

No. 878,198.

PATENTED FEB. 4, 1908.

J. B. FOLEY.

CAR RACK.

APPLICATION FILED JULY 31, 1907.

2 SHEETS—SHEET 1.

Fig. 1

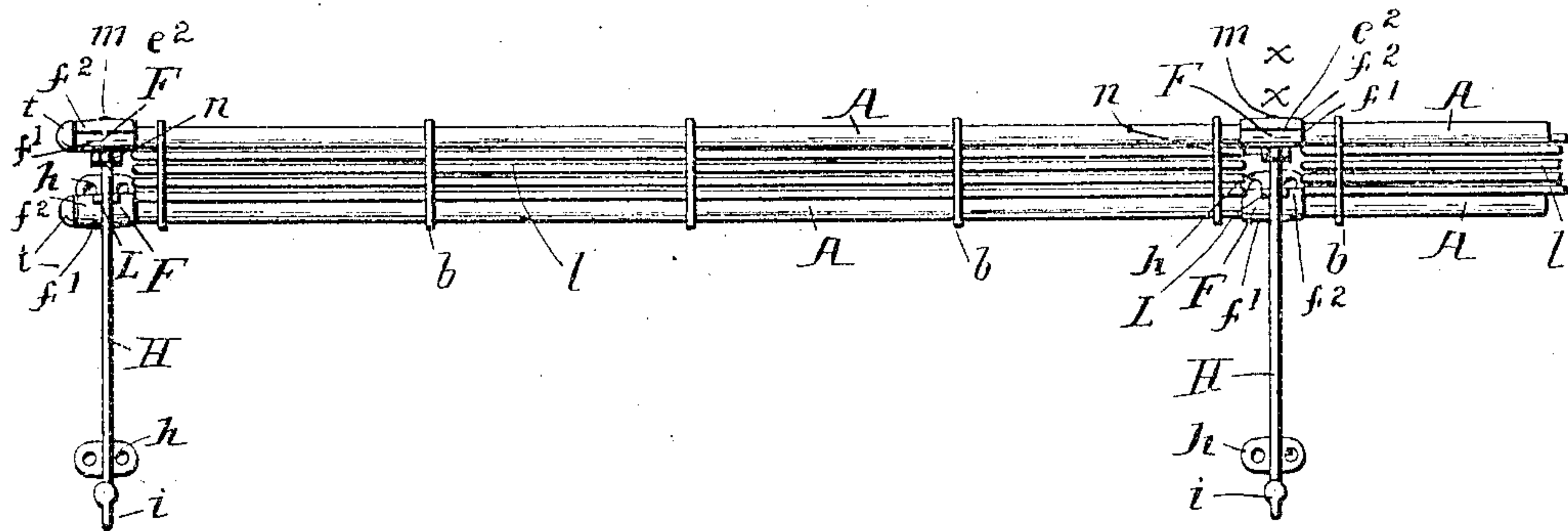


Fig. 2

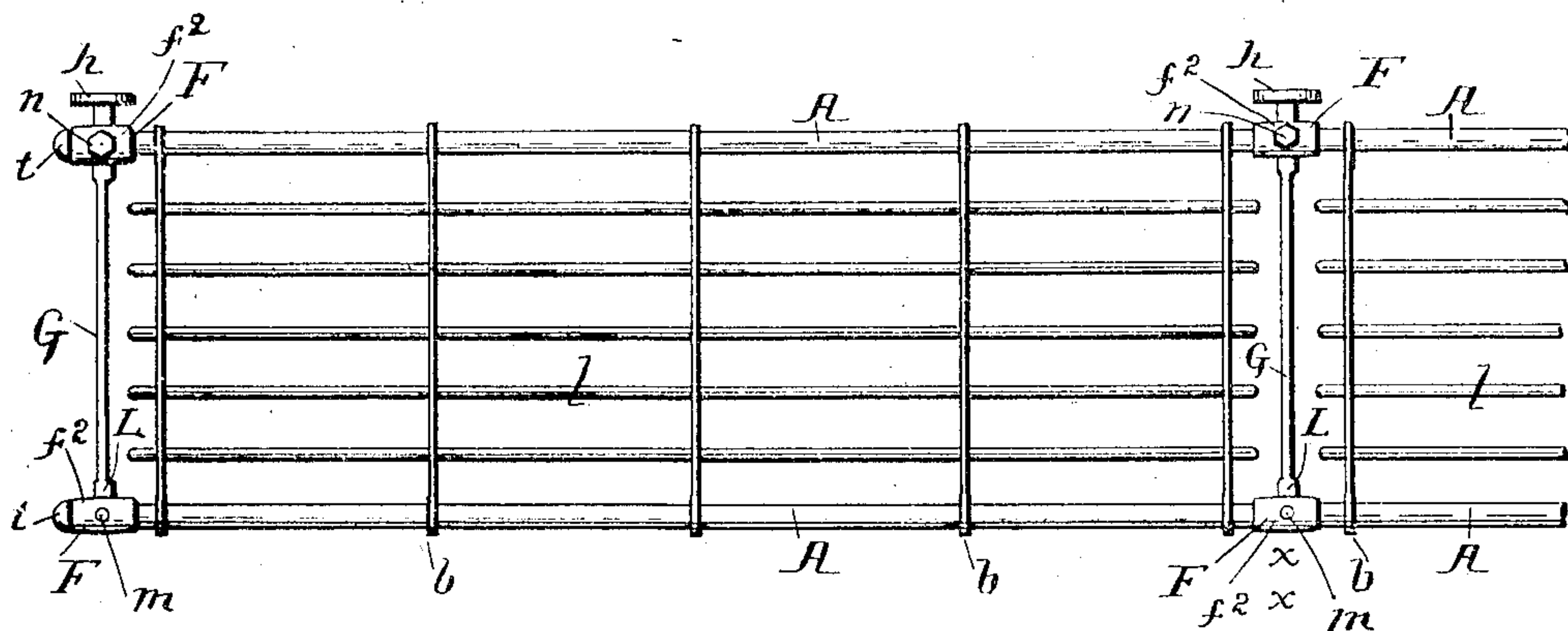
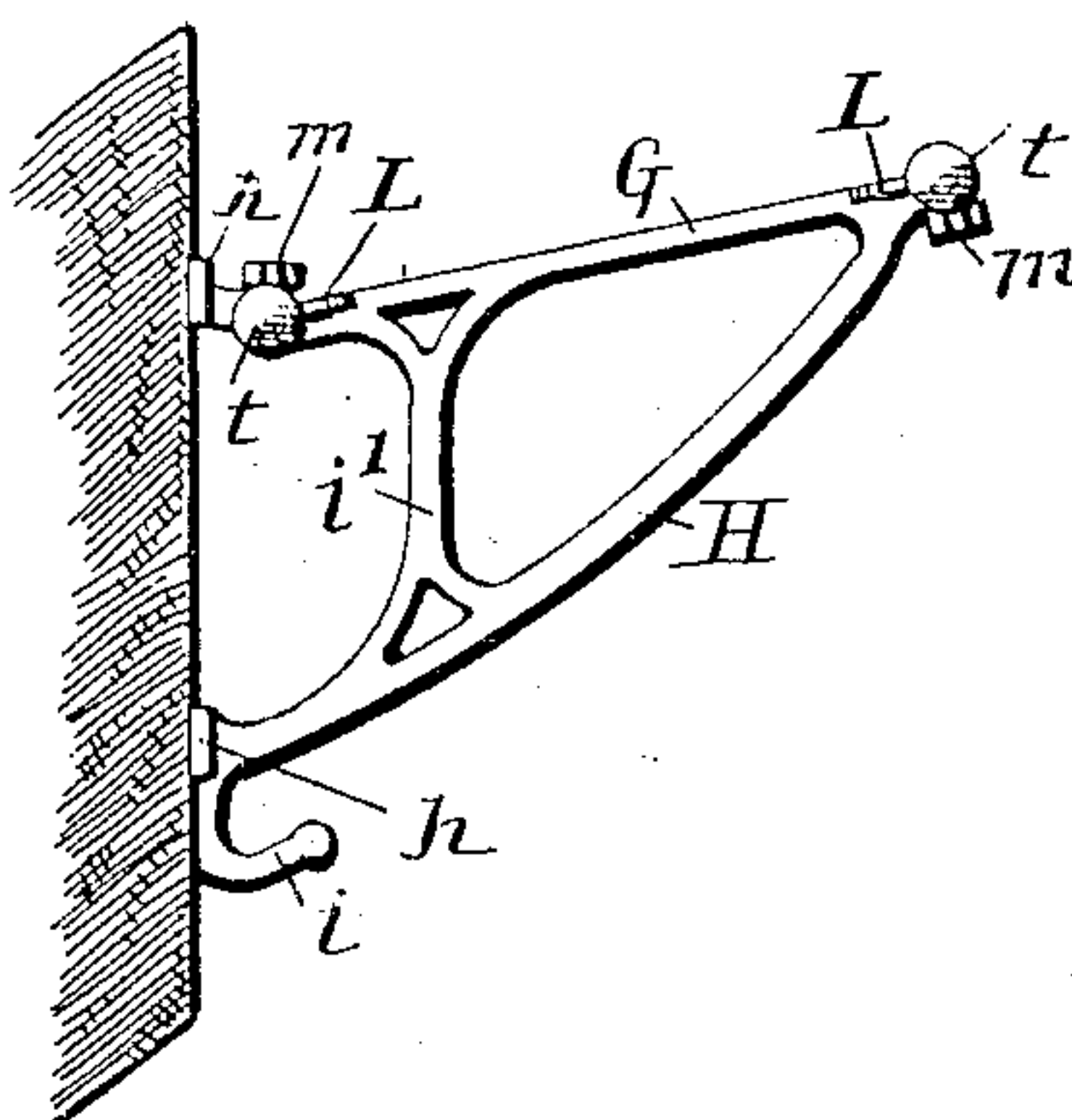


Fig. 3



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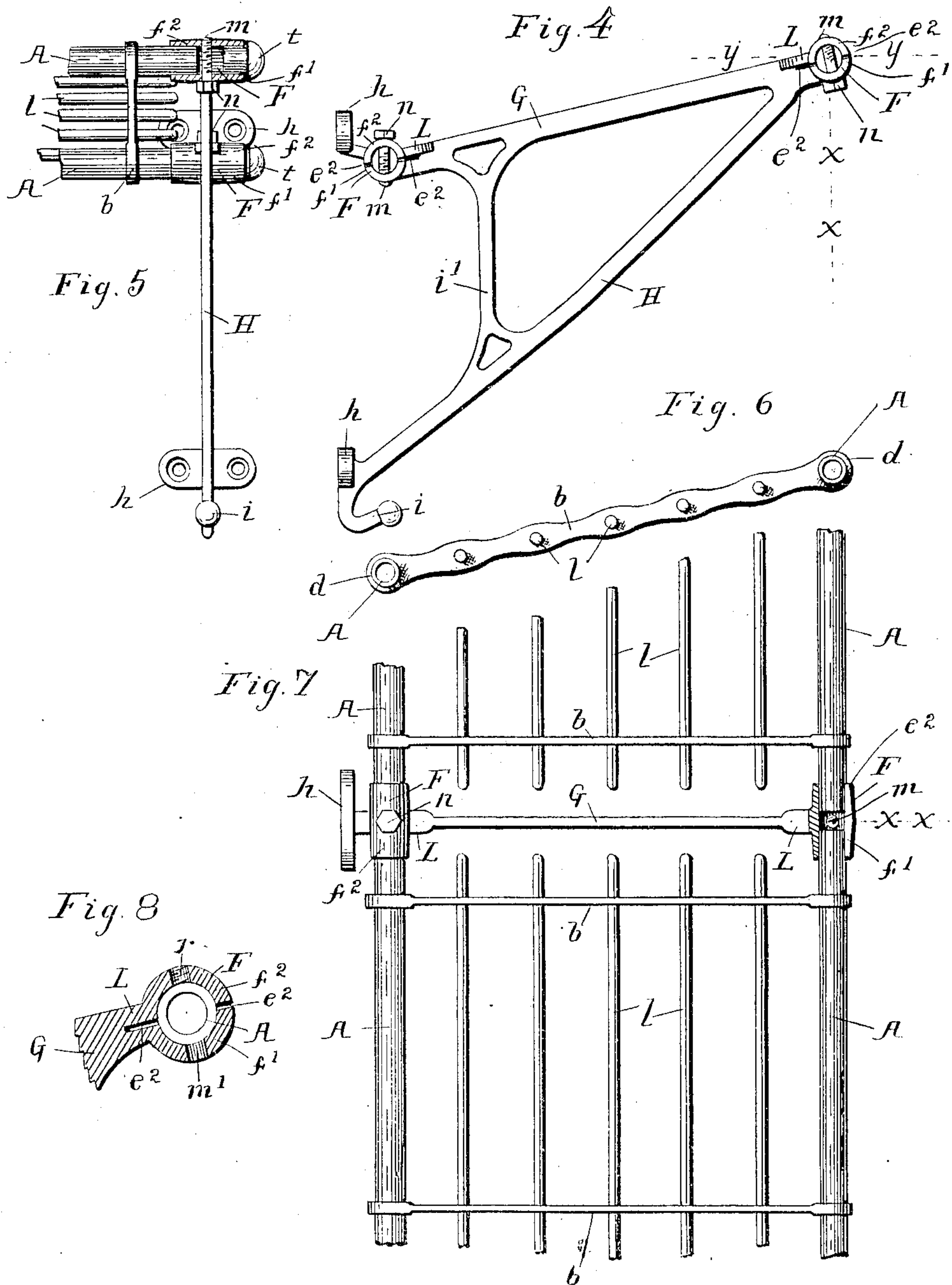
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UNITED STATES PATENT OFFICE.

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CAR-RACK.

No. 878,198.

Specification of Letters Patent.

Patented Feb. 4, 1908.

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To all whom it may concern:

Be it known that I, JOHN B. FOLEY, a citizen of the United States, and resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Car-Racks, of which the following is a full, clear, and exact specification.

My invention relates to an improvement in car racks and it has for its object primarily to provide a rack of a construction that permits the indefinite extension or coupling together of individual racks in a continuous series, any unit of which may be readily removed or detached without displacement of the other members of the system, and which shall present a continuous even or unobstructed holding surface or supporting area along the entire length of the series of racks.

The construction further has in view a limited longitudinal adjustment of the individual sections with reference to one another, while being securely held against material displacement or the possibility of working loose from their supports, and also strength and simplicity of design.

The improvement consists in the novel construction, arrangement and combination of parts as hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a front elevation of a car rack embodying my improved construction and Fig. 2 is a plan view of the same. Fig. 3 is an end elevation showing the manner of mounting the rack against the wall or side of the car. Fig. 4 is an enlarged view similar to Fig. 3 of one of the supporting brackets. Fig. 5 is a front elevation similarly enlarged of a bracket and small section of the body part of the rack with the outer bearing of the bracket cut in vertical lengthwise section on the line $x x$ of Fig. 4. Fig. 6 is an end view on the same scale as the two preceding figures of the body part of the rack. Fig. 7 is a plan view of the rack on a similar scale, but having the outer bearing cut in horizontal section on the line $y y$, Fig. 4. Fig. 8 is an enlarged central vertical cross section of the outer bearing of the bracket on the line $x x$, Fig. 7.

Referring to the drawings, the body part of my improved rack, and which by itself is old in the art, is shown to comprise the two parallel main rails, A, of rods or tubing as

may be preferred, connected by the cross bars, b through eyes, d , in the ends of which the rails are fitted, and a parallel series of intermediate smaller rods or tubes 1 fitted through the cross bars at substantially equal distances from one another and from each of the main rails, A. The rails and rods are fitted snugly in the cross bars, held by the metal of the bars being pinched or swaged upon them by hammer blows or pressure in a vise.

The supporting brackets for the said body part of the rack each comprises a pair of clamping bearing sockets, F, which receive the ends of the rails, A, of the body part, a girder member, G, connecting the bearings, a brace member, H, extended downward and rearward from the front end of the girder member and terminating in a hook, i , for suspending apparel or other articles, an upright supporting member, i' , connecting the girder and brace members in substantially triangular arrangement, and suitable perforated ears, h , at the rear ends of the girder and brace members by which the structure may be fastened or fixed to the wall or side of the car by means of screws, all integrally joined in a single casting or piece, as shown in Fig. 4.

The bearing sockets, F, are divided into two half sections by being sawed through diametrically on the plane of the girder member or body of the rack, that is, in a common plane extending through the axes of both bearing sections, f^1 , are joined to the girder by a sufficient depth of stock vertically to render them inflexibly fixed thereon, but the upper halves or compression sections, f^2 , are united thereto by a web, L, which is quite thin in vertical thickness, but expanded laterally as shown to a breadth sufficient to provide the requisite strength at the point of junction, and yet permit a certain amount of vertical flexibility due to the elasticity of the metal, for the purpose of compression upon the end of the rails of the body part as hereinafter described. The saw kerfs, e^2 , thus separating the section extend just underneath the webs, L, and to a sufficient horizontal distance to insure the metallic flexibility and vertical compression movement of the upper section above referred to.

Through the two opposed half sections of each bearing socket, F, a screw, m , is passed, having the body part underneath its

head, n , fitted freely through a perforation, m^1 , in one of the halves, with its head engaging the outer surface of said part of the bearing, and its screw threaded end screwed into a screw threaded perforation, r , in the opposite half. In the front bearing socket the screw is preferably passed upward through the parts, with its head bearing under the lower half section, f^1 , and in the rear bearing socket the screw is passed downward with its head bearing on the upper half section, f^2 .

In operation, the screws are adapted to compress the separate half sections of the bearing sockets together with powerful clamping effect, the thin webs of metal, L , uniting the upper sections with the girder members, readily permitting the vertical yielding or springing movement of those parts necessary to this purpose. The ends of the rails, A , of the body part of the rack are received in and supported by the bearing sockets, into which they are entered to nearly contact with the screws, and tightly clamped between the half section by the compression of those parts under the action of the screw. A small amount of clearance only is left between the rails and screws, whereby, when the brackets are secured in position on the wall of a car the screws act as stops to prevent longitudinal displacement of the rails in the bearing sockets even when loosely held therein, or with the half section not firmly clamped upon them, but said clearance space permits the racks to be readily set up or connected together without specially fitting the body parts of the rack to their places as to their length, and dispenses with the necessity for extreme accuracy in placing the brackets in position.

In the case of a single or individual rack, the body part thereof, comprising a pair of rails, A , with their cross bars, b , and the intermediate rods, 1 , all fastened together as hereinbefore described, is supported by a pair of the brackets, and the outer ends of the bearing sockets will be filled by suitable plugs, t , of the same size as the rails, and similarly gripped and held by the separate sections of the sockets. The plugs serve as abutments to insure parallelism of the half sections of the bearing sockets in their frictional contact with the rails, A , and may also be provided with an ornamental head to present a finished appearance to the structure.

When a series of the aforesaid individual rack sections are to be united in a continuous rack or structure, the contiguous ends of the rails of successive body parts of the series will be coupled together by the bearing sockets of a bracket common thereto, and received by and clamped between the opposite ends of the bearing sockets of such bracket, as shown at $x x$ in Figs. 7, 1, and 2. In such

coupling of parts, each of the brackets except the end brackets of the series will support a half length of each of the two contiguous rack sections which it couples. The separate half sections of a bearing socket in this arrangement will be clamped with equal pressure upon each of the two rail ends thus embraced by them, and said rail ends will approximately abut upon the clamping screw, m , passing between them. The position of the screw at the intersection of the central cross and lengthwise planes of the bearing sockets is the most advantageous for exerting uniform compression upon the meeting ends of the rails, and the screws act as stops throughout the series to positively secure the rails against displacement in their bearings. The end bearing sockets of the series of brackets will be supplied with the plugs, as in the case of the individual racks, hereinbefore described.

Any form of body part of rack may be employed in this construction, having rail ends or tenons adapted to enter the bearing sockets, whether such ends are parts of continuous rails or simply comprise projections upon a body part of a varied configuration from that shown. The removal of any individual rack of a series may readily be effected, after withdrawal of the clamping screws pertaining thereto, by unfastening one of the corresponding brackets and sliding it endwise of the rails sufficiently to uncover the joint between the rails.

The construction of the brackets as aforesaid, having the girder members thereof uppermost and in the plane of the body part of the rack, with the brace and upright tie members beneath them, provides an even or unobstructed upper or supporting surface to the rack throughout its entire length, so that no restriction is imposed to the length of articles laid thereon.

I claim as my invention:

1. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails of the body part of the rack, and means for clamping the compression sections together and gripping them upon the rails.

2. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails, and clamping screws connecting the compression section and adapted to force them together and grip them upon the rails.

3. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails, and clamping screws connecting the respective halves of the bearing sockets through the bore thereof, to clamp them together and upon the rails.

4. In car rack construction, a bracket provided with half bearings or sections forming

a rigid component part thereof for supporting the rack rails, and yielding half bearings or sections forming integral bearing sockets in combination with the supporting sections, 5 and connected with and clamped thereto by compression screws secured through the half sections in the bore of the socket and forming stops for the rack rails.

10 5. In car rack construction, the combination of a body part provided with parallel end tenons, and brackets provided with bearing sockets receiving the end tenons of the body part, the bearing sockets comprising half bearings or sections clamped together 15 and upon the end tenons or rails by clamping screws secured through the respective sections in the bore of the sockets adjacent the ends of the tenons.

20 6. In continuous rack construction the combination of a body part provided with parallel end tenons or rails, a bracket provided with half bearings or sections for supporting the rails or end tenons of the body part, clamping half bearings or sections 25 seated upon the tenons and forming bearing sockets therefor in combination with the supporting half bearings, the respective sections of the bearing sockets being clamped together and upon the end tenons by clamping 30 screws secured through the half sections in the bore of the sockets between the end tenons of contiguous racks.

35 7. In a continuous car rack composed of individual sections joined together, the combination of the body parts provided with the end tenons or rails, the brackets provided with supporting bearings therefor and clamping bearings forming bearing sockets with the supporting sockets, and the compression 40 screws secured through the respective sections of the bearing sockets in the bore of the sockets to clamp the sections together and upon the rails and form stops to prevent the endwise displacement of the rails in their 45 bearings, substantially as and for the purpose specified.

8. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rack rails in combination with clamp- 50 ing screws secured through the respective halves of the bearing sockets at the intersection of the cross and lengthwise planes thereof, and adapted to clamp the parts together and upon the rack rails, substantially 55 as and for the purpose specified.

9. In car rack construction, a bracket provided with half bearings or sections forming a rigid component part thereof for supporting the rack rails, and yielding half bear- 60 ings or sections integral with the bracket and forming bearing sockets in combination with the supporting sections, in combination with compression screws secured through the half sections in the middle cross plane and bore 65 thereof and constituting abutments or stops for positively holding the rack rails in position in the bearing, substantially as and for the purpose specified.

10. In a continuous car rack composed of 70 individual sections joined together, the combination of the body parts provided with the end tenons or rails, the brackets having their upper sections provided with supporting bearings therefor and clamping bearings 75 forming bearing sockets with the supporting sockets, and the compression screws secured through the respective sections of the bearing sockets in the bore of the sockets to clamp the sections together and upon the 80 rails and form stops to prevent the endwise displacement of the rails in their bearings, forming a continuous rack having its supporting surface even and unobstructed throughout, substantially as and for the pur- 85 pose specified.

Signed by me at New Haven, Connecticut,
this 23rd day of July, 1907.

JOHN B. FOLEY.

Witnesses:

WALTER H. ALLEN,
GEORGE L. BARNES.