

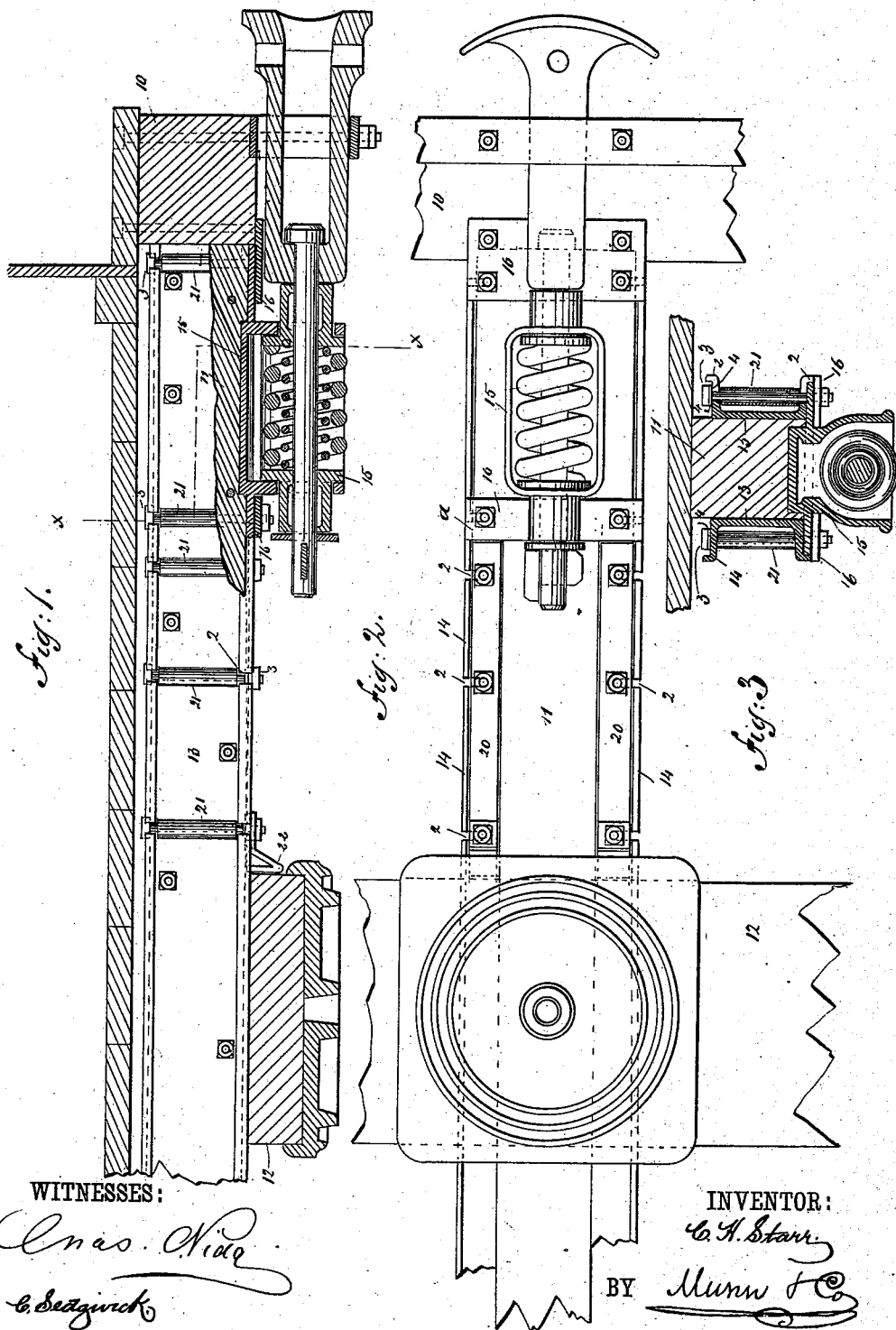
(No Model.)

C. H. STARR.

DRAW GEAR FOR RAILWAY CARS.

No. 382,840.

Patented May 15, 1888.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES H. STARR, OF LOGANSPORT, INDIANA.

## DRAW-GEAR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 382,840, dated May 15, 1888.

Application filed July 13, 1887. Serial No. 244,195. (No model.)

### *To all whom it may concern:*

Be it known that I, CHARLES H. STARR, of Logansport, in the county of Cass and State of Indiana, have invented a new and Improved Draw-Bar Connection for Railway-Cars, of which the following is a full, clear, and exact description.

This invention relates to draw-bar connections, the object of the invention being to provide for the connection of the draft-irons to the draft-sill in a manner so that the flooring of the car will not be interfered with, and in a manner so that any broken connecting-bolt may be readily replaced; and to this end the invention consists, essentially, of a pair of flanged channel-irons, in the flanges and sides of which are formed transverse gains or slots to receive the bolts by which the draw-spring cage and the bolster-bearing are bolted to position, the channel-irons being arranged for connection with the draft-sill, as will be hereinafter more fully described, and specifically pointed out in the claims.

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

Figure 1 is a central longitudinal sectional view through the draw-head and the draw-spring cage, a portion of the channel-iron being broken away to disclose the arrangement of the parts. Fig. 2 is an inverted plan view of a draw-bar connection arranged in accordance with the terms of my invention, and Fig. 3 is a sectional view taken on line *xx* of Fig. 1.

In the drawings, 10 represents the end sill, 11 the draft-sill, and 12 the body bolster, of an ordinary form of car. To the sides of the draft-sill 11, I bolt channel-irons 13, with outwardly-extending flanges 14, and in these flanges 14 are formed gains or slots 2, through which there are passed bolts 3, by which the draw-spring cage 15 is held to place beneath the sill 11, the lower flanges on the channel-irons being gained out to receive the plates which hold the draw-spring cage in position, and the upper sides of the channel-irons may be either countersunk or inclined downward and inward toward the sill; but I prefer to flange both the upper and lower sides of the

channel-bars, as shown in the drawings. The bolts 3 not only pass through the flanges and sides of the channel-irons 13, but also pass through apertures formed in plates 16, that are arranged, as usual, in connection with the draw-spring cage.

In order that the channel-irons 13 may be held against any backward pressure, I provide braces 20, which consist of bars of iron that are bolted to place between the lower flanges 14 on the channel-irons 13, the rear ends of these bars being bent over to form shoulders 22, which bear against the bolster 12.

From the construction described it will be seen that the buffing and pulling strains are much more evenly distributed upon the draft-sill, and that such sill is at the same time greatly strengthened and stiffened, and it will also be seen that the flooring of the car is left intact, and that in case of the accidental breakage of any of the connecting-bolts such bolts may be quickly and conveniently replaced.

In order that the channel-bar 13 may be stiffened and strengthened, I provide sleeves 21, which closely abut against its approaching faces, and in order that a certain amount of elasticity may be imparted to the connection I prefer to arrange rubber washers 4 as shown in Fig. 3.

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

1. As a new article of manufacture, a channel-bar having outwardly-extending flanges, the flanges and sides of which are provided with transverse gains or slots, substantially as described.

2. An improved channel-bar having outwardly-extending flanges and provided with transverse slots in the sides and flanges, the said slots being of a sufficient depth to allow the head of a bolt to drop down behind the said flanges when a bolt is inserted in the said slots, substantially as herein shown and described.

3. The combination, with channel-bars with outwardly-extending flanges and a means of connecting said bars with the draft-sill of the car, of bolts passing through transverse gains or slots formed in the flanges and sides of the

channel-bars and bolster-bearings, being held to place by bolts and the lower flanges on the channel-bars, substantially as described.

4. The combination, with channel-bars 13,  
5 a means for connecting said bars to the draft-sills of a car, of bolts 3, which pass through gains or slots 2, formed in the flanges and sides of channel-bars 13, substantially as described.

5. The combination, with the spring-cage 15,

provided with apertured plates or flanges 16, 10 of the channel irons 13, having outwardly-extending flanges and provided with slots 2 in the sides and flanges, and the bolts 3, substantially as herein shown and described.

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Witnesses:

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