

(No Model.)

D. H. ALLEN.  
CARRIAGE TOP.

No. 345,472.

Patented July 13, 1886.

Fig. 1.

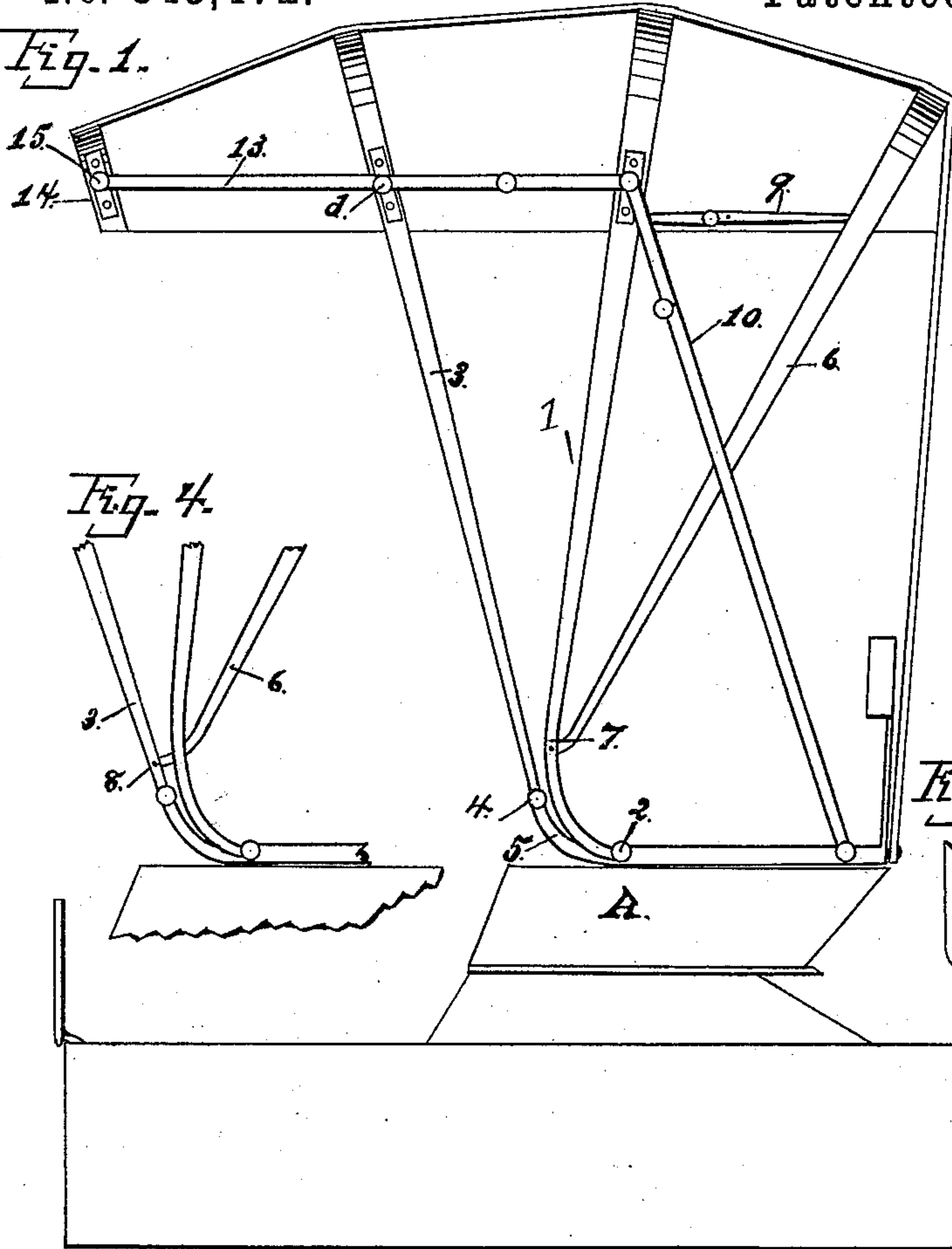


Fig. 3.

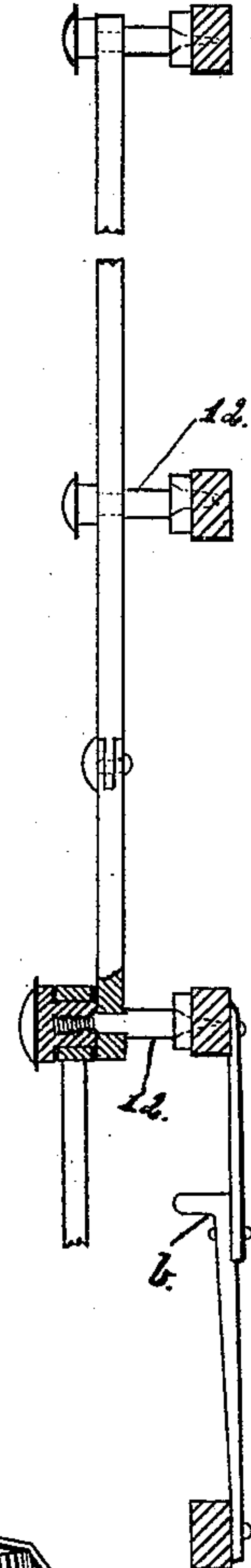


Fig. 4.

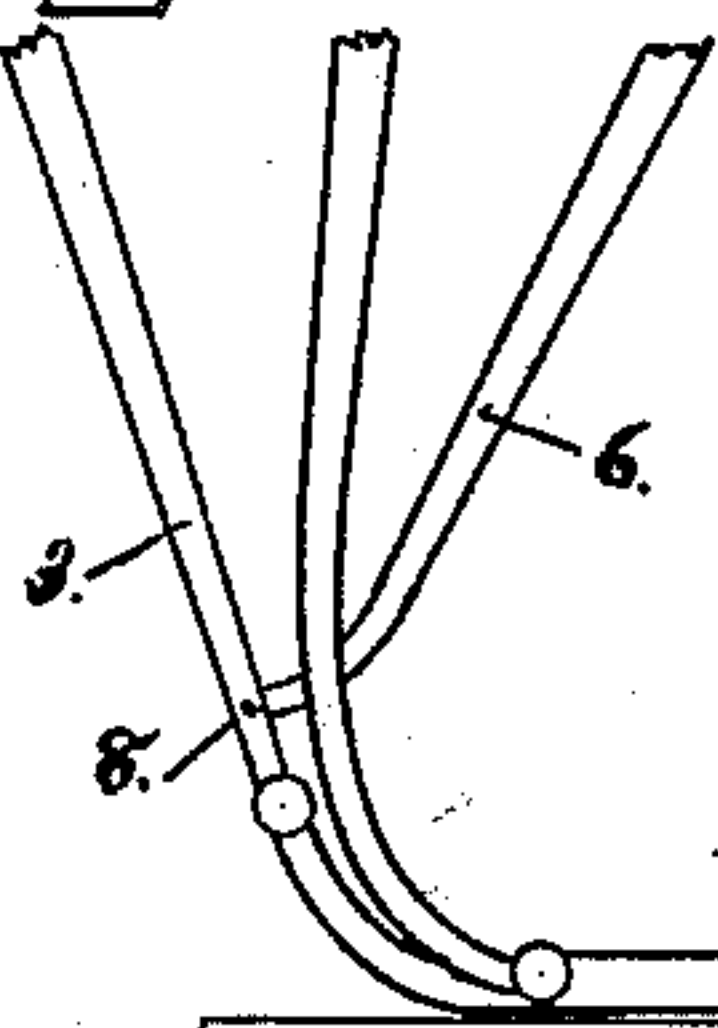
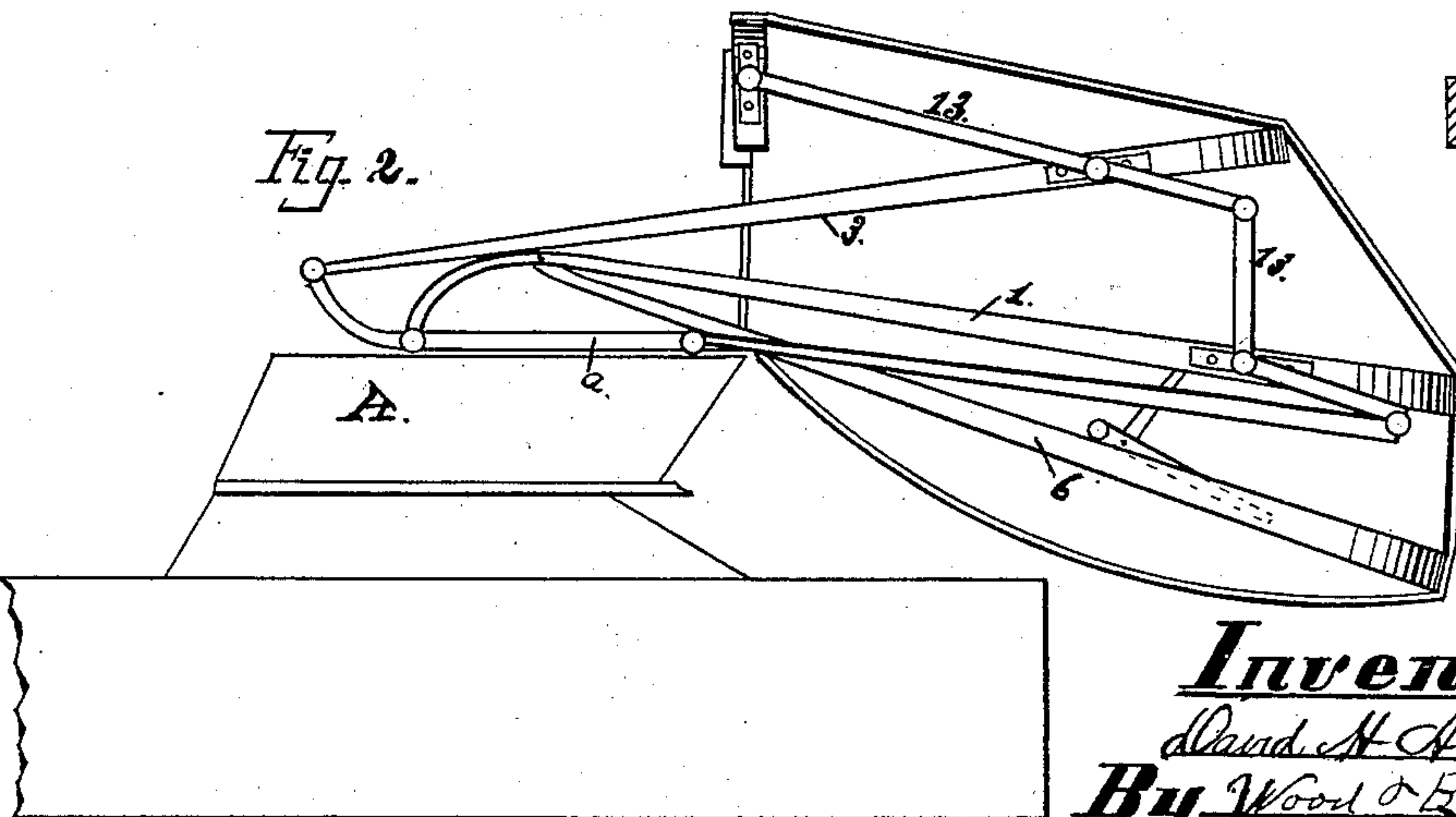


Fig. 5.



Fig. 2.



**Inventor,**  
*David H. Allen*  
**By** *Wood & Boyd*  
**his Attys.**

**Attest.** *Geo. S. Roebuck Jr.*  
*J. H. Eaton*

# UNITED STATES PATENT OFFICE.

DAVID H. ALLEN, OF MIAMISBURG, OHIO.

## CARRIAGE-TOP.

SPECIFICATION forming part of Letters Patent No. 345,472, dated July 13, 1886.

Application filed April 22, 1886. Serial No. 199,819. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID H. ALLEN, a resident of Miamisburg, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Carriage-Tops, of which the following is a specification.

My invention relates to folding carriage-tops.

One of the objects of my invention is to hinge the bows and props of a carriage-top so that they will fold backward without doubling the bows one upon the other, and sustaining them a sufficient distance apart to prevent injury to the covering of the top.

Another object of my invention is to fold the front portion of the top down in rear of the seat, forming a hooded fold of the entire top, to prevent mud and dirt from being thrown in or carried into the lining of the top when it is thus folded.

The principal features of my invention will be explained in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of my improvement applied to an ordinary piano-box buggy. Fig. 2 is a similar view showing the top folded. Fig. 3 is a section on line *x x*, Fig. 1. Fig. 4 is a modification of the method of hinging the bows. Fig. 5 is a plan view of the rear end of the prop.

A represents the seat of the carriage-body, to which the top is connected by the rail *a*.

1 represents the center bow, hinged to the seat-rail by pivot 2.

3 represents the front bow, hinged at 4 to the arm 5, which is practically a continuation of the seat-rail *a*.

6 represents the rear inclined bow, hinged at 7 to the center bow, 1.

In Fig. 4 I have shown a sectional elevation of the same bow with the bow 6 hinged to bow 3 by pivot 8.

The object of pivoting the two front bows upon separate centers, and of different radii relative to the seat-rail, is to employ a horizontal prop hinged to the front and short bow, and rigidly connecting the prop to the center bow, so as to hold the bows some distance apart when they are folded backward, as shown in Fig. 2.

9 represents the inner jointed prop. It is

provided with a supporting-arm, *b*, which rests on bow 6 when the top is folded, and holds bow 1 away from bow 6, as shown in Fig. 2. Bow 3 is likewise held from contact with bow 1 by means of the rear arm of prop 13.

Prop 13 is connected to the bows as follows: 15 represents a hinge for connecting the front arm of said prop to the short bow 14. *d* represents a hinge connecting said prop to bow 3, and the rear arm of said prop is rigidly connected to bow 1 by means of a square hole, 17, fitting a similar-shaped shank on the stud 12, which also serves as the center for the prop 10. By this means the joint of prop 13 is broken upward when the top is folded, and the short bow 14 is folded down upon the front bow, 3, as shown in Fig. 2, thereby hooding or closing the front of the top behind the seat, and preventing mud, dust, &c., from being thrown in. This prevents the lining of the top from being soiled, worn, or becoming dusty. The parts are covered and lined in any desired manner.

By employing the method of hinging the bows and connecting the props to the same, as herein set forth, the top presents a much neater appearance when folded, and both the exterior and interior covering of the top will wear and preserve their beauty much longer, which is a great desideratum in carriage-tops.

By reason of pivoting the bows 1 and 3 on two different centers relatively to the plane of the seat-rail *a*, and from the fact that the rear end of the horizontal prop is rigidly connected to the center bow, 1, the top, when spread, is much stiffer, and the inner horizontal prop, 9, in combination with the inclined prop 10, forms a rigid brace, requiring them both to be broken before the top can be folded. The horizontal prop 13 will break itself when the top is folded back, owing to the fact that the bows 1 and 3 turn on different centers, and from the fact that the rear arm of the prop 13 is a rigid one united to bow 1, it forms a bell-crank lever for breaking the joint.

I claim—

1. A carriage-top with its bows 1 and 3 hinged together by props and to the seat-rail at different radial points, substantially as specified.

2. In combination with the bows of a car-



riage-top hinged to the seat-rail at different radial centers, the jointed horizontal prop hinging on the front bow, with its front arm connected to the short bow and the rear arm rigidly connected to the center bow, substantially as and for the purpose specified.

3. In combination with the bows of a carriage-top hinged to the seat-rail, the horizontal prop hinged to the front bow, 3, and rigidly attached at its rear end to the bow 1, and its front end connected to the short bow, whereby the latter is drawn down toward bow 3, substantially as specified.

4. In combination with the bows 1, 3, and 6 and props 10 13, the prop 9, provided with an arm, *b*, for holding bows 1 and 6 apart when the top is folded, substantially as specified.

5. A carriage-top frame composed of the bows 1 3, hinged to the seat-rail, and 6, connected to 1, the inclined prop 10, inside prop, 9, and horizontal prop 13, rigidly attached to bow 1 and hinged to bow 3, substantially as specified.

6. A carriage-top composed of the bows 1 3, hinged to the seat-rail, and 6, connected to 1, the inclined prop 10, inside prop, 9, having supporting-arm *b*, and horizontal prop 13, rigidly attached to bow 1 and hinged to bow 3, substantially as specified.

In testimony whereof I have hereunto set my hand.

DAVID H. ALLEN.

Witnesses:

A. H. WEAVER,  
ELWOOD ALLEN.