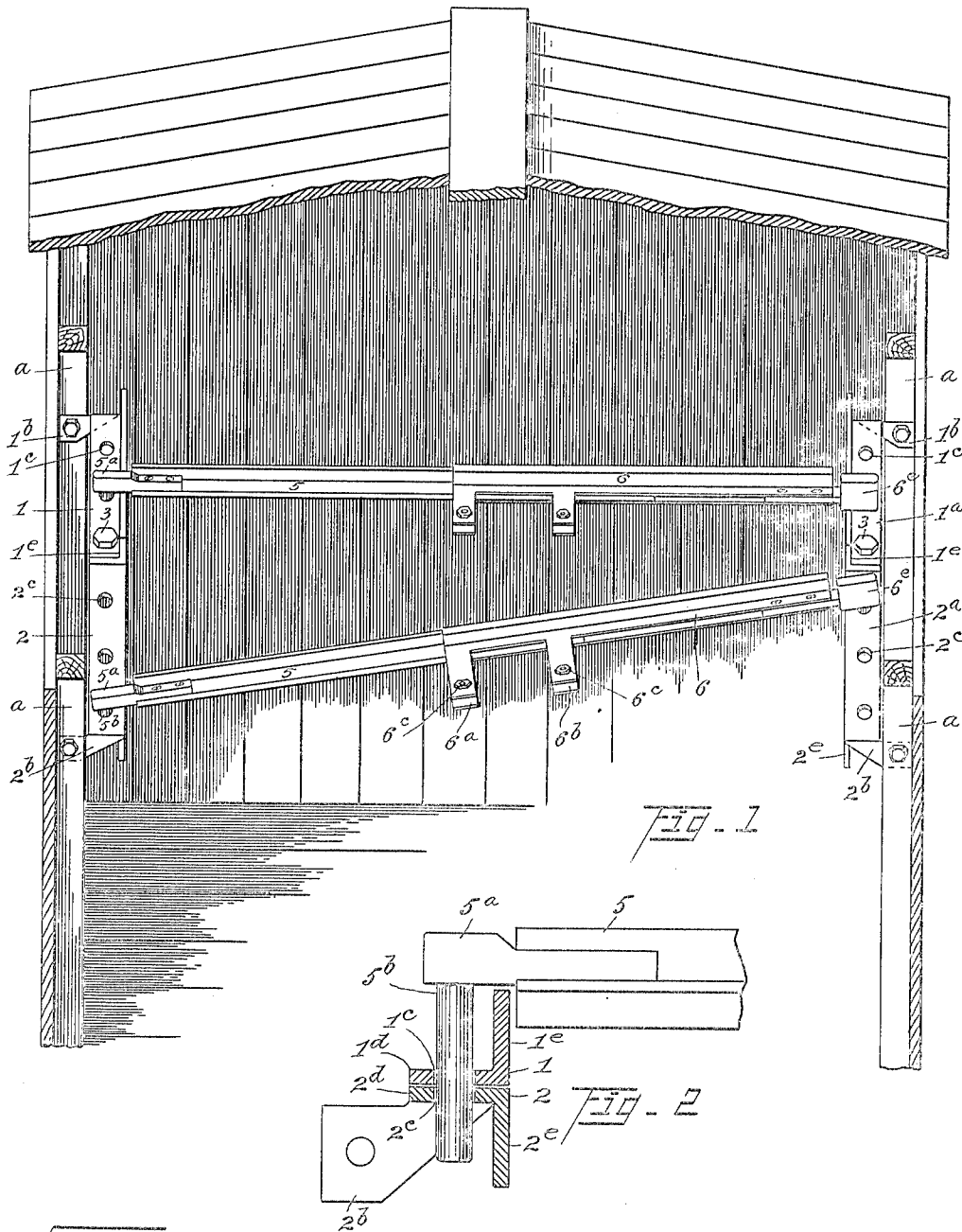


J. J. CONLIN.
BRACE.
APPLICATION FILED MAR. 10, 1913.

1,064,130.

Patented June 10, 1913.

3 SHEETS—SHEET 1.



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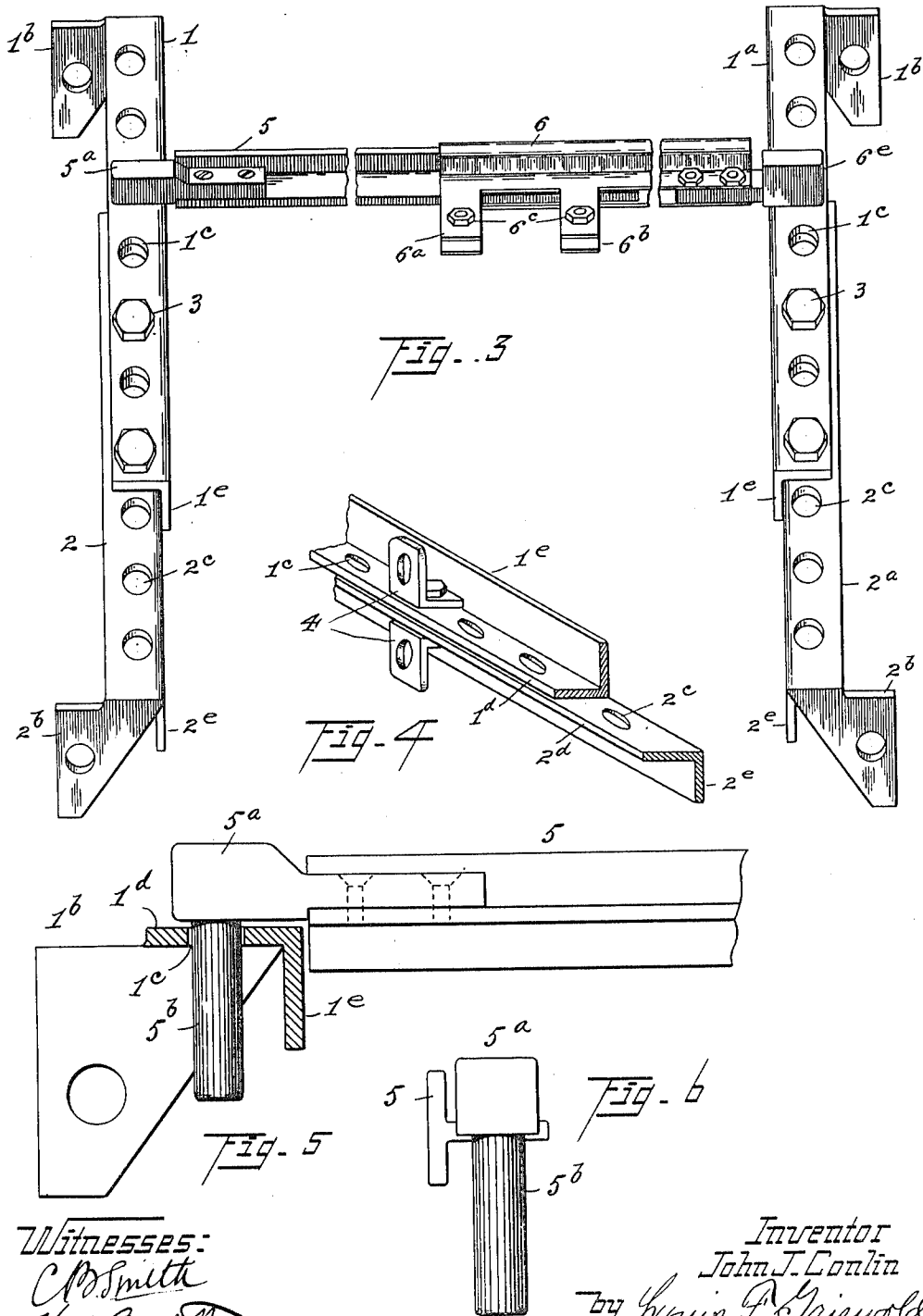
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3 SHEETS-SHEET 2.

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3 SHEETS—SHEET 3.

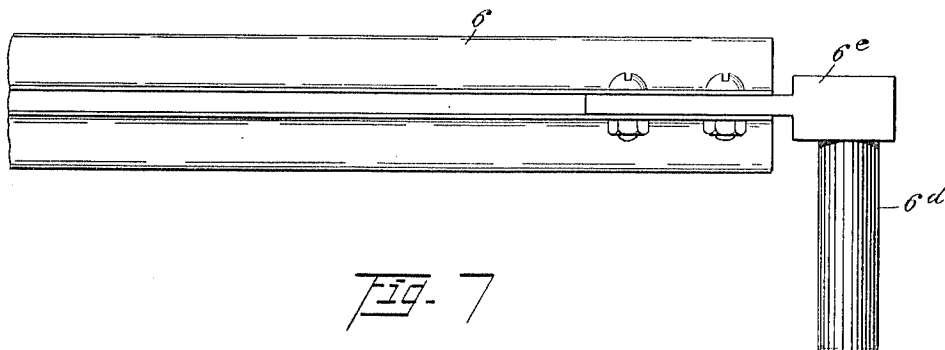


Fig. 7

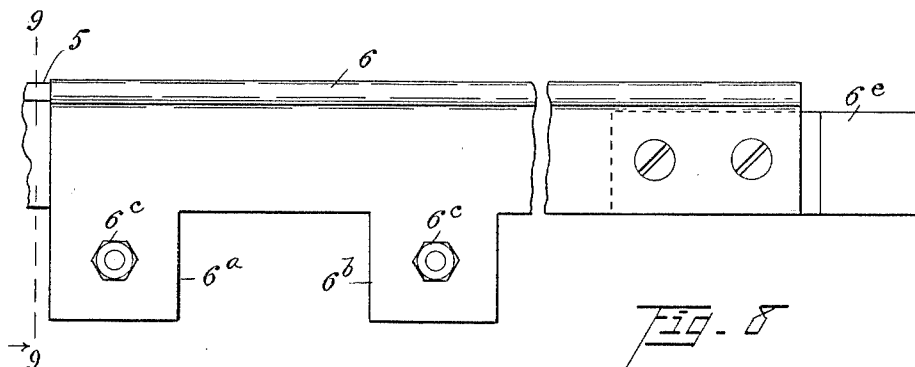


Fig. 8

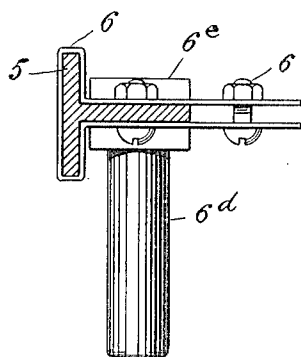


Fig. 9

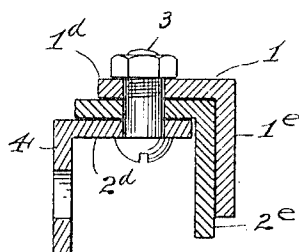


Fig. 10

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UNITED STATES PATENT OFFICE.

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BRACE.

1,064,130.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed March 10, 1913. Serial No. 753,328.

To all whom it may concern:

Be it known that I, JOHN JAMES CONLIN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Brace, of which the following is a specification.

My invention relates generally to braces, and more particularly to adjustable, structural braces adaptable to a more or less broad field of usefulness.

The primary object of the invention is the provision of a brace that is particularly adapted to be used as a block or retainer for packing merchandise in freight cars for transportation.

It is necessary, both for the protection of the merchandise and for the car itself, that the cases, barrels or other containers used in shipping articles by freight be prevented from shifting, and when cars are only partially filled, as is frequently the case, the prevention of the shifting and displacement of the packages is a more or less difficult proposition. Heretofore this has been accomplished by nailing boards to the interior sides, ends and uprights in the car, and nailing other boards between them to brace and support the packages. This method of packing is very unsatisfactory for several reasons. It necessitates a large amount of labor, both in packing and in unpacking the cars. A great quantity of the lumber used is wasted. Nails are left protruding into the car after unloading, causing damage to merchandise which may afterward be loaded in the same car. There are also numerous other objectionable features.

The improved brace, with its adjustable features, is adapted to firmly hold packages of different sizes and shapes, and is easily and quickly manipulated in both the packing and unpacking of the car, and when once installed in a car, its serviceable life is indefinite. It is simple and durable in construction and efficient in operation.

While as above stated it is particularly adapted for use in freight cars, the invention can be adapted to other uses. It can be used, in a light form, in packing cases, or it can be applied to advantage in storage houses; in the holds of ships, or in moving vans. It can be used for storing goods in warehouses, and for various other purposes.

With the above mentioned and other ends in view, the invention consists in the novel

construction, and combination of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings forming a part of this specification, Figure 1 illustrates a portion of a freight car, showing the application of the invention thereto. Fig. 2 is an enlarged detail, through the bracket members, showing a fragment of the brace member and its connection with the bracket, in one form. Fig. 3 is a perspective view of the device, showing it assembled in a different manner from that shown in Fig. 1. Fig. 4 is a fragmentary perspective view, showing one form of assembling the bracket members, and also showing clips attached thereto. Fig. 5 is a section through the bracket member, showing a fragment of the brace and one manner of connection to the bracket. Fig. 6 is an end view of one of the brace members. Fig. 7 is an elevation of one of the brace members, with parts broken away. Fig. 8 is a plan view of one of the brace members, and a fragment of the other. Fig. 9 is a section on line 9—9, Fig. 8. Fig. 10 is a section through the bracket members and clip, in one of the assembled forms.

Similar characters of reference designate similar parts in the drawings and specification.

The several members that are embodied in the improved device are so constructed that they admit of being assembled in a number of different ways, without departing from the nature of the invention, or changing the functions of the parts.

While the different members that make up my improved device, may be made of any suitable material, I prefer to make the principal parts of Norway iron, owing to its toughness and durability and to its imperviousness to changes of temperature.

In general, the improved device is made up of adjustable bracket members, adjustable brace members, means for connecting the brace members with the brackets, and means for retaining the several parts in the desired adjustment.

As the invention is particularly adapted to use in freight cars, I will describe it as so employed. First referring particularly to Figs. 1 and 2, the two bracket members 1 and 2, and the similar members 1^a and 2^a, are angular in cross-section, or are made of

the ordinary structural angle iron. They are provided with ears 1^a and 2^b at one end, by means of which they may be bolted to the upright supports *a*, on the interior of the car. They may be adjusted to accommodate them to a greater or less distance between the uprights *a*, through the medium of the registering holes 1^c and 2^c, in the flanges 1^a and 2^a, adapted to receive bolts 3.

The bracket members may be assembled as shown in Figs. 1, 2 and 4, with the flanges 1^c and 2^c extending in opposite directions, or it may be desirable in some cases to assemble them as shown in Figs. 3 and 10, in which one angle overlies the other, in which case the pitch line of the holes is differently located in the two flanges 1^a and 2^a, on account of the thickness of the overlapping flange 1^c. Clips 4 may be attached to the bracket members as shown in Figs. 4 and 10 for connecting said members with extra supports.

The brace member consists of the part 5, which is of the structural T shape, and the member 6, made of sheet metal, formed so that it will envelop the member 5, as best shown in Fig. 9, allowing a close sliding adjustment between the two members 5 and 6. The member 6 may be made to fit the member 5 so tightly that locking means will not be necessary, but to provide against the liability of looseness between the parts, which may be caused by wear or other causes, I provide clamping means. A convenient clamp consists of the extensions 6^a and 6^b, provided with bolts 6^c. Bolted, riveted or otherwise firmly attached to the free end of the member 5, is a bar 5^a, provided with a pin 5^b, extending at right angles therefrom. The pin 5^b is adapted for engagement with any of the holes 1^c or 2^c in the bracket members. The member 6 has a bar 6^a, similar to the bar 5^a, firmly attached thereto at its free end, and provided with a pin 6^b, also adapted for engagement with the holes in the bracket members.

It will be seen that the brace is adjustable to different widths of cars, as well as adjustable to various angles.

The invention has been described in its embodiment in freight cars, but the same combination of elements of substantially the same form and arrangement may be used for various purposes, and their functions be the same, I therefore do not wish it to be understood that I am confined to the detail construction herein described and shown, only so far as limited by the scope of the claims and the existing state of the art.

What I claim and desire to secure by Letters Patent is—

1. In a device for the purposes described

the combination of two brace members, the shank of one being adapted to slide longitudinally within the shank of the other; pins depending from the outer ends of said brace members; brackets adapted to be attached to supports; and a series of holes in said brackets to receive the pins.

2. In a device for the purposes described the combination of two brace members, the shank of one having a sliding longitudinal adjustment within the shank of the other; means for locking said members to each other; pins depending from the outer ends of said brace members; brackets adapted to be attached to supports, each of said brackets consisting of two members having a longitudinal sliding adjustment relative to each other; and a series of holes in said brackets to receive the pins on the brace members.

3. In a device for the purposes described the combination of two brace members, the shank of one having a sliding longitudinal adjustment within the shank of the other; pins depending from the free ends of the brace members; brackets provided with a series of holes adapted to receive the brace member pins; each of said brackets consisting of two members having a longitudinal adjustment relative to each other; and means for locking said bracket members to each other.

4. In a device for the purposes described the combination of longitudinally inter-sliding brace members; pins attached to the free ends of said members; longitudinally adjustable brackets adapted to support the brace members; a series of openings in said brackets adapted to receive the pins on the brace members, whereby said brace members may be adjusted at various angles relative to the brackets.

5. In a device for the purposes described the combination of longitudinally adjustable brackets; supporting clips adapted to be attached to said brackets; longitudinally adjustable brace members; and means for connecting said brace members with the brackets at various angles relative thereto.

6. In a device for the purposes described the combination of longitudinally adjustable brackets; supporting members at the ends of the brackets; flanges on said brackets; a series of openings in said flanges; longitudinally inter-sliding brace members; and depending pins attached to the free ends of said brace members adapted to enter the openings in the brackets.

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Witnesses:

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