G. A. HILLER.

DRAFT BAR.

APPLICATION FILED DEC. 12, 1918.

1,313,381.

Patented Aug. 19, 1919.

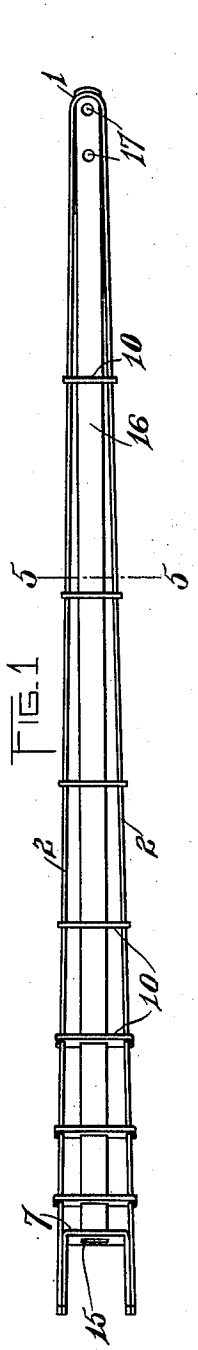


FIG. 1

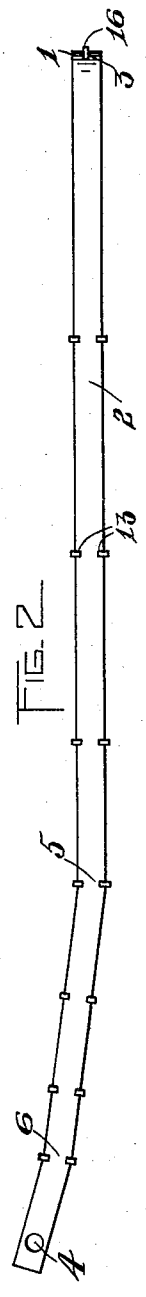


FIG. 2

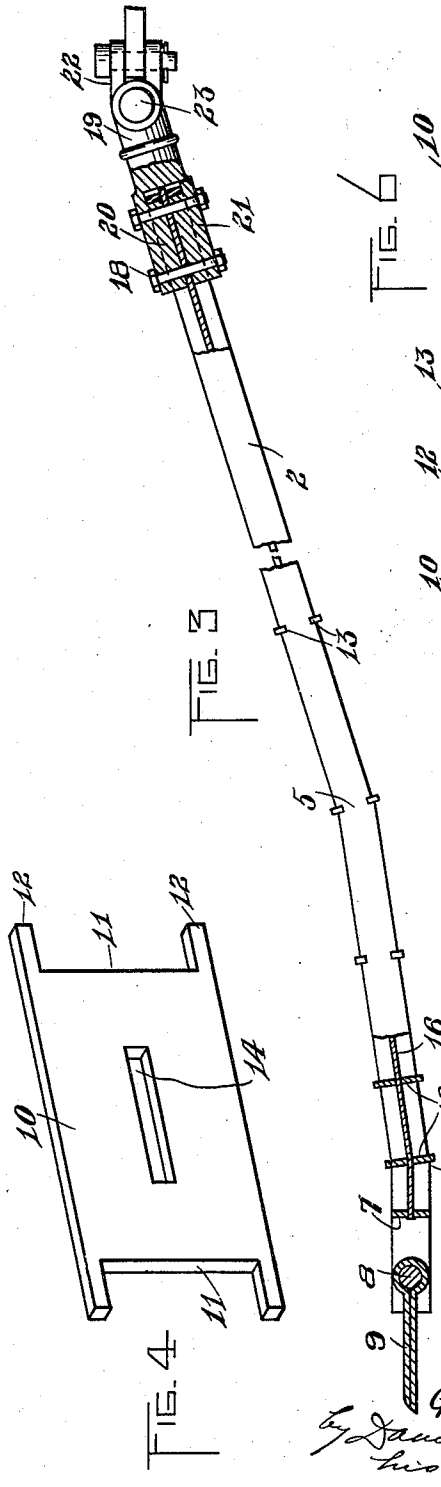


FIG. 3

FIG. 4

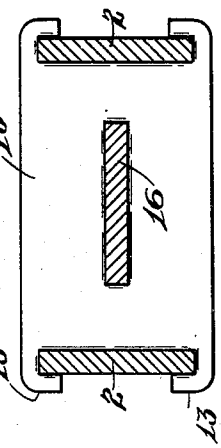


FIG. 6

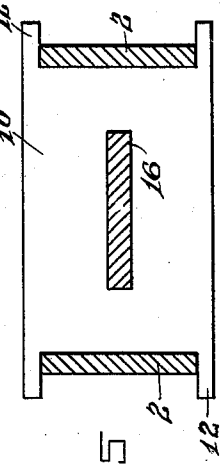


FIG. 5

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DRAFT-BAR.

1,313,381. Specification of Letters Patent. Patented Aug. 19, 1919.

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To all whom it may concern:

Be it known that I, GEORGE A. HILLER, a citizen of the United States, and resident of East Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Draft-Bars, of which the following is a specification.

The present invention relates to draft bars of the type employed for connecting two vehicles so that one may be drawn by the other, an object of this invention being to provide a strong and durable structure which shall have a minimum weight.

To this and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:—

Figure 1 is a plan view of the draft bar;

Fig. 2 is a side view;

Fig. 3 is an enlarged view partially in section;

Fig. 4 is a perspective view of one of the transverse brace plates before it is applied;

Fig. 5 is an enlarged transverse section, through the draft bar on the line 5—5, Fig. 1, showing one of the transverse plates before it is fastened to the bar; and

Fig. 6 is a view similar to Fig. 5, showing the brace plate secured to the draft bar.

According to the illustrated embodiment of this invention, the draft bar comprises a strip of flat stock bent between its ends at 1 to form two diverging arms 2, said stock being provided with an opening 3 at the bend 1, and with openings 4 at its free end, the openings 4 being axially alined. Between its ends the arms or diverging portions 2 may be bent slightly edgewise of the stock, as at 5 and 6, in order that when the draft bar is in use one end of the bar may lie in a higher plane than the other end, as shown in Fig. 3.

Between the free ends of the diverging portions may be introduced a U-shaped piece 7 which has its arms welded or otherwise secured to the diverging portions and provided with openings which aline with the openings 4 of the diverging portions 2, in order that a pin 8 may be positioned in the openings for connecting to a strap 9 or other device on one of the vehicles.

Between its bent portion 1 and the U-shaped piece 7, the diverging portions of the flat stock may be connected by braces 10 which, in this instance, are in the form of plates having recessed sides 11 forming tongues 12 on opposite sides of the recesses. These recesses receive the diverging portions 2, and the tongues 12, formed by the recesses, are bent over the outer faces of the diverging portions 2 in the manner shown at 13 in Fig. 6, after which all of the contacting faces of the brace plates or pieces 10 are welded to the diverging portions 2. These brace plates are each provided with an opening or slot 14, and an opening or slot 15 is provided in the connection between the arms and the U-shaped piece 7.

Through the openings 14 and the opening 15, as well as the opening 3 in the bend 1 of the flat stock 2, a longitudinally extending brace piece 16 is arranged. This longitudinally extending brace piece is preferably also made of flat stock, and its faces are perpendicular to the flat faces of the flat stock forming the diverging portions 2. The longitudinally extending brace piece 16 is welded to each of the brace blocks, as well as to the U-shaped piece 7, and to the bend 1 of the flat stock forming the diverging portions 2.

Near the bend 1 the longitudinally extending brace piece 16 may be provided with two openings 17 through which are passed bolts 18, which are employed for securing a clip 19. This clip may be formed of a body part having a projection 20 received between the diverging portions 2 adjacent the bend 1, this projection abutting the bend and the opposed inner faces of the diverging portions 2 on the upper side of the brace piece 16. A removable piece 21 is held to the body part 19 by the bolts 18, and fits snugly on the under side of the longitudinally-extending brace piece 16 in abutment with said brace piece, the bend 1, and the faces of the diverging portions 2. A shackle 22 may be pivotally connected at 23 to the clip 19 for connection with another vehicle.

From the foregoing it will be seen that there has been provided a strong and durable structure of light skeleton formation. This structure, in this instance, is made entirely from flat stock and the pieces are

formed and arranged so that the tendency to bend the bar, due to lateral strains or stresses, is overcome.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A draft bar comprising a strip bent between its ends to form two diverging portions, a U-shaped piece fitted between the free ends of the flat stock, transverse brace pieces connecting the two diverging portions, and a longitudinally extending brace piece arranged between the diverging portions connected at one end to the U-shaped piece, at its other end to the strip at the bend, and between its ends to the transverse brace pieces.

2. A draft bar comprising two diverging portions, a longitudinally extending brace piece arranged between the diverging portions, and transverse brace pieces connecting the diverging portions and having openings through which the longitudinally extending brace piece extends, said longitudinally extending brace piece being secured to said transversely extending brace pieces.

3. A draft bar comprising a strap bent between its ends to provide two longitudinally extending pieces, transverse brace pieces connecting said longitudinally extending pieces, and a longitudinally extending brace piece connected to said transverse brace pieces and also connected to the strap at the bend.

4. A draft bar comprising a strip of flat stock bent between its ends to provide diverging portions, said stock having an opening at its bend, a U-shaped piece arranged between the free ends of the diverging portions and provided with an opening in its connecting portion, a plurality of transverse brace plates connecting the diverging portions, a longitudinally extending brace formed from a strip of flat stock extending through the openings in the brace plates, the opening in the U-shaped piece, and the opening in the bend between the diverging portions, said longitudinally extending brace having its flat faces at right angles to the flat faces of the diverging portions.

5. A draft bar comprising a strip of flat stock bent between its ends to form diverging portions, a longitudinally extending brace piece arranged between said diverging portions and formed from flat stock with its flat faces at right angles to the flat faces of the diverging portions, and bracing means between said longitudinally extending brace and said diverging portions.

6. A draft bar comprising a strip of flat stock bent between its ends to form diverging portions, a longitudinally extending brace piece arranged between said diverging portions and formed from flat stock with its flat faces at right angles to the flat faces of the diverging portions, bracing means between said longitudinally extending brace and said diverging portions, and a clip having a projection fitting between the diverging portions at the bend in abutment with the bend, said clip also having a movable part arranged on the opposite side of the longitudinally extending brace and fitting between the diverging portions at the bend.

7. A draft bar comprising two diverging portions formed of flat stock, a longitudinally extending brace portion formed of flat stock and arranged between the diverging portions with its flat faces at right angles to the flat faces of the diverging portions, and brace pieces formed with openings through which the longitudinal brace extends, said brace pieces having their opposite sides recessed to receive the diverging portions and to form lugs bent to coöperate with the outer faces of the diverging portions.

GEORGE A. HILLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."