(No Model.)

H. B. CRANDALL.

SHIFTING RAIL FOR BUGGIES.

No. 306,061. Patented Oct. 7, 1884.

Fig. 1.

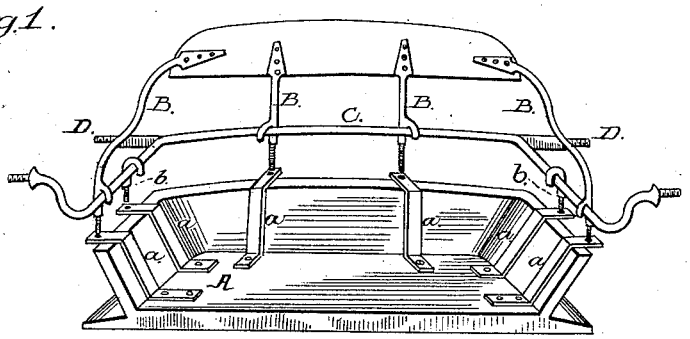


Fig. 2.

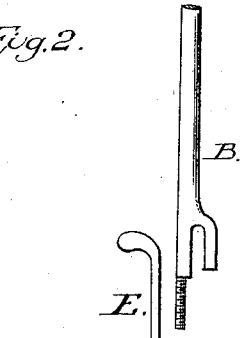


Fig. 3.

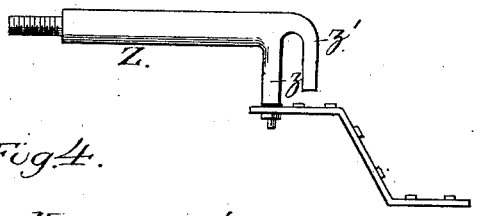


Fig. 4.

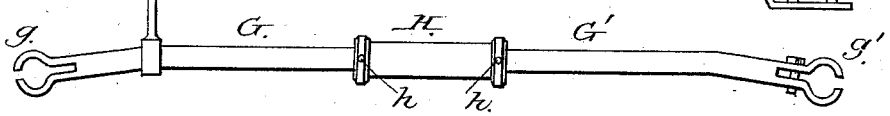
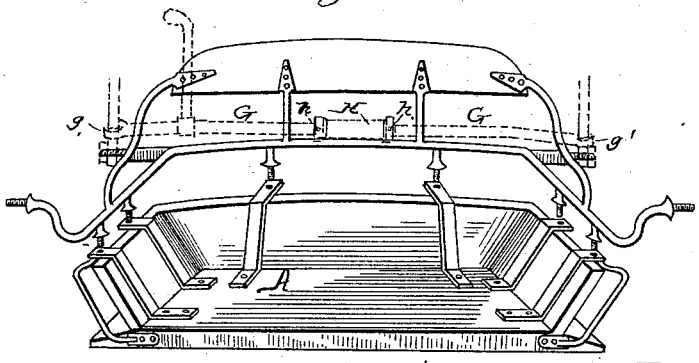


Fig. 5.



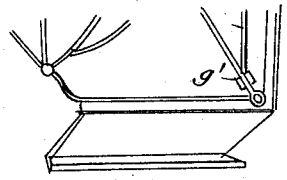


Fig 6

Witnesses;
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UNITED STATES PATENT OFFICE.

HENRY B. CRANDALL, OF HOMER, NEW YORK, ASSIGNOR OF ONE-HALF TO WILLIAM F. HITCHCOCK, OF SAME PLACE.

SHIFTING-RAIL FOR BUGGIES.

SPECIFICATION forming part of Letters Patent No. 306,061, dated October 7, 1884.

Application filed November 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. CRANDALL, a citizen of the United States, residing at Homer, in the county of Cortland and State of New York, have invented certain new and useful Improvements in Shifting Rails and Bars for Buggies; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to shifting rails and bars for buggies and other similar vehicles. I employ an adjustable shifting-bar, which may be made of any length to fit upon any buggy, and has adjustable clips on the ends regulated by set-screws. The bar is preferably formed in two lengths, with a barrel over the two adjoining ends and pinching-screws to set the bars at any point therein. Upon the bar I place an operating-lever to facilitate the turning of the bar. This lever is adjustable upon the said bar, and may be set at any distance along the length thereof. I secure the buggy-rail by means of the lazy-back irons, which are bifurcated at one end, with the longer limb screw-threaded, and the shorter limb to form a clip to encircle or partially encircle the rail. The screw-threaded limb engages with threaded openings in the seat-irons, while the upper ends of the lazy-back irons support the back in the usual manner. I also provide a removable prop, which has a bifurcated arm extending at right angles, or approximately so, to the body of the prop, one limb (the longer) of which is screw-threaded and engages in the seat-irons, and the other (the shorter) forms a clip to support the rail, as was the case with the lazy-back irons. I may, however, use a prop secured rigidly to the rail.

The accompanying drawings illustrate my invention as I have considered best to apply it.

Figure 1 is a view of a buggy or other vehicle seat having the rail attached by means of my lazy-back irons. Fig. 2 is an enlarged view of the end of the lazy-back iron. Fig. 3 is a view of the loose prop. Fig. 4 is a view of my improved top-shifting rail, showing the lever in place. Fig. 5 shows the loose prop secured to the rail, showing in dotted lines the application of the shifting-bar illustrated in Fig. 4. Fig. 6 is an end view of the buggy-seat, showing the clamp on the end of the shifting-bar taking hold of the side bar of the buggy-top.

Similar letters of reference indicate corresponding parts wherever they occur.

A is the buggy-seat, and *a a*, &c., the seat-irons.

I do not employ barrels and holes as ordinarily used for holding or receiving the lazy-back irons, but substitute therefor my improved construction, about to be described, which embodies the clip and bolt ended irons B, which are secured to the seat-irons in any convenient manner, as by nuts under the seat-irons or screw-threaded openings in them, and hold and support the rail in themselves.

The shifting-rail is marked C, and is solid throughout its entire length.

As now clearly shown in Fig. 2, the clip-irons B are bifurcated at the lower end, and terminate in a long and short limb, the long limb being screw-threaded to form a bolt for passage through the seat-irons *a*, while the short limb encompasses the rail C or covers the one side thereof.

Short clips *b* may be used on some of the seat-irons, if desired, as shown in Fig. 1.

In connection with my improved construction just described I may use either a fast or loose prop on the rail C.

In Fig. 1 a prop is shown welded onto the rail, as seen at D, and in such construction the short clip or bolt *b*, just described, is used, and is secured to the seat-iron by a nut in the same manner as that described in connection with the clips B.

I show the loose prop which I have devised in Fig. 3. Where such is used, the bolts *b* may be dispensed with, as one limb, *z*, of the prop Z forms a bolt for engagement with the seat-iron, while another limb, *z'*, forms a clip for clasping the shifting-rail, as was done by the lazy-back irons. The seat-iron, to which the limb *z* is secured by nut, as was the screw-threaded limb of the lazy-back irons, is placed in the corner of the buggy-seat, to bring the prop into the proper position. This prop may

have the limb or clip *z'* formed to entirely encircle the rail in connection with the limb *z*, and be drawn toward the limb *z* and tightened upon the rail by a suitable bolt and nut passing through the limbs below the rail, and held or tightened by a nut.

My improved shifting-bar is shown in Fig. 4. This is intended for use on top-buggies, and will fit any and all buggies using tops. It is made in two parts, G G', which are joined together with capacity for longitudinal adjustment. These parts are for the greater portion of their length covered with rubber tubing or material, to prevent rattling and to give a finished appearance.

A barrel or sleeve, H, forms the means for adjusting the length of the bar. The inner ends of the parts G G' are inserted in the barrel and held at any point by the pinching-screws *h*, whose heads are let in flush with the exterior surface of the barrel, so as to prevent their catching or chafing upon the upholstering of cushions. Both the clips *b* and B bind the rail C by taking hold of the top thereof, while the bottom rests upon the seat-irons. The rods G G' are formed with a slight bend near each outer end, as shown, to suit the height of the seat, and at the same time keep the rods in the corner of the seat and back out of the way. The ends of the rods G G' which are opposite the barrel in the center are finished with adjustable clips *g g'*. These clips can be made to fit any size of joints, and for this purpose the rods G G', for a little distance in from the clips, are slitted and provided with a bolt or bolt and nut for drawing together and tightening the jaws of the clips. A lever, E, adjustably secured on one of the rods G or G', is used in rotating the rods to break the joints and lower or raise the top. It may be shifted to any position on the length of the rod, and secured by a pinching-screw.

The shifting-rail is not intended to be attached to the seat-irons nor the seat, but is to lie in the back of the seat between it and the cushion, and the clips on the ends of it are intended to take hold of the joints which support the top.

The rail and bar, with the means of adjusting and securing them, are unique in appearance, easy of application, cheap of construction, and adapted for use upon any buggy.

I believe it practical to make modifications and changes within wide limits without departing from the spirit or sacrificing the advantages of my invention.

The clips, to prevent lateral motion, are provided with feathered edges, which fit into corresponding depressions in the rail on which they bear.

I am aware that lazy-back irons have been formed with a curved shoulder to rest upon and hold the shifting-rail down, and also that clips have been formed of three limbs, the center one of which is elongated and threaded on the end, and the two side ones adapted to rest over the two parts of a split or double shifting-rail, while the center threaded and longer limb rests between the two parts of the shifting-rail; and I do not claim such, as my invention contemplates a bifurcated lazy-back iron and a bifurcated clip, both limbs of which are fully formed to encompass the top and both sides of an ordinary single shifting-rail and hold it securely in place without any other holding means.

Having thus described my invention, what I desire to claim and secure by Letters Patent is—

1. A loose prop, as Z, having a long threaded limb, *z*, and a short plane limb, *z'*, adapted to be secured to the seat-irons and around the shifting-rail.

2. A bar for raising and lowering a buggy-top, entirely detached from the buggy-seat, and adapted to take hold of the top-joints on both sides of the buggy, as set forth.

3. A bar for raising and lowering a buggy-top, detached from the seat and attached to the top-joints on each side, provided with the adjustable lever E, substantially as set forth.

4. A shifting-bar for operating a buggy-top, formed in two pieces or parts having clips on the outer ends thereof, and a barrel, H, in the center thereof, into which the inner ends of the pieces or parts are inserted and may be adjusted, as set forth.

5. An adjustable shifting-bar for working the top of a buggy, provided with adjustable clips on the ends thereof to take hold of the top-joints, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY B. CRANDALL.

Witnesses:
W. H. CRANE,
W. S. SANTUS.