

No. 633,205.

Patented Sept. 19, 1899.

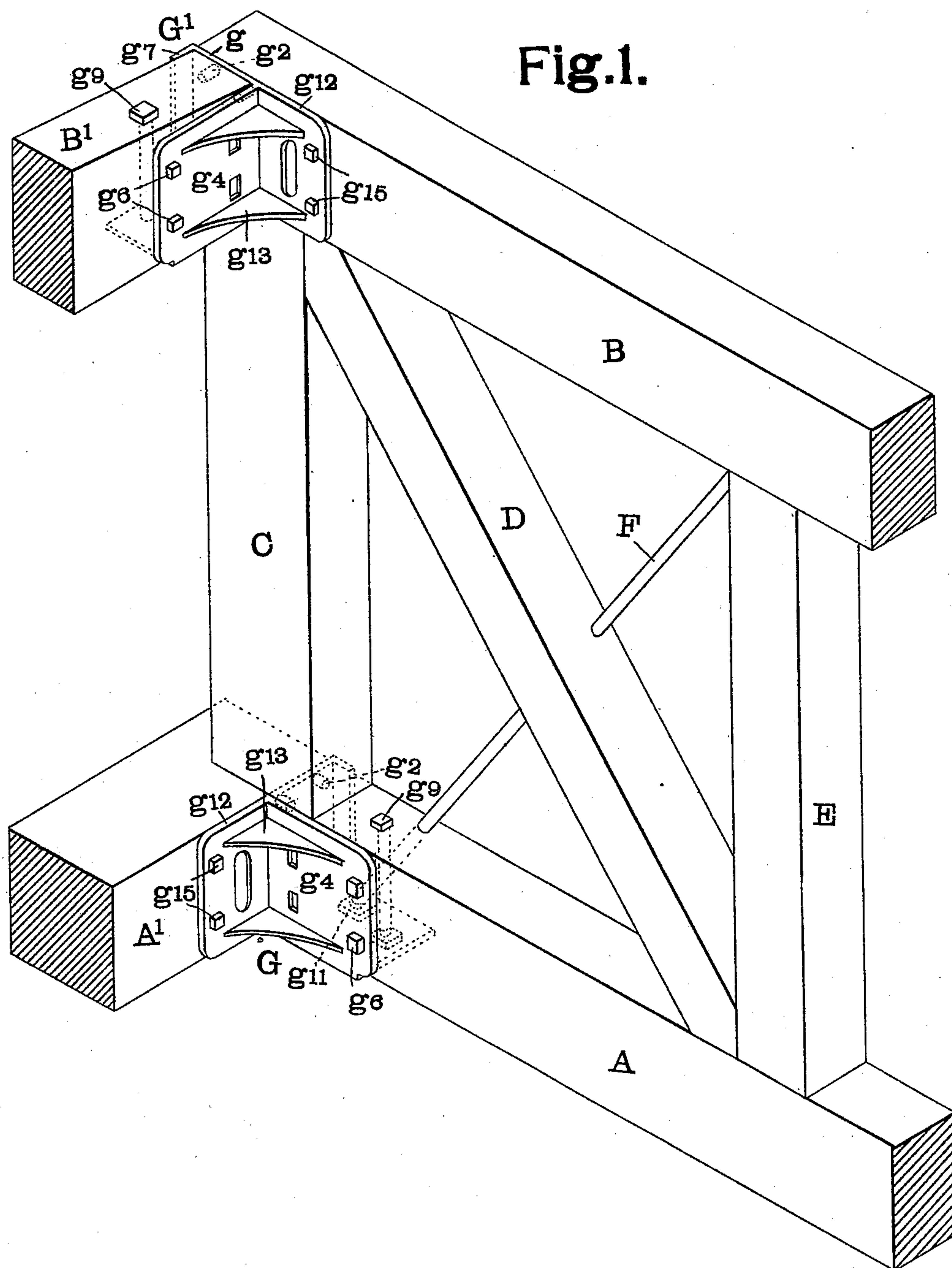
C. M. MILEHAM.  
RAILWAY CAR.

(Application filed Mar. 6, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses

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2 Sheets—Sheet 2.

Fig. 2.

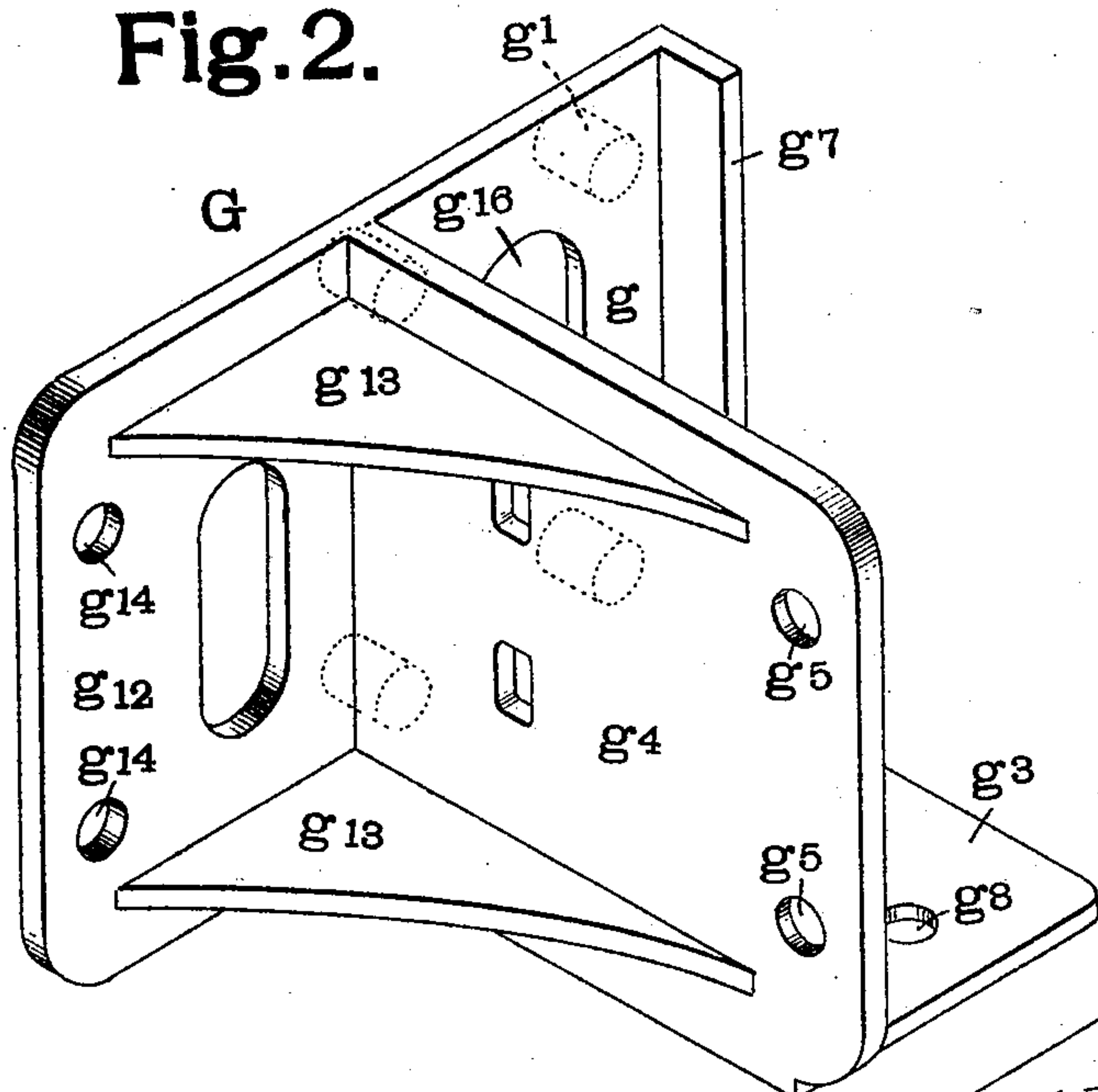
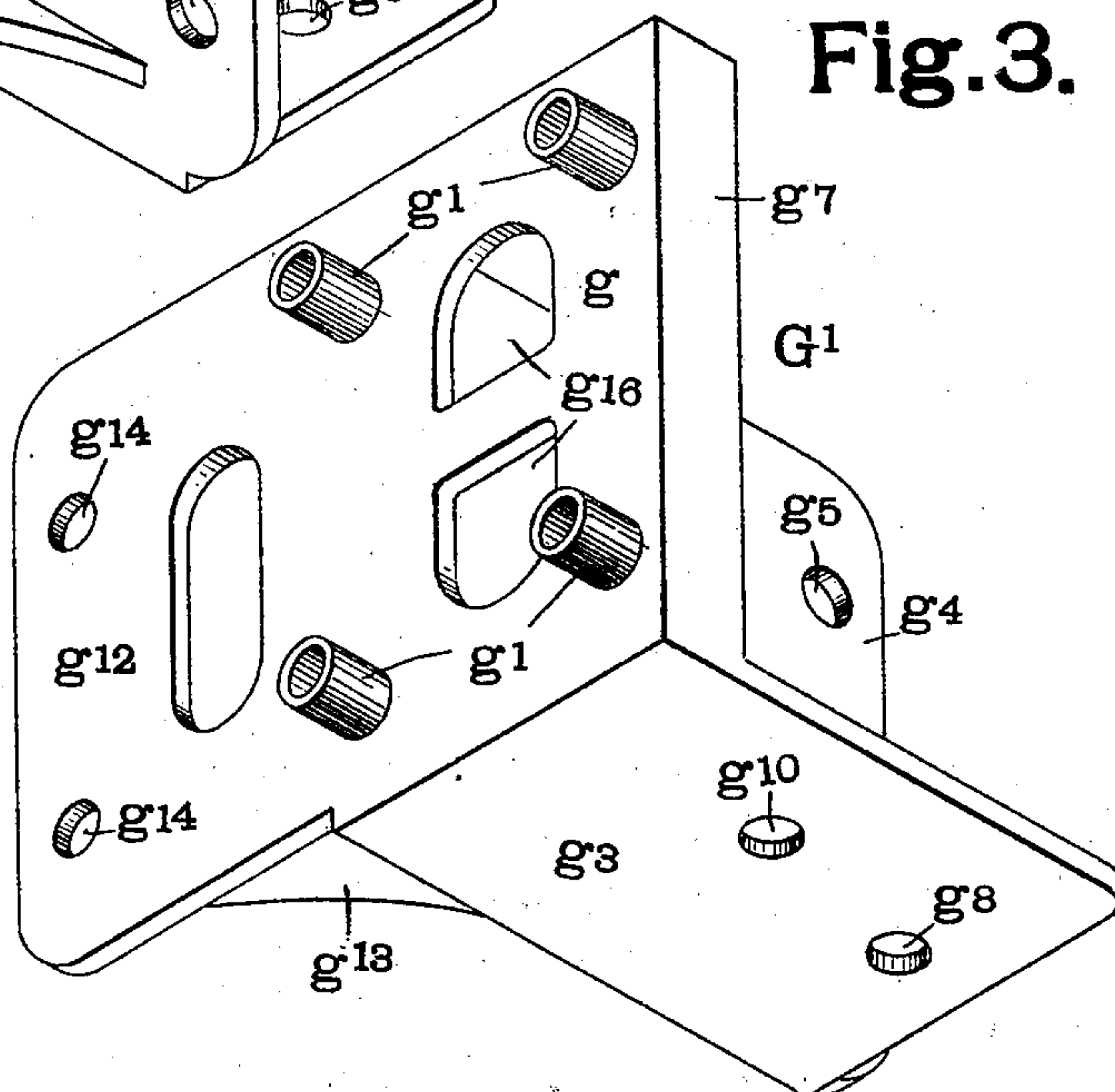


Fig. 3.



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## RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 633,205, dated September 19, 1899.

Application filed March 6, 1899. Serial No. 707,904. (No model.)

*To all whom it may concern:*

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

My invention relates chiefly to means for connecting the side and end timbers of the frames of freight-cars together, and has for its chief object, first, to provide an improved metal pocket adapted to be used either as a sill or plate pocket, and, second, to combining such pockets with car-framing, so as to produce stronger and more durable joints than those heretofore secured. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an isometric projection of the corner of a freight-car frame embodying my improvements. Fig. 2 is an isometric projection of one of my framing-pockets, and Fig. 3 is an isometric projection of a similar pocket in a different position and adapted to be used opposite the pocket illustrated in Fig. 2.

Similar letters refer to similar parts throughout the several views.

A and A', Fig. 1, respectively represent a side and an end sill of a freight-car frame. B and B' respectively represent a side and an end plate of the same frame. C is a corner post; D, a body-counterbrace; E, a body-post, and F a side body-brace rod. All of said parts are shown of common form; but the proportions of same are exaggerated for the sake of clearness in illustrating my improvement.

G is one of a pair of framing-pockets. (Shown in place in Fig. 1 and detached in Fig. 2.) G', Fig. 3, is the other member of the pair of pockets to which the pocket G belongs. A similar pocket is shown connecting a side and an end plate in Fig. 1. As the pockets G and G' are substantially the same, except that one is open on the right-hand side and the other on the left, the parts which go to make up the pocket are lettered alike in each case.

The base-plate of the pocket is lettered  $g$ . The outside of said plate is preferably provided with bosses  $g'$ , preferably made hollow,

as shown, and preferably four in number and arranged at the corners of a square; but it is not essential that the bosses be made hollow; neither are the number and arrangement essential. The bosses are designed to enter and fit holes  $g^2$ , bored or otherwise formed in the side of a timber resting against the outer side of the base-plate  $g$ , and the arrangement shown is more efficient in preventing the timber whose face they enter from moving in any direction parallel to said face than any other with which I am acquainted. From the base-plate  $g'$  a supporting plate or lip  $g^3$ , designed to support the end of a plate or sill, projects backward, and the inner side of the pocket is formed by a web  $g^4$ , extending back from the plate  $g$  and preferably somewhat longer than the supporting-lip  $g^3$ , though this is not essential. It is preferably formed integral with said lip, which preferably connects with it along said lip's inner edge. It is preferably pierced by bolt-holes  $g^5$ , through which bolts  $g^6$  preferably pass and bind it to the timber whose end rests in the pocket. The web  $g^4$  may be made substantially rectangular, as shown, but that is not essential. It performs three functions. One is to limit the lateral movement inward of any timber whose end is in the pocket, another is to prevent such timber from twisting, and the third is to strengthen the wing hereinafter described. On the outer side of the pocket a flange  $g^7$  preferably projects back from the base-plate  $g$ . It preferably extends from the plate  $g^3$  substantially to the top of the base-plate  $g$ . It is preferably narrower than the length of the plate  $g^3$ , so as to make it unnecessary to displace a timber resting against the outside of the base-plate, for in order to remove a timber whose end rests in the pocket the pocket is preferably open on the outer side, back of the flange  $g^7$ , also at the rear end and top.

The supporting-lip  $g^3$  is preferably pierced by a bolt-hole  $g^8$ , and a bolt  $g^9$ , passing through said hole, preferably assists in holding the timber resting in the pocket in place. Said lip  $g^3$  may also be pierced with another hole  $g^{10}$ , as shown, for the passage of a second bolt or the end of a tie or brace rod.

In Fig. 1 the lower end of the brace-rod F is shown passing through the side sill B and the hole  $g^{10}$  of the pocket G. It is provided



with a nut  $g^{11}$ , which assists in binding the pocket G to the side sill B. From the inner edge of the base-plate  $g$  a wing  $g^{12}$ , preferably formed integral with said plate, extends inward, preferably in such a manner that its outer face will be flush with that of the plate  $g$  and adapted to rest against the inner side of the same timber, as shown clearly in the drawings. This wing is braced and strengthened by bracing-webs  $g^{13}$ , extending from its inner face to the web  $g^4$ . The wing  $g^{12}$  is preferably provided with one or more bolt-holes  $g^{14}$ , through which it is preferably secured to the timber resting against it by means of bolts  $g^{15}$ , Fig. 1. The wing  $g^{12}$  and bracing-webs  $g^{13}$  greatly strengthen the web  $g^4$ , tend to prevent the timber resting against said wing from being sprung either inward or outward, which is very important, as where said timber is so sprung it is liable to be split by the bosses, and if not split the wood around the bosses is often either crushed or compressed so as to loosen the joint, and, finally, said wing and wing-bolts  $g^{15}$  assist the bosses  $g'$  and the pocket-bolt  $g^9$  in binding together the ends of the timbers in connection with which the pocket is used. The openings  $g^{16}$  in the plate  $g$  are preferably, but not necessarily, left so as to lighten the casting.

I claim—

1. The combination, in a metal framing-pocket, of a base-plate having an outwardly-projecting boss; a supporting-lip extending back from said plate; an inner side web, extending back from said plate, and connecting with said lip, along the inner side thereof; a wing extending laterally from the inner side edge of said base-plate; and a bracing-web extending from the wing to the side web of the pocket.

2. The combination, in a metal framing-pocket, of a base-plate having an outwardly-projecting boss; a supporting-lip extending back from said plate; a flange narrower than the length of the lip, extending back from the outer side edge of the base-plate; a web extending back along the inner side of the pocket; a laterally-extending wing; and bracing-webs extending from the wing to the pocket-web, and said pocket being open on the outer side, back of said flange, substantially as described.

3. The combination, in a metal framing-pocket, of a base-plate bosses projecting out from said plate; a laterally-extending wing pierced by a bolt-hole; a backwardly-projecting supporting-lip pierced by a bolt-hole; a web extending back along the inner side of the pocket having a bolt-hole; bracing-webs extending from said first-mentioned web to said wing; and said pocket being open opposite said inner side web, back of said flange; opposite the base-plate; and above the supporting-lip, substantially as described.

4. In a metal framing-pocket, the combination with a base-plate having outwardly-projecting bosses, of a side flange, a supporting-lip of greater length than said side flange projecting from said base-plate at right angles thereto and to said side flange and forming the bottom of the pocket, and a side web of greater length than said supporting-lip projecting from said base-plate parallel with said side flange, said pocket being open at the outer side back of said flange, at the top and at the rear.

5. A combination of a metal framing-pocket having a base-plate, a laterally-extending wing, a supporting-lip, a web on the inner side of the pocket, and a bracing-web extending across from the wing to the pocket-web; a timber whose end rests in the pocket; and a second timber resting against said base-plate and wing, substantially as described.

6. The combination of a metal framing-pocket having a base-plate with bosses; a supporting-lip, a flange extending back from the outer edge of the base-plate; a web extending back from the base-plate along the inner side of the pocket; a wing extending inward; webs extending from the wing to the side web of the pocket; a timber having an end in the pocket; a second timber resting against the base-plate and wing and having cavities into which said bosses project; means for bolting the timber resting against said wing to the wing, and means for bolting the timber whose end rests in the pocket to the supporting-lip and side web; substantially as described.

CHARLES M. MILEHAM.

In presence of—

CHAS. DETRICK,  
J. F. LOCKREY.