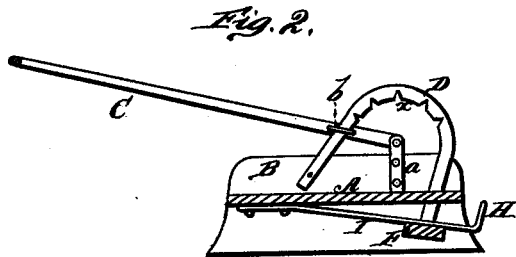
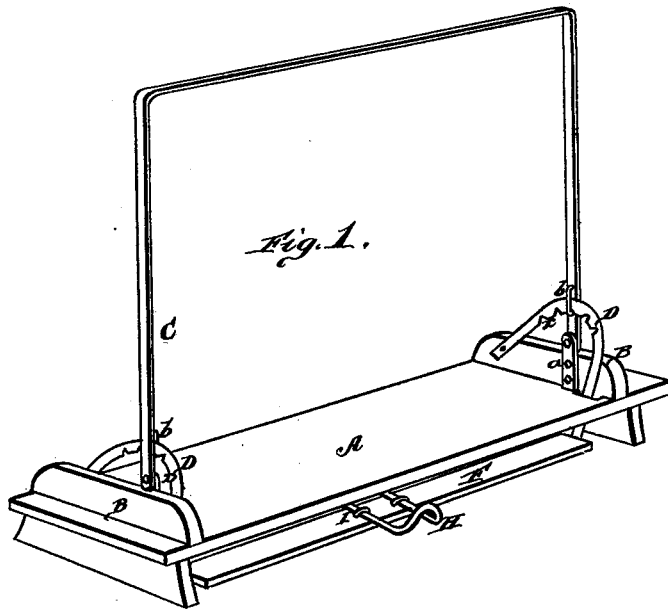


V. B. GRINNELL.
Wagon-Top.

No. 202,810.

Patented April 23, 1878.



WITNESSES

Robert Smith
James J. Sheehy

INVENTOR.

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

VROOMAN B. GRINNELL, OF WAVERLY, IOWA.

IMPROVEMENT IN WAGON-TOPS.

Specification forming part of Letters Patent No. **202,810**, dated April 23, 1878; application filed March 30, 1878.

To all whom it may concern:

Be it known that I, VROOMAN B. GRINNELL, of Waverly, in the county of Bremer and State of Iowa, have invented a new and valuable Improvement in Wagon-Top Adjusters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my wagon-top adjuster, and Fig. 2 is a transverse vertical section thereof.

The nature of my invention consists in the construction and arrangement of a device for adjusting wagon and buggy tops, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the wagon-seat, provided with side pieces B B. To straps *a a* on said side pieces are pivoted the ends of the bow C, each arm of said bow being, on its inner side, provided with a staple, *b*, through which passes a curved metal arm, D. The inner edge of this curved arm is provided with a series of notches, *x x*, as shown, and its rear end is pivoted to the side piece B, while its front end passes down through or in front of the seat, and there the ends of the two curved metal bars are bolted or otherwise secured to the ends of a horizontal wooden bar, F, which is situated under the front edge of the seat. The bar F is connected to the under side of the seat by one or more metal springs, I, in such a manner as to press downward said bar F, to hold the curved arms D in position.

The spring or springs I are extended in

front of the bar F to form a handle, H, for the same; or such handle may be made separate, and secured to the bar.

The staples *b* in the bow C hold said bow from swaying sidewise. They act as catches in the notches of the curved arms to hold the bow or top in position, and they also act as a rest when the bow or top is thrown clear back.

By means of the bar, spring, and handle, arranged, as described, under and in front of the seat, the driver can with his rein-hand grasp and raise the handle, and thereby release both sides of the top at once, and adjust it with the other free hand, and it will fasten itself when he lets go the handle.

What I claim as new, and desire to secure by Letters Patent, is—

1. The curved notched and movable arms D, pivoted at their rear ends, and their front ends connected under the front of the seat by a cross-bar, F, for simultaneous manipulation of the two bars, as set forth.

2. One or more springs, I, connecting the bar F with the slat, in combination with the curved arms D D, substantially as and for the purposes set forth.

3. The handle H, attached to and projecting in front of the bar F, in combination with the spring I and curved arms D, substantially as and for the purposes set forth.

4. The staples *b b* on the sides of the bow C, in combination with the curved and notched movable bars D D, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

VROOMAN B. GRINNELL.

Witnesses:

A. T. COLE,
E. W. RISDON.