

E. & M. HAYES.

Carriage-Top.

No. 13,171.

Patented July 3, 1855.

Fig. 2.

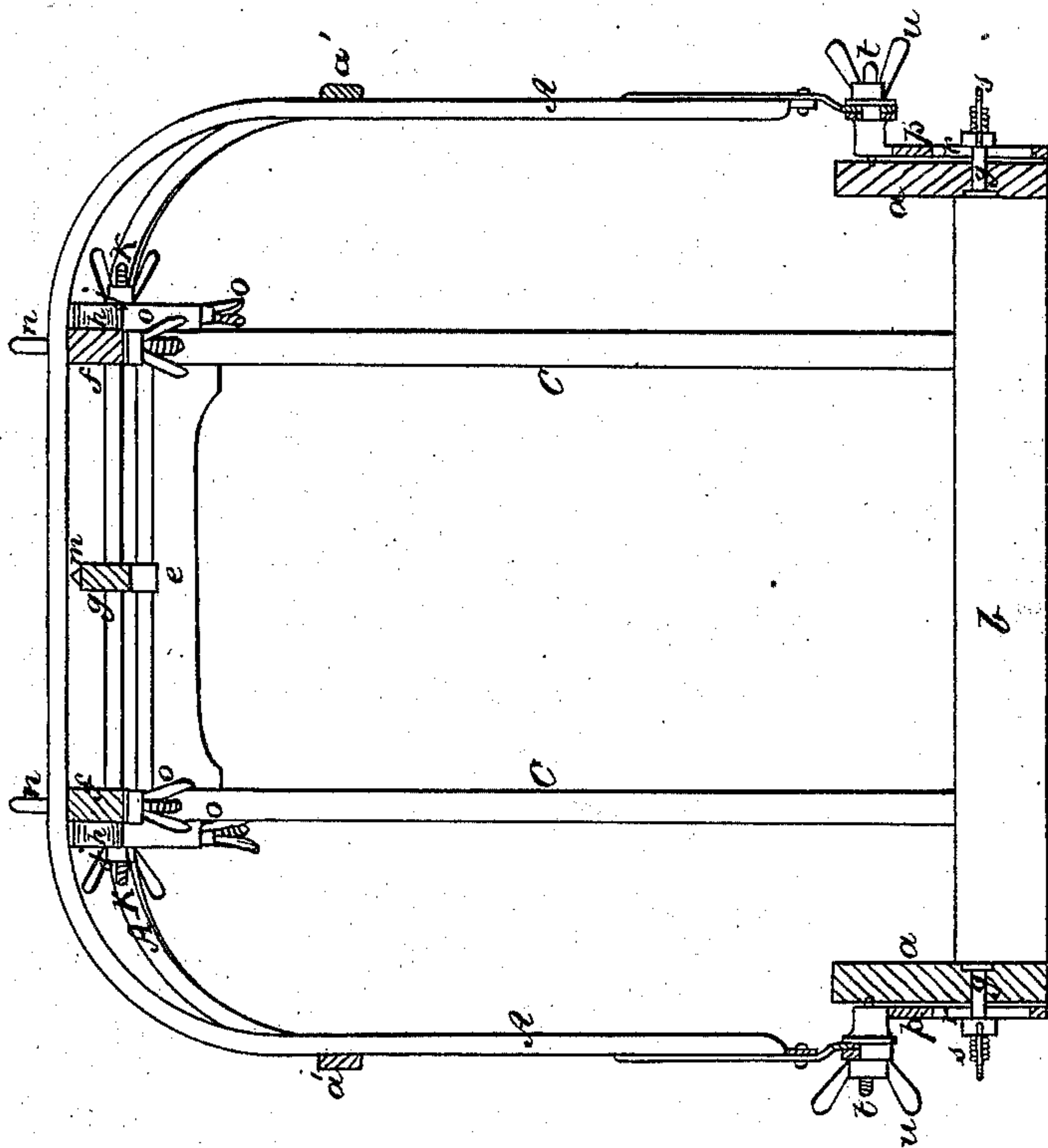
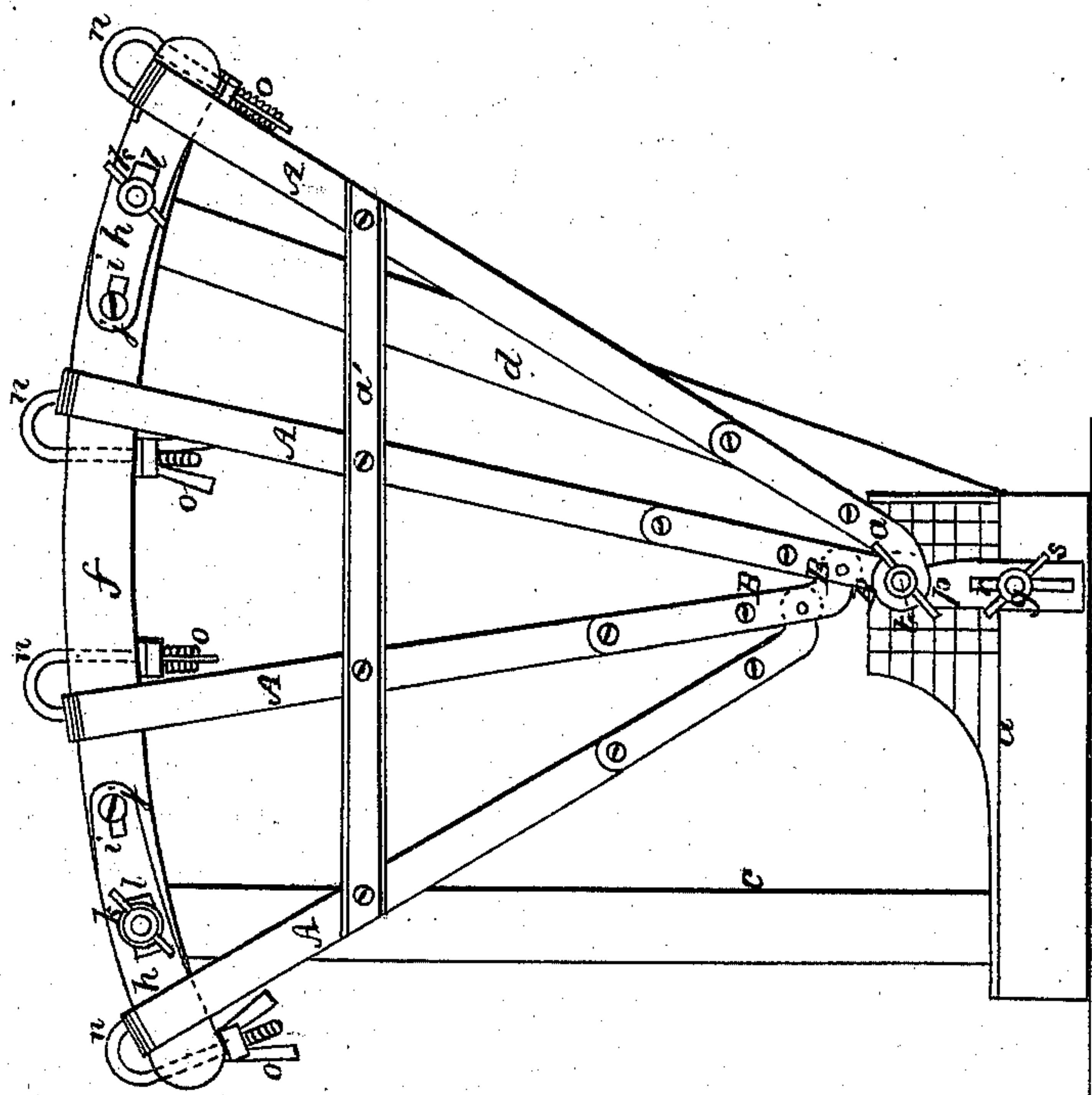


Fig. 1.



UNITED STATES PATENT OFFICE.

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APPARATUS FOR SETTING BOWS FOR CARRIAGE-TOPS.

Specification of Letters Patent No. 13,171, dated July 3, 1855.

To all whom it may concern:

Be it known that we, EDWARD HAYES, of Wheeling, in the county of Ohio and State of Virginia, and MORGAN HAYES, of Washington, in the county of Washington and State of Pennsylvania, have invented a new and Improved Apparatus or Device for Setting Bows for Carriage-Tops; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of our improvement. Fig. 2, is a transverse vertical section of ditto, the plane of section being through the center.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of our invention consists in setting or fitting the bows upon a plane, the upper part of which is provided with adjustable end pieces and clamps, and the lower end provided with adjustable pivots or arms, whereby, as will be hereafter fully shown and described, the bows may be set in proper position and arranged to suit tops or different sizes, with great facility and accuracy, and without applying for the purpose of measurement the bows to the vehicle for which the top is intended.

To enable others skilled in the art to make and use our invention we will proceed to describe its construction and the way it is used.

A, represents the bows of a carriage top. These bows are of the usual construction, and are now generally purchased by carriage makers in bent form ready for use.

We construct a framing the form of which approximates to that of a carriage top and seat. The lower part of the framing is formed of four pieces of timber mortised or connected together in rectangular form, the end pieces (a) (a) being rather higher than the front and back pieces (b). This lower part corresponds to the seat of a carriage or vehicle. To the back piece (b) there are attached two uprights (c), (c), and to the front piece (b), there are attached two inclined pieces or posts (d), and the uprights (c) and inclined posts (d), are connected at their upper ends by cross pieces (e). The upper ends of the uprights and posts are also connected by longitudinal curved strips (f), (f). The cross pieces

(e) are also connected by a curved strip (g). Each end of the curved strips (f) has an adjustable piece (h) attached to it. The pieces (h) have oblong slots (i) made through their inner ends through which slots screws (j) pass into the strips (f) and set screws (k) also pass through slots (l) in the pieces (h) into the strips (f), see Fig. 1. The pieces (h) by being attached to the strips (f) in the above manner are rendered capable of being adjusted farther in or out from the strips (f), and their outer ends may be raised or lowered as desired. The center curved strip is provided with points (m) on its upper surface see Fig. 2, in which one point is shown. The curved strips (f), have clamps (n) passing through them, and the pieces (h) also have each one clamp passing through them near their ends. The clamps are formed by having a hook bent on the upper end of a small iron rod, the lower ends of the rods passing through the strips and having a screw thread cut on them on which threads thumb nuts (o) work.

To the outer sides of the end pieces (a) (a) at the lower part of the framing there are attached metallic plates (p). These plates have oblong slots (r) made through them through which screw rods (g) pass, said screw rods being permanently secured to the end pieces (a). On the screw rods thumb nuts (s) work. To the upper ends of the plates (p) pivots or arms (t) are attached which pivots or arms project outward at right angles from the plates. The outer ends of the pivots or arms have screw threads cut on them on which thumb nuts (u) work.

The bows A, are set in the following manner: They (the bows) are first centered and the center marks placed on the points (m) of the curved strip (g), the bows resting transversely upon the three strips (f), (f), (g). The bows are placed the proper distance apart and secured down upon the strips by the clamps (n). The two end bows are secured upon the pieces (h) as shown in Fig. 1, and as these pieces are adjustable as previously stated it will be seen that the upper part of the carriage top may be made longer or shorter as desired, because the top of the framing may be increased or diminished in length. The plates (p) are then adjusted so that the pivots or arms (t) will occupy the same position on the end pieces

(a) that the arms do on the sides of the seat of the carriage or vehicle. And to facilitate this adjustment the outer and top edges of the end pieces may be graduated so that
5 the exact point may be readily ascertained. The metallic joints represented by B, and which are commonly used are then placed upon the arms (t) and secured thereon by the thumb nuts (u), and the lower ends of
10 the bows are then fitted or secured to the joints, see Fig. 1. The bows are then properly set and may be secured by a strip (a') so as to be kept in proper position when taken from the framing.
15 By the above invention the bows may be set in a perfect manner and with great facility, all the workman has to determine, is the size of the top required. The top of the framing is then contracted or enlarged
20 by adjusting the pieces (h) and the position of the arms on the seat of the vehicle ascer-

tained and the arms or pivots (t) on the framing set to correspond to them. The adjustment of the bows to the framing is then done as described. 25

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is—

Setting or adjusting the bows A, for carriage tops by means of a framing constructed 30 substantially as herein shown and provided with clamps (n) adjustable pieces (h) and adjustable arms or pivots (t), as described.

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