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Patented Aug. 16, 1898.

G. A. AKERLIND & J. T. CARROLL.

CAR TRANSOM.

(Application filed July 16, 1897.)

(No Model.)

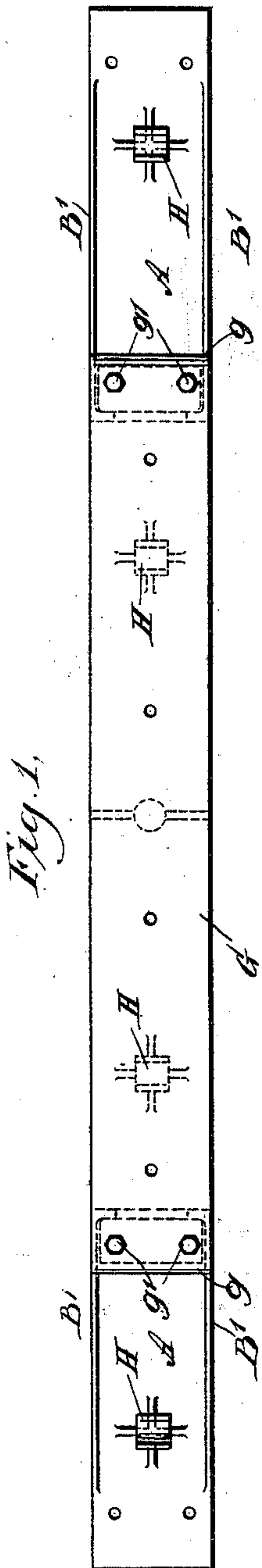


Fig. 1.

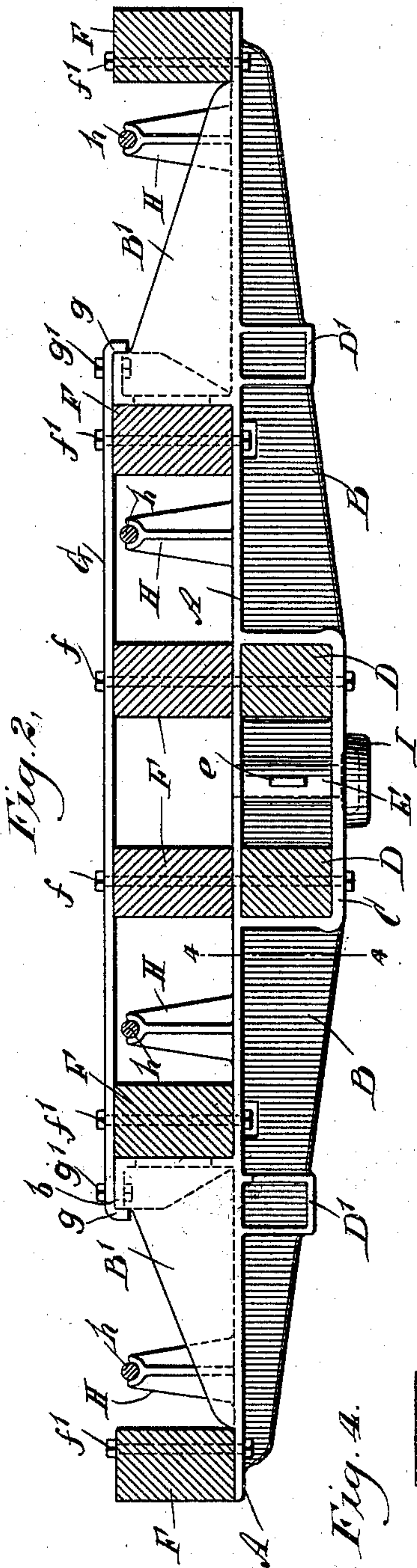


Fig. 2.

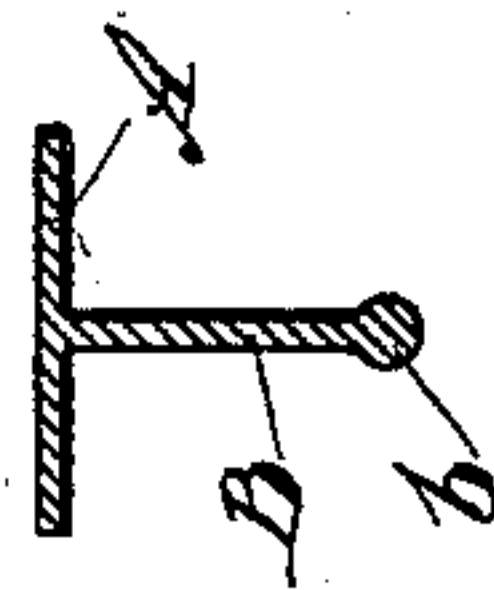


Fig. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

GUSTAF A. AKERLIND AND JOHN T. CARROLL, OF CHICAGO, ILLINOIS.

## CAR-TRANSON.

SPECIFICATION forming part of Letters Patent No. 609,323, dated August 16, 1898.

Application filed July 16, 1897. Serial No. 644,774. (No model.)

*To all whom it may concern:*

Be it known that we, GUSTAF A. AKERLIND and JOHN T. CARROLL, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Car-Transom, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in car-transoms, or the sills to receive the king-bolts at each end of the car and support the weight of the car; and it has for its object to construct a transom the major part of which may be cast in a single piece and furnish bearing-surfaces for the floor-beams, sockets for the draft-beams, and also side bearings and a center plate and which shall at the same time increase the effective depth of the beam, and consequently its strength, and permit the use of a wrought-iron or steel tension member which passes over the floor-beams.

Our invention consists of the particular construction which will be pointed out and specifically claimed hereinafter.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a top plan view of the transom. Fig. 2 is a side elevation thereof, showing the floor and draft beams in position and in section. Fig. 3 is a bottom plan view, and Fig. 4 is a section upon the line 4 4 of Fig. 2.

The main part of the transom is constructed of metal and in a single piece and consists of the top horizontal plate A and the vertical web B, which latter is beneath the plate A. Near the center of the beam a horizontal plate C extends along the lower portion of the web B and is connected at each end by a similar transverse web to the upper plate A. Each end of the space inclosed by the transverse web or plate C is open, providing a socket for the draft-beams D. The central portion of the space between the draft-beams D contains the cylindrical socket E for the king-bolt. Said socket is transversely apertured at *e* to receive a key, which will pass through the king-bolt and prevent its being accidentally removed from the socket. The cylindrical socket is also extended below the center plate, forming a center bearing or lug

I, adapted to enter a socket in the top of the truck-bolster.

At about the middle of the distance between the sockets for the draft-beams D and the ends of the beam are formed the side bearings D' to meet the side bearings on the truck-bolster (not shown) should the car be overladen, so as to deflect the transom beyond a certain distance. Upon the top surface of the horizontal plate A near each end is formed a buttress B'. This consists of a vertical flange or flanges connected to the top plate A or the main part of the transom and terminating in such a manner as to form a side support for the floor-beams F and to receive a truss bar or rod G, which securely connects the buttresses on each end of the transom, thereby forming a tension member and securing a proper distribution of the stresses. This tension member is in the drawings shown as a flat bar or plate, of wrought-iron, steel, or other suitable material, and at each end has a hook or downward projection *g*, adapted to snugly engage the outer vertical surfaces upon the upper portion of the buttresses B'.

The tension-plate G is shown secured to the buttresses by means of bolts *g'*; but it will be understood that the truss-rod may be adjustable and may be round in cross-section or square or rectangular. The tension-plate or truss-rod G is also secured to the inner floor-beams F by bolts *f* and *f'*. The central bolts *f* are passed through the tension-plate G, the innermost floor-beams F, the lower portion C of the transom, and the draft-beams D, thus binding the whole securely together. This construction makes the lower portion B of the transom, which is in compression, of cast metal, which is well adapted to resist compression strains, and the upper member, which is under tension, of wrought iron or steel or other suitable material which is best adapted to resist tensile strains. It also materially increases the depth of the transom, and consequently its strength, and makes the parts which constitute the transom of very much greater strength than those of the ordinary form, or, if made of equal strength, they would be of much less weight.

The lower edge of the vertical web B is preferably made slightly enlarged, as shown at *b* in Fig. 4. This increases the strength of



the member and its resistance to compressive strains. Lugs or brackets H are placed upon the upper surface of the plate A to receive the longitudinal truss-rods  $h$  of the car-frame.

- 5 These lugs or brackets may be cast as a part of the upper member of the transom or bolted thereon, as desired. This construction of transom makes it possible to build up the transom of a small number of pieces and dis-  
10 tributes the material in a form well adapted to resist the strain.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

- 15 1. A car-transom, comprising a beam having through-sockets for the draft-timbers, buttresses rising from said beam near its outer ends, and a truss rod or plate fixed to the buttresses and extending over the interme-  
20 diate floor-beams, substantially as described.

2. In a car-transom, the combination of a beam, the top whereof consists mainly of a horizontal top plate, and a vertical web be-  
25 neath the center portion, having a transverse plate at the bottom of the web extending at each end upward to the top plate, the part inclosed by said plate or web having through-sockets for the reception of the draft-timbers, the top plate near each end having a buttress  
30 rising therefrom, and a tension-plate attached to the tops of both buttresses, substantially as described.

3. In a car-transom, the combination of a beam, the top whereof consists of a horizontal

top plate, and a vertical web beneath the cen- 35  
tral portion having a transverse plate at its bottom extending at each end upward to the top plate, the part inclosed by said plate hav-  
ing a through-socket at each end for the re- 40  
ception of the draft-timbers, a central socket for the king-bolt, having a keyway there-  
through, the top plate near each end having a buttress rising from the top thereof, and a  
tension-bar attached to the tops of both but- 45  
tresses, substantially as described.

4. In a car-transom, the combination of a beam, the body whereof consists mainly of a horizontal top plate with lugs or supports for the longitudinal truss-rods of the car, a ver-  
tical web beneath said top plate and having 50  
side bearings attached thereto, the central portion of the beam having a transverse plate at its bottom extending at each end upward to the top plate, the part inclosed by said  
plate having a through-socket at each end for 55  
the reception of the draft-timbers, a central socket for the king-bolt, a central bearing-  
ring projecting beneath the beam and con-  
centric with said socket, the top plate near  
each end having a buttress rising from the top 60  
thereof, and a tension-truss attached to the tops of both buttresses, substantially as de-  
scribed.

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Witnesses:

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