No. 858,981. PATENTED JULY 2, 1907.

J. L. HECHT.

RUNNING GEAR FOR VEHICLES.

APPLICATION FILED APR. 27, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

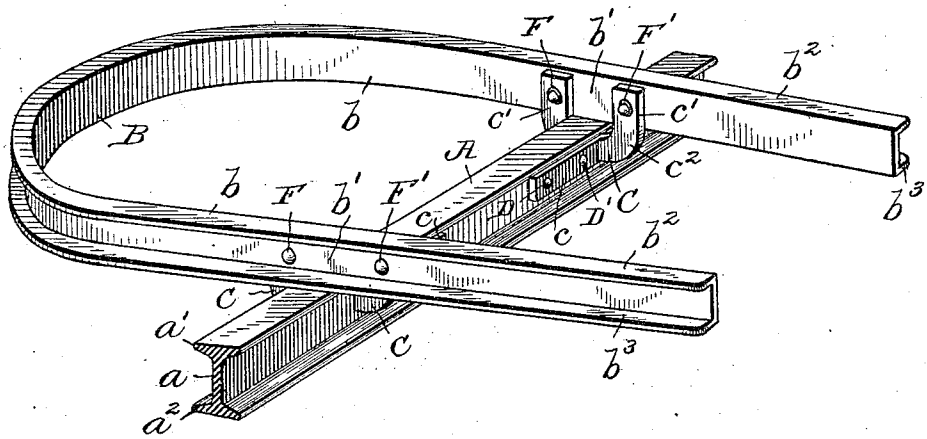
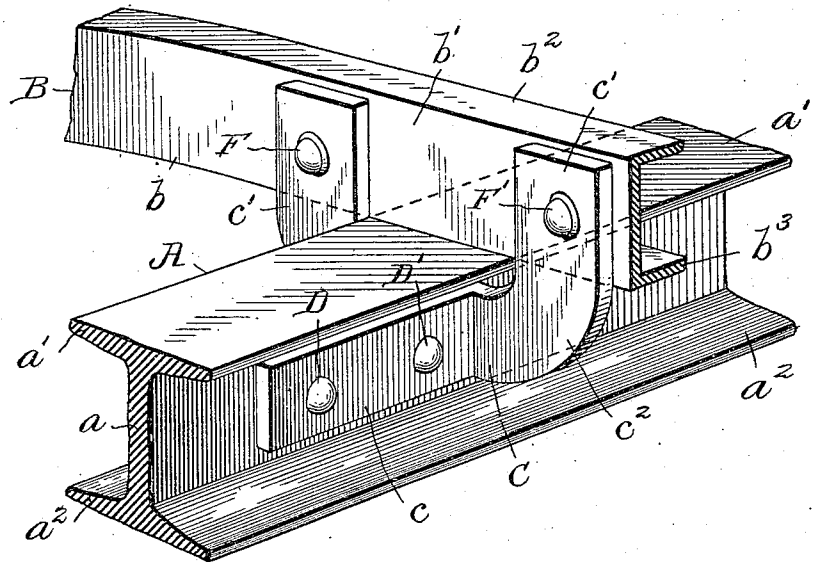


Fig. 2.



WITNESSES.

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J. L. Hecht

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Fig. 3.

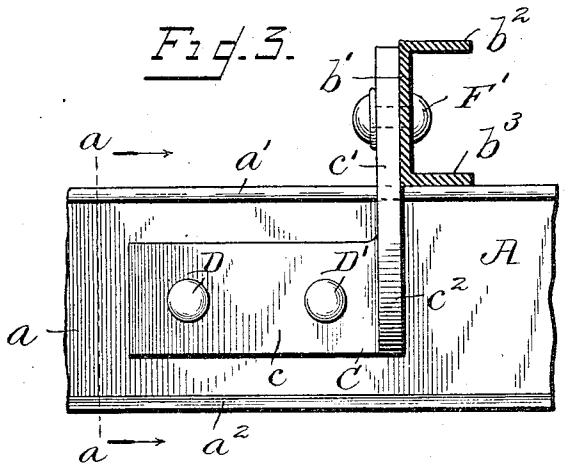


Fig. 4.

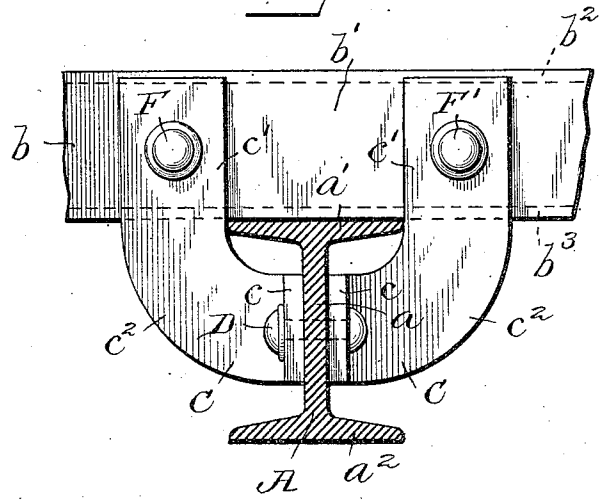
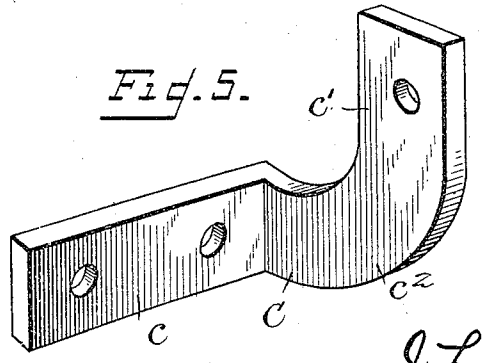


Fig. 5.



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JOSEPH L. HECHT, OF DAVENPORT, IOWA, ASSIGNOR TO DAVENPORT WAGON COMPANY, A CORPORATION OF IOWA.

RUNNING-GEAR FOR VEHICLES.

No. 858,981. Specification of Letters Patent. Patented July 2, 1907.

Application filed April 27, 1906. Serial No. 313,972.

To all whom it may concern:

Be it known that I, JOSEPH L. HECHT, of Davenport, county of Scott, and State of Iowa, have invented a new and useful Improvement in Running-Gear for Vehicles, of which the following is a specification.

This invention relates to structural iron work, and is designed with special reference to metal wagon running gear construction, for effecting a firm and rigid connection between the flanged members or parts of which the gear is made.

In certain forms of metal wagon gear, the axle is made from a section of flanged bar with a vertical web and a horizontal lateral flange, such for instance as an I-beam, and the hounds are formed from a bar, seated on the horizontal flange of the axle and firmly fixed thereto by a connecting member in the form of a plate riveted to the hounds and axle respectively.

My invention is directed to the form and construction of the connecting plate, and the manner of applying the same to the parts to be connected; and the invention consists of a bracket plate provided with a vertically arranged longitudinal portion, seated and secured against the side of the web of the axle, and having an integral extension arranged in a plane bearing an angular relation to that of the longitudinal portion, which extension is seated and secured against the side of the hounds, the said plate thus serving to maintain the hounds firmly and fixedly in position on the axle, and in angular relation thereto.

The invention consists also in the details of construction and combination of parts hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of an axle and hounds connected together by my improved bracket plates. Fig. 2 is a perspective view on an enlarged scale of one end of the hounds and the adjacent portion of the axle, showing how the bracket plates are connected to said parts. Fig. 3 is an end elevation of the same. Fig. 4 is a transverse vertical sectional elevation on the line *a*—*a* of Fig. 3, looking in the direction of the arrow in said figure. Fig. 5 is a perspective view of one of the bracket plates detached.

Referring to the drawings:—A represents a metal axle, B the hounds formed with the side members *b* extending above and transversely of the axle, and seated thereon. C represents the connecting plates riveted to the axle and hounds respectively, and maintaining said parts in fixed relations. In the present instance, the axle is formed from a section of an I-beam, having a vertical central web *a*, an upper horizontal flange a', and a lower horizontal flange a^2. The hounds, in the present instance, are formed from a single section of a channel bar, having a vertical web b' and upper and lower horizontal flanges b^2 and b^3, the latter being seated on the upper flange a' of the axle and extending in a direction transversely of the axis of the axle.

The bracket plates C are each provided with a lower vertically arranged longitudinally extending portion *c*, and a vertically arranged upward extension c' disposed in a plane extending at right angles to that of the portion *c*, and joining the end of the portion *c* by an inward curvature c^2. The longitudinally extending portion *c* of the bracket plate is adapted to be seated against and firmly secured to the web of the axle, while the upward extension of the plate is adapted to be seated against and firmly secured to the web of the overlying hounds. As shown in Fig. 4, the plates have their longitudinal portions seated against the opposite sides of the web of the axle and firmly fastened thereto by means of rivets D, D′ passing through the longitudinal portions of the plates, and the intermediate web, the upward extensions of the plates extending outward and upward around the edges of the flange a', and being riveted to the inner side of the vertical web of the hounds, by means of rivets F, F′ extending through the vertical extensions of the plates, and the web of the hounds.

It will be observed from the construction described that, by reason of the connection of the bracket plates with the vertical web of the axle, the upper flanges of the latter are left intact and are free from holes or recesses. Consequently, as the sustaining strength of bars of this form resides mainly in the flanges, the full strength of the axle is unimpaired, and in a most favorable condition to withstand, without breakage or bending, the severe strains to which they are in practice subjected.

While I have illustrated and described my invention as peculiarly applicable to the construction of the running gear of wagons, it will be understood that it may be used for other purposes in iron work construction, where the conditions are substantially as above described.

It will be noted that in the construction described the two parts of the connecting bracket plate, where they are applied respectively to the two members which they connect, are disposed in planes extending one transversely with respect to the other, but both planes being vertical.

On reference to Fig. 5, it will be seen that the connecting member which unites the I-beam axle and the overlying hound, is an integral unitary structure, comprising a longitudinal limb *c* and an upward extension c', which latter extends in a plane disposed transversely to the plane of the portion *c* and is offset to one side of

said portion c, so that the latter may be applied to the web of the I-beam, and the extension c' applied to the side of the hound, the offsetting of the latter avoiding any interference with the flange of the I-beam. It is seen therefore that the extension c' while in a plane transverse to that of the longitudinal portion c, is out of alinement or to one side of said longitudinal portion, the edges of the extension being parallel with the face of the longitudinal portion.

Having thus described my invention, what I claim is:—

1. In combination with a horizontal bar having a vertical web and a lateral flange, a transversely extending member seated on the flange of the bar, and a connecting plate comprising integrally united limbs disposed both in vertical planes, but arranged at relative angles to each other, one of said limbs being fixed to the vertical web of the bar, and the other limb being fixed to the side of the transverse member.

2. In a running gear for wagons, the combination of an axle having a vertical web and a horizontal flange, hounds extending transversely of the axle and seated on the flange thereof, and a one piece connecting plate formed with a longitudinal portion seated and secured against the side of the web, and with an upward extension disposed transversely with reference to the longitudinal portion and seated and secured against the side of the hounds.

3. In a running gear for wagons, the combination of an axle having a vertical web and a horizontal laterally extending flange, hounds seated on the flange and extending transversely of the axle, and connecting plates each made in one piece and provided with a longitudinally extending portion fastened to the web, and with an upwardly and outwardly extending transverse portion fastened to said hounds, said portions of the connecting plate being disposed in vertical planes but arranged at relative angles.

4. In a running gear for wagons, the combination of an axle having a vertical web, and outwardly extending flanges at its top, hounds seated on said flanges and extending transversely of the axle, and a pair of one piece connecting plates formed with horizontal longitudinally extending portions riveted to the opposite sides of the web, and having outwardly and upwardly extending transversely disposed portions riveted to the side of the hounds.

5. In a running gear for wagons, a one piece connecting plate for securing the hounds to the axle, said plate comprising a longitudinally extending portion adapted to be fastened to the axle, and an upward transversely disposed extension adapted to be fastened to the side of the hounds, said longitudinally and transversely extending portions being arranged in vertical planes.

6. In combination with a bar having a vertical web and a lateral flange, a member seated against said flange and extended in a plane at right angles to the bar, and a connecting plate provided with a pair of rigidly connected portions disposed in planes at right angles to each other and adapted to seat respectively against the side face of said web and the side face of the member, the portion of the connecting plate which bears on the side face of the member being disposed in a plane beyond the edge of said lateral flange.

7. The improved connecting member for uniting in angular relations the flanged parts of structural iron work, said connecting member consisting of a unitary integral structure having a longitudinal portion adapted to be fastened to one of the flanged parts to be connected, and having an extension offset from the longitudinal portion and disposed transversely with reference to the same, the edges of said extension being parallel with the face of the longitudinal portion.

In testimony whereof I hereunto set my hand this ninth day of April, 1906, in the presence of two attesting witnesses.

JOSEPH L. HECHT.

Witnesses:
M. LOUISE DODGE,
ANDREW NEILSON.