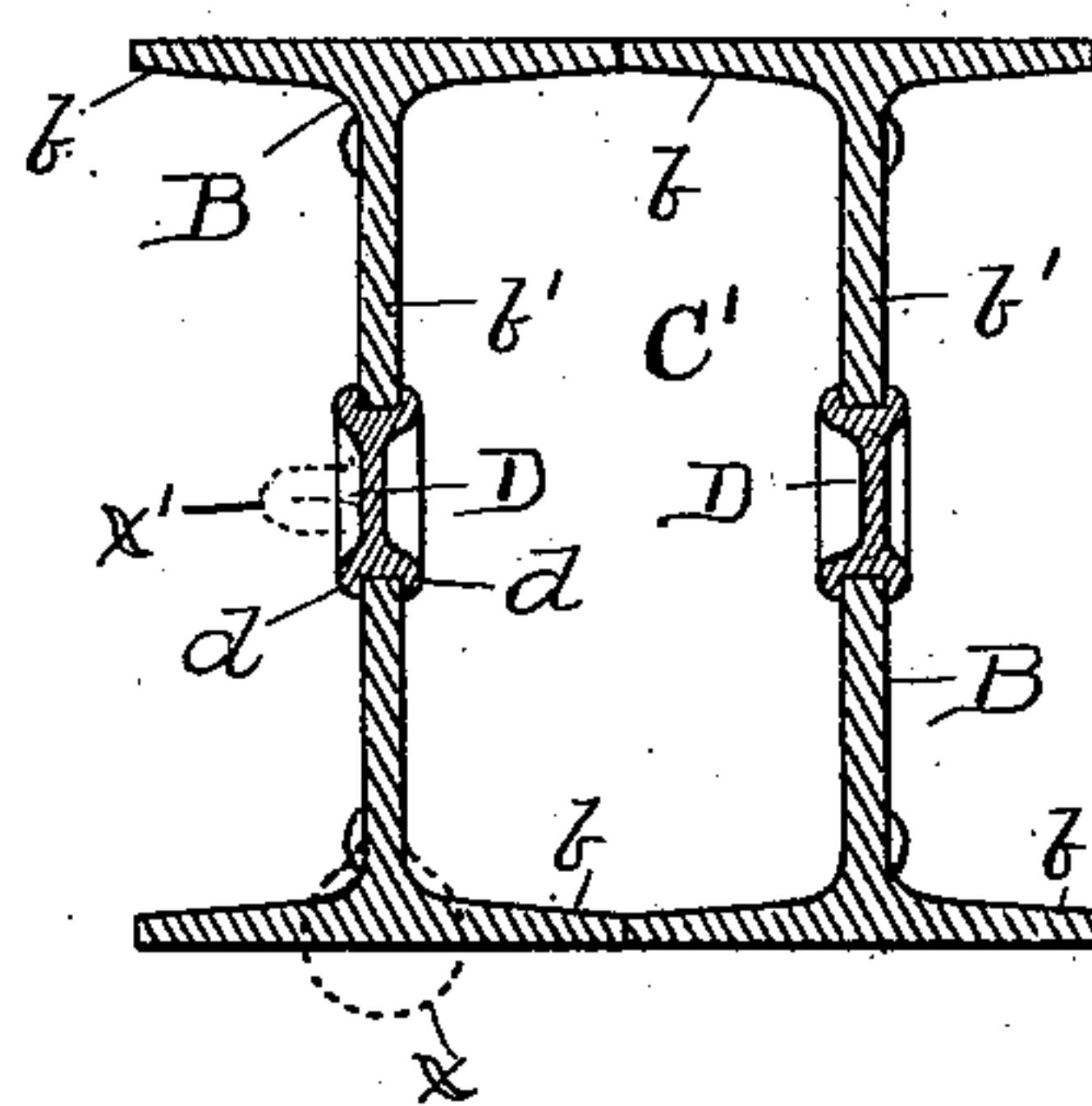


FIG. 5.

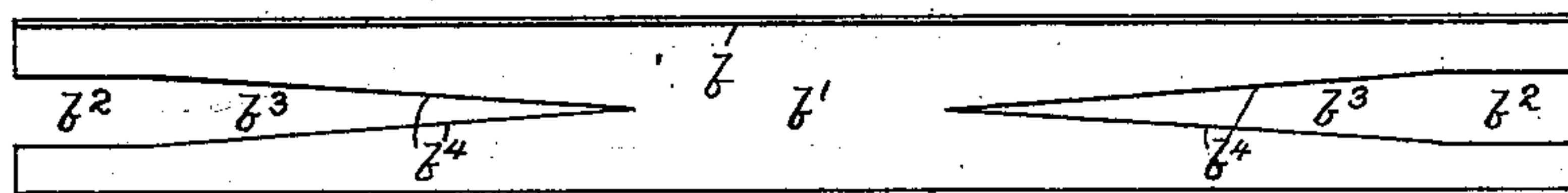
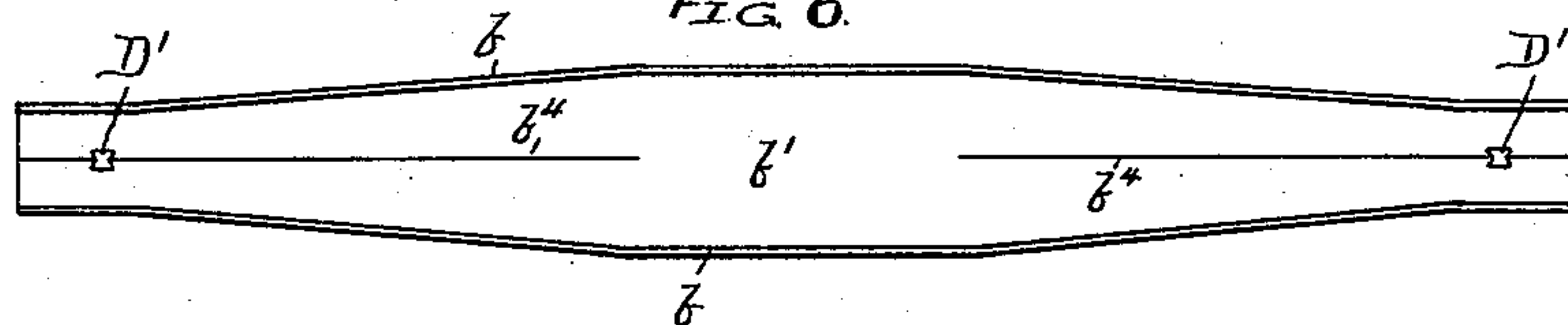


FIG. 6.



WITNESSES:

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JOHN M. MARIS, OF CHICAGO, ILLINOIS.

BOLSTER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 601,270, dated March 29, 1898.

Application filed December 9, 1897. Serial No. 661,253. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. MARIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Improvement in Bolsters for Railway-Cars, of which the following is a specification.

My invention relates to improvements in bolsters for cars; and it relates more especially to improvements in steel or metal bolsters formed of I-beams or other rolled-steel beams having an upper and lower flange and an intermediate web by cutting out and removing a portion of the web at each end of
15 the beam and then bending one or both of the flanges at an angle to the other to give the beam the required truss shape.

My invention consists in the means I employ for firmly securing together the severed
20 meeting edges of the web, as will be herein-after fully described in connection with the accompanying drawings, forming a part of this specification.

In said drawings, Figure 1 is a side elevation of a car-bolster embodying my improvement. Fig. 2 is a plan view. Fig. 3 is an enlarged detail side elevation. Fig. 4 is a cross-section through the I-beams of the bolster on the line 4 4 of Fig. 3. Fig. 5 is a side elevation showing the form of blank-beam from
30 which the bolster-beam is formed and showing the same with a portion of the web cut out or removed and before the upper and lower flanges are inclined or bent toward each other to give a truss shape to the beam, and Fig. 6 is a similar view showing the flanges bent or inclined and the recess formed in the web for receiving the lock.

In said drawings, A represents the bolster, the same being composed of two I-beams or other beams B B, having upper and lower flanges b b and an intermediate web b' between the flanges. A parallel-sided or rectangular piece b^2 is cut out from the web b'
45 of the blank-beam at each end, and a gore or wedge shaped area b^3 is also preferably cut out from the web at each end extending back as far toward the middle of the beam as it is desired to have one or both of the flanges inclined or bent toward each other in producing the truss shape. The upper and lower flanges b b of the truss-shaped beam are parallel with

each other for a short distance from each end, preferably about twelve inches, the parallel portion extending back as far as the parallel-sided rectangular piece or area b^2 is cut out. The meeting edges b^4 of the cut-out portion of the web abut directly together after the flanges b b of the beam, one or both, (according as the bolster is designed to be a body or truck bolster,) are bent or inclined, and in this position they are firmly secured together by a lock or interlocking device D, attached to one of the severed members of the web, and fitting in a recess D' in the other. This interlocking device is preferably made of a dovetail shape, so that any pulling or thrusting strain of one severed member of the flanged beam against the other in the truss action of the beam will not tend to disengage the lock or means for securing the severed members together.

The dovetail lock D is preferably made in a separate piece from each of the severed members instead of being formed integral with either, a similar recess being formed in each of the meeting severed members of the web, as I am thus enabled in manufacturing the bolster to more conveniently secure an exact and proper registry of the lock in the recess in which it fits, because this construction enables me to form the recess for the lock in both members after the upper and lower flanges of the beam, one or both, are bent or inclined toward each other. The bolster is formed by securing together side by side a pair of the truss-beams thus formed by means of suitable castings C C', riveted or bolted to and between the parallel truss-beams. The upper and lower flanges of the beam may be of any desired shape in cross-section—such, for example, as indicated by the dotted lines x in Fig. 4. Instead of cutting out or removing the gore or wedge shaped area b^3 of the web at each end to give the truss shape to the beam this gore or wedge shaped area may be folded or corrugated laterally, as indicated by the dotted lines x in Fig. 4, the cutting out or removing or the folding or corrugating the gore or wedge shaped area to the side being in my present improvement equivalents for each other, as both these means serve the same function of giving a truss shape to the flanged beam. This dove-

tail lock D is riveted or upset at its ends or provided with heads or shoulders d d , both preferably integral with the lock, one on each side of the web, and thus serves to keep the meeting edges of the severed web in place one directly above another, and also to secure the lock in place, which latter is necessary where the lock is made in a separate piece from the web.

In the drawings at Fig. 1 I have shown my invention as applied both to a lower or truck bolster, as I have above described it, and in which both the upper and lower flanges are preferably bent or inclined toward each other, and also as applied to a body-bolster in which the upper flange is straight throughout. In the body-bolster, as shown in Fig. 1, the gore or wedge shaped area cut out from the web may extend to the extreme end of the beam and the lower flange have an inclination to the extreme end, the parallel portion at the extreme end, as in the truck-bolster before described, being thus omitted.

I claim—

1. In a car-bolster, a rolled-steel beam having upper and lower flanges and an intermediate web, the web having a short rectangular piece cut out at each end, and the upper and lower flanges of the beam being bent or inclined, one or both, toward the other to cause the edges of the rectangular cut-out portion to meet or abut together and to give a truss shape to the beam, and said meeting edges of the cut-out portion of the web being secured together by a lock fitting in a recess formed in one of said meeting edges of the web, substantially as specified.

2. In a car-bolster, a rolled-steel beam having upper and lower flanges and an intermediate web, the web having a short rectangular piece cut out at each end, and the upper and lower flanges of the beam being bent or inclined, one or both, toward the other to cause the edges of the rectangular cut-out portion to meet or abut together and to give a truss shape to the beam, and said meeting edges of the cut-out portion of the web being secured together by a lock fitting in a recess formed in one of said meeting edges of the web, said lock being of a dovetail shape, substantially as specified.

3. In a car-bolster, a rolled-steel beam having upper and lower flanges and an intermediate web, the web having a short rectangular piece cut out at each end, and the upper and lower flanges of the beam being bent or inclined, one or both, toward the other to cause the edges of the rectangular cut-out portion to meet or abut together and to give a truss shape to the beam, and said meeting edges of the cut-out portion of the web being secured together by a lock, said lock being in a separate piece from each of the meeting members of said beam and fitting in a recess formed partially in each of the meeting members, substantially as specified.

4. The bolster for cars, comprising in com-

bination a pair of truss-shaped rolled-steel beams secured together side by side, each of said beams having an upper and lower flange and an intermediate web, the web having a portion cut out at each end, and the upper and lower flanges of the beam extending at an angle to each other to give the required truss shape to the beam and to bring the meeting edges of the cut-out portions of the web together, one on top of the other, and dovetail locks securing the meeting edges of the cut-out portions together, substantially as specified.

5. A rolled-steel truss-shaped beam having upper and lower flanges and an intermediate web, the upper and lower flanges extending at an angle to each other from the middle portion of the beam toward each end, and an intermediate web having a cut-out portion at each end, the meeting edges of which abut together, one on top of another, and a lock fitting in a recess in the web to secure the meeting edges together against pulling or thrusting strain, substantially as specified.

6. A rolled-steel truss-shaped beam having upper and lower flanges and an intermediate web, the upper and lower flanges extending at an angle to each other from the middle portion of the beam toward each end, and an intermediate web having a cut-out portion at each end, the meeting edges of which abut together, one on top of another, and a dovetail lock fitting in a recess in the web to secure the meeting edges together against pulling or thrusting strain, substantially as specified.

7. In a car-bolster, a rolled-steel beam having upper and lower flanges and an intermediate web, the web having a short rectangular piece cut out at each end, and the upper and lower flanges of the beam being bent or inclined, one or both, toward the other to cause the edges of the rectangular cut-out portion to meet or abut together and to give a truss shape to the beam, and said meeting edges of the cut-out portion of the web being secured together by a lock, said lock being in a separate piece from each of the meeting members of said beam and fitting in a recess formed partially in each of the meeting members, and said lock being upset or provided with heads at each end, substantially as specified.

8. In a car-bolster, a rolled-steel beam having upper and lower flanges and an intermediate web, the web having a short rectangular piece cut out at each end, and the upper and lower flanges of the beam being bent or inclined, one or both, toward the other to cause the edges of the rectangular cut-out portion to meet or abut together and to give a truss shape to the beam, and said meeting edges of the cut-out portion of the web being secured together by a lock, said lock being in a separate piece from each of the meeting members of said beam and fitting in a recess formed partially in each of the meeting mem-

bers, and said lock being of a dovetail shape and being upset or having heads at each end, substantially as specified.

9. A bolster for cars, comprising in combination a pair of rolled-steel beams secured together side by side, and having each an upper and lower flange and intermediate web, the web of each beam having a rectangular piece cut out at each end, and a wedge or gore shaped area cut out at each end, and the upper and lower flanges being, one or both, bent or inclined toward the other, and each beam having at each end a lock securing the meeting edges of the severed portions of the web together, and fitting in a recess in one of the severed members of the web, substantially as specified.

10. A bolster for cars, comprising in combi-

nation a pair of rolled-steel beams secured together side by side, and having each an upper and lower flange and intermediate web, the web of each beam having a rectangular piece cut out at each end, and a wedge or gore shaped area cut out at each end, and the upper and lower flanges being, one or both, bent or inclined toward the other, and each beam having at each end a dovetail lock securing the meeting edges of the severed portions of the web together, and fitting in a recess in one of the severed members of the web, substantially as specified.

JOHN M. MARIS.

Witnesses:

EDMUND ADCOCK,
H. M. MUNDAY.