(No Model.)

J. DELINE.

Carriage Top.

No. 236,002. Patented Dec. 28, 1880.

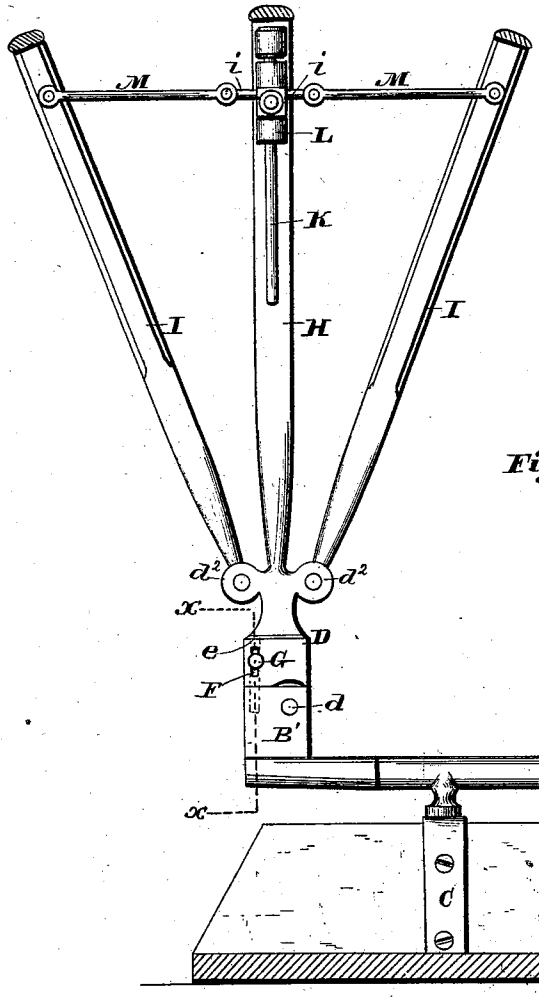


Fig. 1.

Fig. 3.

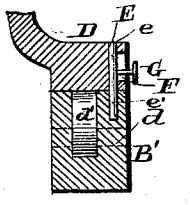
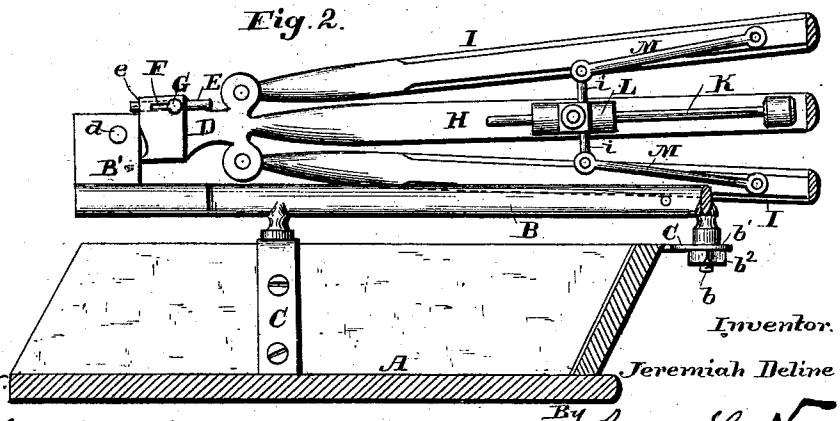


Fig. 2.



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UNITED STATES PATENT OFFICE.

JEREMIAH DELINE, OF AKRON, OHIO.

CARRIAGE-TOP.

SPECIFICATION forming part of Letters Patent No. 236,002, dated December 28, 1880.

Application filed October 12, 1880. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH DELINE, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented new and useful Improvements in Buggy-Tops, of which the following is a specification.

The object of this invention is to provide an improved means for admitting of the expansion and the contraction or collapsing of the top, and for securing the top either in an expanded or contracted condition, so that the top can be either expanded to its fullest extent in order to take up any slack in the covering occasioned by use, and then held in such expanded state as long as required, or that the top can be contracted to a certain extent and then held in such condition, so as to prevent the bows from coming too closely together and injuring the covering.

To such end my invention consists in the combination, with the central bow in a folding vehicle-top, of two outer bows pivoted to hinged brackets, with which the central bow is rigidly connected, and two pairs of brace-bars pivoted to the said outer bows and connected by joints with movable sleeves arranged to slide longitudinally upon rods which are secured to the inner bow, all of which will be more fully described.

The invention also consists of other features, which will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a section taken on a vertical plane through a buggy seat and top constructed in accordance with my improvement, the top raised and open. Fig. 2 is a side view with the top down and closed. Fig. 3 is a detail sectional view taken on the line *x x*, Fig. 1.

The letter A designates a buggy-seat, around the sides and back of which is extended the seat-rail B. This seat-rail is supported upon brackets C, secured to the sides and back of the seat; and in order to render the seat-rail detachable from the brackets, the rail is provided with pins *b*, which are screw-threaded at their lower ends and passed down through holes in the outer ends of the brackets up to shoulders *b'* upon the pins, which said shoulders seat upon the upper sides of the outer bracket ends. Suitable taps, b^2, are then fitted upon the screw-threaded ends of the pins and tightened up either directly against the brackets or against washers interposed between the brackets and the taps. Each end of the seat-rail is provided with a block, B', which is formed with a mortise-opening at the top and the rear side of the block. The brackets D, which support the several bows of the buggy-top, are hinged within these mortises of the blocks by means of pivots *d*, passing through the blocks and through tenons *d'* of the brackets, which are introduced into said mortises. This arrangement of mortises, while admitting of the top being thrown back, prevents its falling forward after being raised, since the front walls of the mortises do not allow the brackets to be swung forward from a vertical position; also, after the top has been raised, the under side of the body of each hinged bracket seats squarely upon the top of the block below it, so as to form a firm connection between the two.

As herein illustrated, the bracket D is formed with a vertical mortise, *e*, in which a locking-pin, E, is arranged to slide, and the block to which the bracket is hinged is formed with an opening, *e'*, to receive the lower end of the pin after the buggy-top has been raised by bringing its supporting-bracket into a vertical position. A slot, F, formed through the side of the hinged bracket, opens into the mortise in which the locking-pin slides, and a set-screw, G, passes through the slot so as to engage the pin, thereby providing a handle by means of which the pin can be readily raised or lowered by the occupant of the vehicle, and also affording means for securing the locking-pin in its adjustment by simply turning the set-screw.

The central bow, H, of the buggy-top is either formed with or rigidly secured to the hinged brackets, while the remaining bows, I I, are pivoted at their lower extremities to arms d^2 d^2, which constitute a part of the hinged brackets, as herein illustrated. These bows I I are hence capable of being either swung toward or away from the centrally-arranged bow, in order to contract or expand the buggy-top; and in order to brace the top when expanded and limit the extent of its contraction or expansion, the following means are

provided: Upon the inner side of each vertical portion of the center bow, H, is secured a rail, K, which is arranged parallel to the length of such vertical portion of the bow, and set out therefrom at a distance sufficient to admit of the free movement of a sleeve upon the rail. This sleeve L, which is adapted to slide along upon the rail, is provided with two short arms, *i i*, to which are pivoted the inner ends of links or brace-rods M M, the outer ends of these brace-rods being pivoted to the outer bows, I I, of the buggy-top. Hence, when the outer pivoted bows are closed toward the centrally-arranged bow, the sleeve which is upon the rail will slide along the rail toward the hinged bracket with which the bows are connected, and when the bows are opened or swung away from the center bow the said sleeve will be moved along the rail toward the upper portion of the bow. As such movements of the outer bows expand or contract the covering of the top, as the case may be, it is necessary that means should be provided for holding the top in an expanded state as long as required, and it is also very desirable that after the top has been closed or contracted to a certain extent it should be held at such limit and be prevented from further contraction in order to guard against the cutting or cracking of the covering by the bows, which, if allowed to come too closely together, will inevitably damage the covering. To such end the sleeves which slide upon the rails are preferably each provided with a locking device, consisting, in the present instance, of a set-screw passing through the sleeve, so that by tightening up the set-screw it will act upon the rail, and thus secure the sleeve against movement upon the rod. A very important feature of this sleeve, with its locking device and its jointed connections with the outer bows, is that the top may always be expanded so as to take up the slack occasioned by use, and be maintained in such expanded condition so long as required.

It is evident that the character of the locking devices for the slidable sleeve may be varied without departing from my invention—as, for instance, locking devices analogous in construction to the ordinary window-sash holders might be employed.

It is also apparent that other mechanical equivalents could be substituted for the locking-pin, which is arranged to slide through the hinged bracket D—as, for instance, either the hinged brackets or the blocks supporting them may be provided with spring-catches arranged to engage in notches after the hinged brackets have been raised vertically; or, in lieu of such locking devices, set-screws or hinged brace-rods might be employed with like result.

Having thus described my invention, what I claim is—

1. The combination, with the central bow in a folding vehicle-top, of two outer bows, I, pivoted to hinged brackets, with which the central bow is rigidly connected, and two pairs of brace-bars pivoted to the said outer bows, I, and connected by joints with movable sleeves arranged to slide longitudinally upon rods which are secured to the inner bow, substantially as described.

2. The combination, with the central bow, H, in a folding vehicle-top, of the two pivoted outer bows, I, sleeves arranged to slide upon rods which are secured to the straight portions of the bow H, and brace-rods connecting said sleeve with the outer bows, I, substantially as described.

3. The combination, with the seat-rail connected with the vehicle-seat, of blocks formed or secured upon the ends of said rail, and provided each with a mortise opening at the top and rear side of the block, the brackets D, having tenons pivoted in the mortises of the said blocks, the locking-pins E, for locking the brackets in an upright position, the center bow, H, of the vehicle-top rigidly connected with the pivoted brackets, and the outer bows, I, pivoted to the said brackets, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JEREMIAH DELINE.

Witnesses:
N. CHALKER,
S. GROSS.