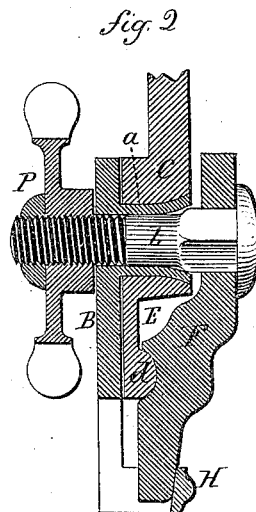
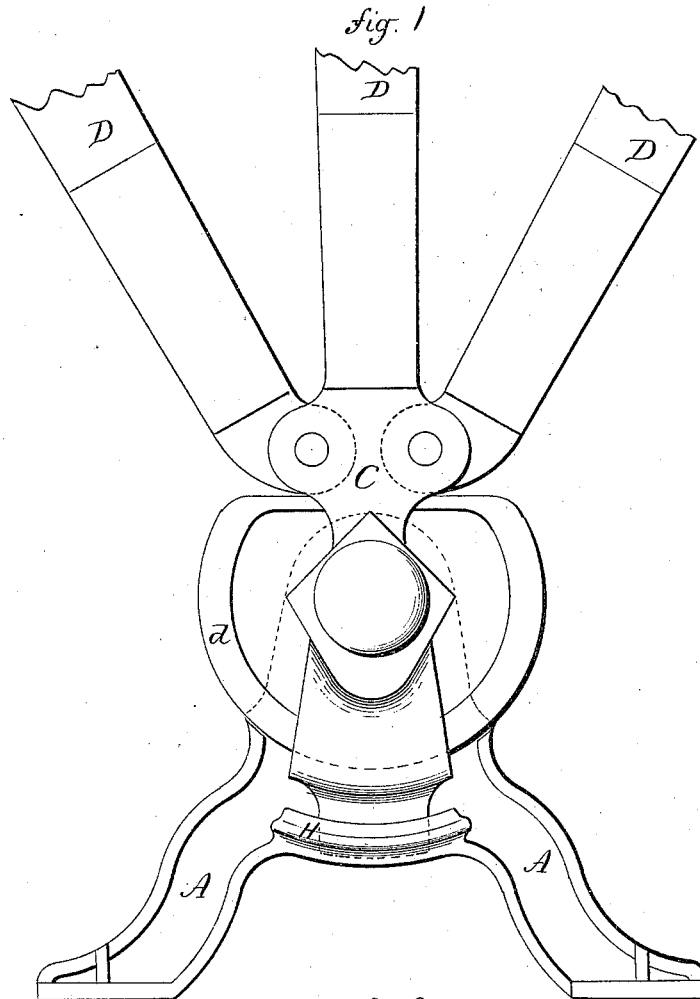


O. B. NORTH & G. M. HUBBARD.

Adjustable Carriage-Top.

No. 211,861.

Patented Feb. 4, 1879.



Witnesses:

J. H. Chumney
Ed. K. K. K.

Oliver B. North
Geo. M. Hubbard,

By atty. *inventors.*
John Paul

UNITED STATES PATENT OFFICE.

OLIVER B. NORTH AND GEORGE M. HUBBARD, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO O. B. NORTH & CO., OF SAME PLACE.

IMPROVEMENT IN ADJUSTABLE CARRIAGE-TOPS.

Specification forming part of Letters Patent No. 211,861, dated February 4, 1879; application filed December 16, 1878.

To all whom it may concern:

Be it known that we, OLIVER B. NORTH and GEORGE M. HUBBARD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Adjustable Carriage-Tops; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view, and in Fig. 2 a vertical central section.

This invention relates to an improvement in attachment of tops to carriages, such as are made adjustable, so as to turn either forward or back, as may be desired; and the invention consists in the construction as hereinafter described, and more particularly recited in the claim.

A represents the base or bracket, which is secured to the seat or body, as the case may be, and extends up in the center, as at B, to form a support for the slat-iron C.

The slat-iron C is constructed to receive the bows D, in any desirable manner. The base or support B is constructed with a tubular projection, *a*, so as to extend through a corresponding opening in the slat-iron C, and form the pivot on which the slat-iron will turn; and to secure the slat-iron on its pivot the end of the tubular pivot *a* is turned or struck down upon the slat-iron, or may be expanded to fill an enlargement in the opening of the slat-iron, as seen in Fig. 2. This method of forming the pivot and securing the slat-iron thereto is simple and cheap, as well as exceedingly strong, and allows the top to be freely turned forward or back.

The slat-iron C has a flange, E, extending in the form of a plate, the back of which is flat, or so as to fit closely against the part B of the base, as seen in Fig. 2, and on this plate is a rib, *d*, concentric with the pivot.

In order to bind or secure the slat-iron at any desired position within its range of turning, a lever, F, is applied, one end introduced into a loop, H, below, the other extending up

over the pivot, and a bolt, L, introduced through a perforation in the lever and through the opening in the tubular pivot, and then a nut, P, applied to the threaded end of the bolt, so as to draw the upper end of the lever F toward the pivot, or allow it to move away, accordingly as the nut is turned to the right or left.

Intermediate between the bolt L and the loop H the lever bears upon the rib *d* on the slat-iron. Hence drawing the lever toward the pivot presses this plate E of the slat-iron against the opposing surface B, producing friction sufficient to retain the slat-iron at any point to which it may be turned; or, when the lever is released, the slat-iron is left free to be turned to any other position.

The rib *d* is preferred as a bearing for the lever; yet that may be dispensed with, and the lever bear directly upon the surface of the plate E.

The loop H is the best method of forming the fulcrum for the lever, because it may be made in the casting by simply leaving a recess back of it, as seen in Fig. 2; but the fulcrum may be otherwise formed.

Instead of the bolt passing through the pivot, which is convenient in this case because of the tubular pivot, the bolt may be rigidly fixed at the pivot, and the nut be placed thereon so as to bear directly upon the lever, if preferred; or the lever may be hung at that end as a fulcrum, and the screw or clamp applied to the other end of the lever, these modifications being simply equivalents of the arrangement first described.

We claim—

The combination, in an adjustable carriage-top iron, of the base, the slat-iron pivoted thereto, and a lever, one end of which bears upon the base as a fulcrum, with a clamping device at the other end to force an intermediate bearing upon the slat-iron, substantially as and for the purpose described.

OLIVER B. NORTH.
GEORGE M. HUBBARD.

Witnesses:

J. H. SHUMWAY,
H. A. KITSON.