Oct. 5, 1948. J. M. FALK ET AL 2,450,589

TOP-STIFFENING TIE BAR FOR OPEN TOP TRUCKS

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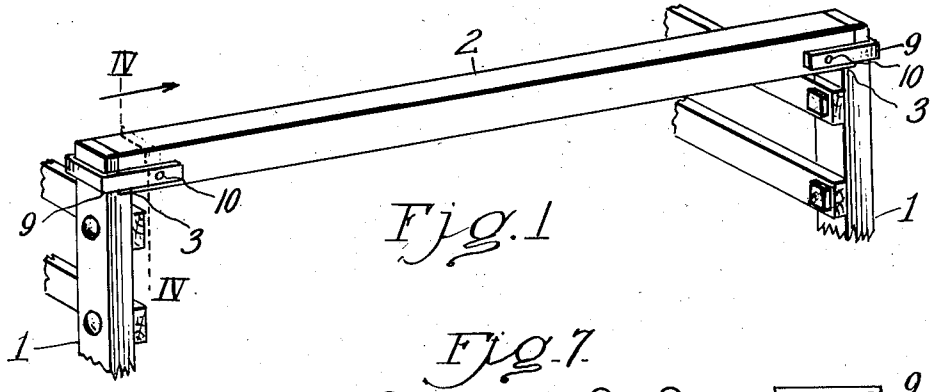


Fig. 1

Fig. 7

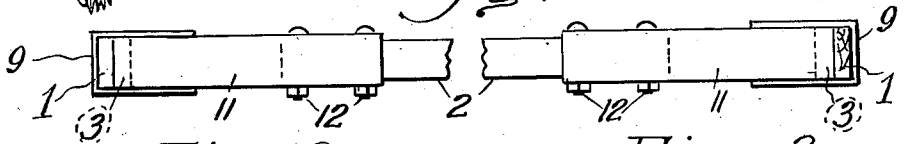


Fig. 2 Fig. 3

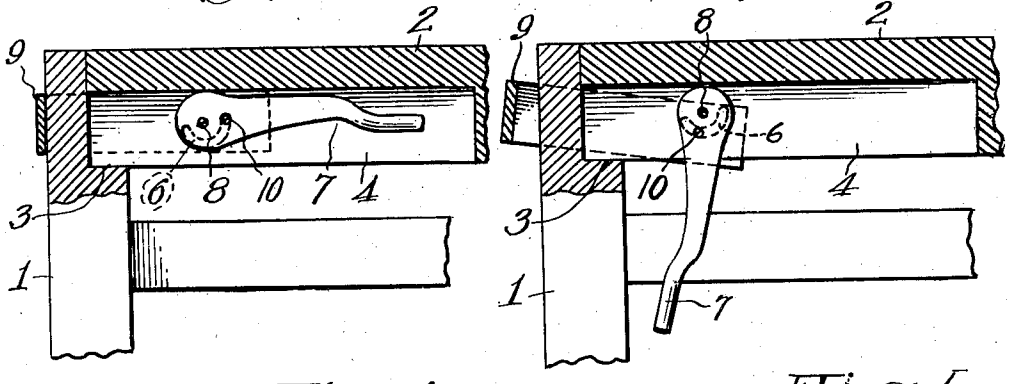


Fig. 4 Fig. 5

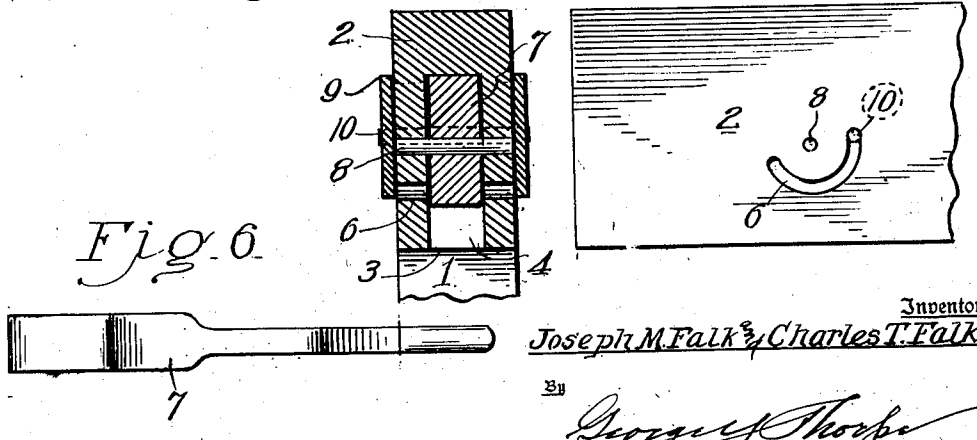


Fig. 6

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TOP-STIFFENING TIE BAR FOR OPEN-TOP TRUCKS

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2 Claims. (Cl. 296—40)

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This invention relates to top-stiffening appliances for open-top trucks, and our general object is to produce means to maintain the sides of such trucks in vertical relation. More specifically, our object is to produce simple, strong, durable and inexpensive fixtures whereby the opposite posts of the sides of such trucks may be quickly and easily connected together by removable transverse arches to form a substantially rigid skeleton superstructure for the bed of the truck, and a means for dependably supporting a tarpaulin in such a manner that it will not be readily susceptible to injury as true if supported only by posts free to weave independently, especially when rough ground is being traversed.

Another object of the invention is to provide fixtures for the purpose which may be carried in stock by jobbers and retailers for sale to truck owners, and be attachable by unskilled labor to and form rigid end extensions for short arches to increase the latter to proper length for connecting standard width truck bodies.

With the objects mentioned in view, the invention consists in certain novel and useful features of construction and combinations of parts as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which:

Figure 1 is a perspective view of a fragment of a truck in which opposite posts of the sides are connected firmly together by fixtures embodying the invention.

Figure 2 is an enlarged fragmentary sectional view of the meeting ends of a side post and a set of fixtures composed of an arch element and means for securing the arch element firmly to the side post element.

Figure 3 is a similar view with the post and arch assembled together preliminary to being clamped rigidly together.

Figure 4 is a vertical section on the scale of Figures 2 and 3, the section being taken on the line IV—IV of Figure 1.

Figure 5 is a side elevation of an end arch element.

Figure 6 is a top view of a cam lever forming an element of the invention.

Figure 7 is a top plan view of an arch having rigid extensions for clamping engagement with a pair of opposite posts of the sides of a truck.

Referring now to the drawing in detail where similar reference characters identify corresponding parts in all of the views, 1 indicates a pair of opposite posts of the sides of a truck, and 2 an

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arch bridging the space between and connecting said posts.

The posts are provided near their upper extremities and at their inner sides with upwardly-facing shoulders 3, and the ends of the arch with downwardly-opening channels 4, and the sides or vertical walls 5 of the channels, are provided with inverted arcuate slots 6.

Within the channels of the arch are levers 7 having cam heads pivoted to the side walls at 8 at points around which the slots extend concentrically, the relation of the parts being such that when the levers are disposed wholly within said channels, their cam-shaped heads clamp against the arch, but when swung to a pendent position, as shown by Figure 3, the cam-heads are spaced slightly from the overlying parts of the arch.

U-shaped clips disposed horizontally, and indicated at 9, receive the respective posts 1 and the juxtaposed ends of the arch, and the arms of the clips are connected by cross-pins 10 which extend through the slots 6 and the head of the cam lever.

Preliminary to fitting the ends of the arch against the inner faces and upon the shoulders of the posts, the levers are disposed in the position shown by Figure 3, to position the clips to easily fit over the posts. The levers are then swung upward and the cross-pins 10 move inwardly and upwardly in the arcuate slots. By the time said cross-pins attain about the same horizontal planes as the pivots of the levers, the cam heads are in engagement peripherally with the arch and the closed ends of the clips have moved from the open position shown by Figure 3 to the closed position shown by Figures 1 and 2. In such operation to guard against reverse movement of the levers and a relaxation of the pressure applied by the clips, the pins 10 move past center with respect to the pivotal points 8, so that the clamping of the arches to the posts serves to guard against reverse action by the levers unless effected by manual power.

In Figure 7 a modified construction is shown, in which the arch is equipped with channel extensions so that the arch as a whole shall be of length to accommodate truck bodies of variable width. The channels 11 are shown as bolted to the ends of the arch as at 12, and when the parts are assembled, fit against the inner faces and upon the shoulders of the posts, and to the channels are attached the cam-levers (not shown in Figure 7) and the clips 9. The provision of fixtures of the character shown by Figure 7, is desirable, as truck owners desiring to overcome in-

dependent weaving of the sides of their trucks, obtain the number of channel extensions needed, shorten the arches, and bolt the channels in place. No skilled labor is required, and the expense of purchasing new arches with the appliances attached, is avoided.

The appliances for firmly connecting the posts not only stiffen and strengthen the sides, but also serve by holding the sides in substantially upright parallel relation, as a dependable support for a tarpaulin for the protection of the contents of the truck. The prevention of independent weaving of the sides also minimizes ripping and tearing of the tarpaulins.

From the foregoing, it will be apparent that we have produced an appliance embodying the features of advantage set forth in the statement of the objects of the invention, and while we have shown the preferred embodiments thereof, it is to be understood that the right is reserved to all modifications properly falling within the spirit and scope of the appended claims.

We claim:

1. The combination in an open-top truck, of an opposite pair of upright posts at the sides of the truck, provided at their inner sides with upwardly-facing shoulders, and an arch resting on said shoulders and abutting endwise against said posts, the arch at each end having a longitudinal channel in its under side, and provided in the side walls of the channel with opposite inverted arcuate slots, a lever having a head within and pivoted to the side walls of the channel axially of the opposite slots, a U-shaped clip fitting around the outer edge and the sides of the respective post and longitudinally of and against the opposite sides of the arch, and a cross-pin extending through said clip, said slots and through the head of the lever eccentrically of the pivotal point thereof; said lever being adapted to

be swung from a pendent position upward until wholly with said channel, and in such movement cause the cross-pin to move in said slots and pull the clip inward to clamp the post and arch firmly together and said cross-pin to attain a position in said slots past center as respects the pivotal point of said lever.

2. The combination in an open top truck having opposite side post elements, of an arch element extending crosswise of the truck between and at the upper ends of said post elements and in abutted relation thereto, one of the abutting elements having a longitudinally extending channel at its inner side and opposite similar arcuate slots in the side walls of said channel, a lever having a rounded head fitting within said channel, a pin mounted at its ends in the side walls of said channel and forming a pivot for but eccentrically of the periphery of said head of the lever, a cross-pin extending through the head of the lever and parallel with but offset from the pivot pin thereof, and extending slidably at its ends through said arcuate slots, and a U-shaped clip receiving the abutted ends of said elements at one side of the truck and pivotally mounted on the ends of said cross-pin extending through said slots.

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