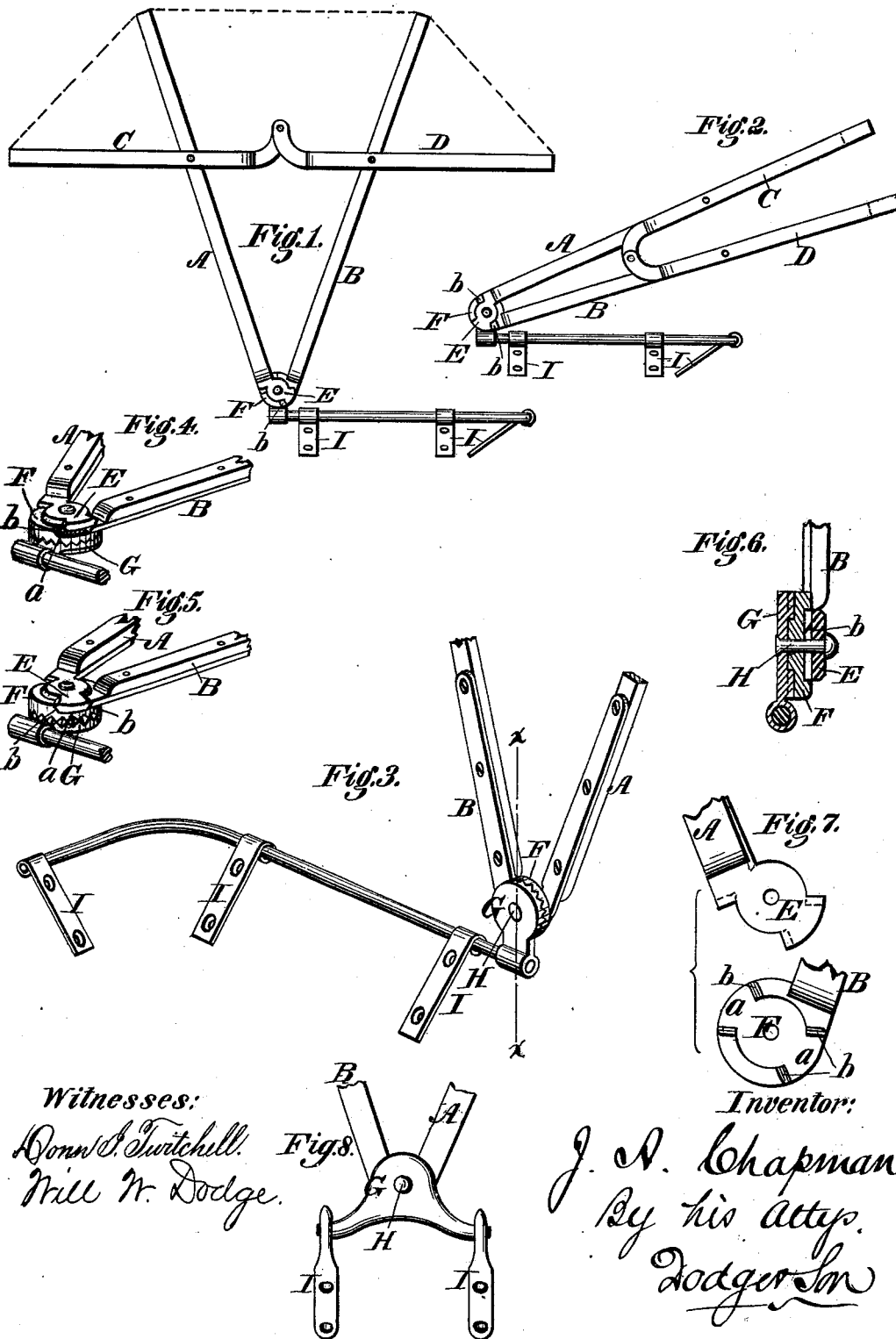


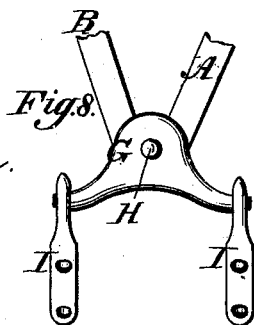
J. A. CHAPMAN.
Carriage-Top.

No. 214,884.

Patented April 29, 1879.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN A. CHAPMAN, OF WHITEWATER, WISCONSIN.

IMPROVEMENT IN CARRIAGE-TOPS.

Specification forming part of Letters Patent No. **214,884**, dated April 29, 1879; application filed June 13, 1878.

To all whom it may concern:

Be it known that I, JOHN A. CHAPMAN, of Whitewater, in the county of Walworth and State of Wisconsin, have invented certain Improvements in Carriage-Tops, of which the following is a specification.

My invention consists, first, in a top consisting of two upright pivoted bows connected by smaller bows pivoted to each other and to said main bows in such manner as to serve the double purpose of supporting the covering or cloth and of braces to hold the top in an extended position; second, in a clamping device to support the top in the different positions or inclinations required, which is locked and unlocked by the act of extending and folding it up; and, third, in providing the rail or base-frame to which the top is attached with hinged feet or supports adapted to fit readily upon seats of different inclinations.

Referring to the accompanying drawings, Figure 1 represents a side elevation of my improved top, embracing the three features of the invention, the top being represented in an extended and elevated position, Fig. 2 representing a similar view with the top folded and turned backward; Fig. 3, a perspective view of one side of the top, looking outward; Figs. 4 and 5, perspective views, showing the supporting-clamp, respectively, in a locked and an unlocked position; Fig. 6, a cross-section on the line *xx* of Fig. 3; Fig. 7, a view showing the component parts of the clamp separated from each other. Fig. 8 is a side elevation, showing a modified form of the base or rail and the hinged feet.

Referring first to the construction of the top proper, it consists of two main upright bows, A B, pivoted together at their lower ends, of two smaller or secondary bows, C D, pivoted together at their inner ends, and also pivoted at or near their middle to the bows A B, respectively, the point of connection to the main bows being near the top of the latter. The canopy or covering is extended over the outside of the secondary bow C to the top of bow A, thence to the top of bow B, and downward to the outside of bow D, in the manner represented in Figs. 1 and 2.

The ends of the bows C D are connected by curved arms, or otherwise connected in such manner that when extended in the horizontal position the connecting-pivot will be thrown above the line of the pivots on the bows A B, or, in other words, so connected that when extended the bows C D shall lock past the center.

Under the above construction, it will be seen that when the bows C D are turned outward in a horizontal position they serve both as seats or braces to hold the bows A B apart, and also as supports to maintain the covering or top proper in an extended position. Upon folding the outer ends of the bows C D upward they close compactly together and also close together the bows A B, causing the top to assume a flat compact form, as represented in Fig. 2.

The top constructed as above may, when partially closed, be swung forward and backward at will upon the pivots by which the bows A B are sustained, and then secured in the desired position by opening or closing the bows, as preferred.

Referring next to the clamping device, by which the top is sustained in the different positions required, it will be seen that it consists, essentially, of a plate, E, attached to the bow A, a corresponding plate, F, attached to the bow B, and a supporting-plate, G, attached to the shifting rail or other rigid support, the three plates being united and supported by a single central pivot, H, attached to the plate G, and provided with heads or enlargements on its ends, as shown in Fig. 6.

The plate G has its outer face provided with radial teeth or serrations to receive corresponding teeth formed on the inner face of the plate F, as shown in Figs. 3, 4, and 5, the arrangement being such that when the two plates F G are forced together their teeth are caused to interlock, and thereby the entire top is held rigidly in position and prevented from swinging either forward or backward.

In order to effect the forcing of the plates F G together, the former is provided, in its outer face with radial depressions *a*, terminating at their sides in inclines or cams *b*, and the plate

E made of such shape that when the bows A B are partially separated, or, in other words, the top partially extended, the plate will fit down within the recesses or depressions in the plate F, as represented in Fig. 5.

When the bows A B are widely separated, as in extending the top, or when they are closed together the plate E is caused to ride out of the recesses or cavities in the plate F and upward over the inclines onto the raised portions of the plate, whereby said plate E, resting against the head of the pivot, is caused to force the plate F over tightly against the toothed plate G, so that it interlocks therewith. When, however, the bows A B are only partially separated the plate E drops, as before described, into the recesses of the plate F, permitting the latter to separate from the plate G, and thereby unlocking the top and permitting it to swing freely forward or backward upon the pivot H. It will thus be seen that the acts of opening or closing the top serve also to unlock the same, that whenever fully extended or closed it is locked firmly in position, and that in order to unlock and permit its forward-and-backward adjustment it is only necessary to partially close the bows A B. This arrangement, while being both cheap and simple, serves to secure the top firmly in position, and admits of its being readily adjusted at any angle or inclination desired, and this, too, by the occupant of the carriage.

It is manifest that the precise form and arrangement of the clamping-plates are not essential, but that they may be modified as desired, provided only their general mode of operation is retained.

Referring, now, to the third feature of the invention, (clearly illustrated in Figs. 1 and 3,) it will be seen to consist merely in providing the shifting rail or base-frame by which the top is supported with supporting-feet I, hinged or journaled thereon in such manner that their ends may be turned upward and downward at will, so as to present the feet at any angle or inclination required. This arrangement admits of the arms being applied to seats or bodies having different inclinations, and adapts the top to be readily applied to any and all seats in the market without the necessity of reshaping or forging the feet, as usual, to fit the same.

In the form of device represented in Fig. 8 the top is hinged or pivoted to a plate which has the supporting-feet hinged or journaled on its ends.

Carriage seats and bodies as sold in the market have seats differing widely in the inclination of their sides and backs, and my improvement admits of the tops being sold in the market, and readily and neatly applied to any and all seats regardless of the inclination of their ends. The arms and the rail may be constructed in any form, and united in any

suitable manner, provided only that the arms are free to swing in the manner described.

I am aware that a top-supporting rail has been seated in forked or notched supporting-arms to render it detachable at will, and I am also aware that rails have been provided with a number of supporting feet or legs, one or more of which were made to encircle the rail and secured by screws, in order to admit of the rail being detached, and therefore I do not claim, broadly, the idea of passing a rail through an eye in a supporting-foot.

In no case, however, has any one hitherto designed a rail for application to seats of different inclinations, or produced a rail having all its supports hinged thereto, so as to render it capable of such use. Although rails, as stated, have been made with one or more feet, capable of being changed in inclination, this was not the end in view, and the remaining feet were so arranged as to prevent the rail from being practically applied to seats of varying inclinations.

I am aware that an extensible frame having two connected parallel bars at one end, with a supporting-foot mounted loosely around one of the bars in order that the latter might slide therein, is old, the arrangement being such, however, as to prevent the frame from being applied to seats of different inclinations. While, therefore, I do not claim to be the first to attach a single arm loosely to the rail, still I do claim to be the first to construct a rail with swinging supports when the parts are constructed and adapted for adjustment to seats of various inclinations.

Having thus described my invention, what I claim is—

1. In a carriage-top, the combination of the two main bows A B and the two smaller bows, C D, the latter pivoted to each other and to the main bows near the top of the latter, in order to serve as braces, and also to assist in sustaining the cover or top proper.

2. A carriage-top consisting of two upright and two secondary horizontal bows, the latter pivoted to each other and to the main bows, substantially as shown, so as to serve the double purpose of supporting the edges of the cover and of holding the main bows and top in an extended position.

3. In combination with the bows A B of the carriage-top, plates E F, attached thereto, and a supporting-plate, G, said plates being united by the pivot H, and constructed and arranged to operate substantially as described, whereby the top is locked in position by the act of opening and closing it.

4. In combination with the plate G, to support a carriage-top, plates E F, substantially such as described, attached to the bows of the top, and arranged to effect the locking of the top by the movement of the bows to or from each other.

5. In combination with a toothed support,

ing-plate, G, and a corresponding plate, E, attached to a carriage-top, a radial cam-plate, F, arranged to cause the plates E G to interlock with each other.

6. A carriage-top provided with a clamping device to sustain it in position, constructed and arranged to be operated by the movements of the bows to or from each other, substantially as described and shown.

7. A top-supporting rail for carriages hav-

ing supporting feet or arms, all of which are connected permanently thereto, and capable of being adjusted at will to seats of different inclinations, substantially as described and shown.

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Witnesses:

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