W. DAVIS.

Adjustable-Top for Carriages.

No. 217,590. Patented July 15, 1879.

Fig. 1.

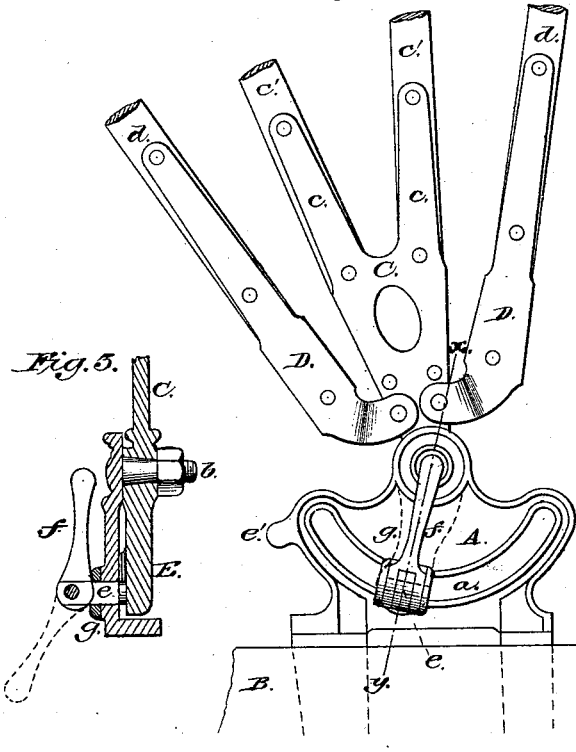
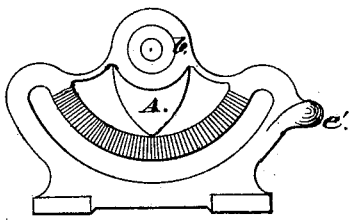


Fig. 3.

Fig. 2.



WITNESSES

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IMPROVEMENT IN ADJUSTABLE TOPS FOR CARRIAGES.

Specification forming part of Letters Patent No. **217,590**, dated July 15, 1879; application filed April 30, 1879.

To all whom it may concern:

Be it known that I, WILLIAM DAVIS, of the city and district of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Adjustable Buggy-Tops, which improvements are fully set forth in the following specification and accompanying drawings.

My invention relates to certain improvements in the form and mode of operation of the bow-irons, and the mechanism for their adjustment and clamping.

The first consists in a convenient and useful method of forming the bow-irons, so as to admit of the introduction of four instead of three bows, as has hitherto been the custom.

For this purpose the central or principal bow-iron is formed with two diverging tangs or shanks at the upper end, cast in one piece, and having at its lower end, below the center of motion, an arm provided with mechanism for clamping and fixing the same.

My second improvement consists in a simple and efficient device for adjusting and clamping the bow-irons by means of a lever and cam instead of a screw, thereby insuring greater firmness, rapidity of action, and durability in the mechanism than by the ordinary methods now in use.

In the accompanying drawings, Figure I is an outside view of my improved bow-irons and apparatus for adjusting and clamping the same. Fig. II is an inside view of the standard, and Fig. III a sectional view on the line *x y* in Fig. I.

Letter A shows the standard, on which the bow-irons are mounted and pivoted. It is firmly bolted to the end of the buggy-seat B in the usual manner, and is formed with a circular concentric slot, *a*, below the center of motion *b*, and at a sufficient distance therefrom to give the necessary leverage for clamping the bow-frame rigidly. C is the central or principal bow-iron, which I form, as represented, with two tangs or shanks, *c c*, for the attachment of the central pair of bows, *c' c'*, the angle of divergence being, of course, adjusted to conform to the radial direction of the bows *c c* from the extremities of the middle stretcher, *d*, to the center of motion *b*. The two outer bow-irons, D D, with their bows *d d*, are jointed to the central one, C, in the usual manner.

For the purpose of adjusting and clamping the bow-frame I provide the following mechanism: The central bow-iron, C, is cast, or otherwise formed, with an arm, E, projecting downward from the center of motion *b*, and having at its lower end an outwardly-projecting stud or pin, *e*, adapted to slide in the concentric slot *a*, the length of which is made to correspond with the amount of travel of the bow-frame, which, when depressed to its lowest point, rests upon the stop *e'*. Immediately inside of the stud *e* the inner surface of the arm E is serrated, or formed with shallow angular teeth, adapted to fit a correspondingly serrated or indented concentric portion of the inner surface of the standard A just inside of the slot *a*, so that when the arm E is clamped or pressed firmly against the standard A it is held immovably in the desired position, even with a very moderate pressure. This is applied by means of a small lever-handle, *f*, having its center of motion in the outer end of the stud *e*, and having the metal around that center disposed in such a manner as to form a small cam or eccentric, bearing against the outer surface of the standard A, on either side of the slot *a*, a washer, *g*, being interposed. These parts are so constructed and arranged that when the handle *f* is turned downward the pressure between the standard A and arm E is relaxed, so as to permit the latter to be readily moved to any required position in the slot *a* as the bow-frame is raised or depressed. On the other hand, when the handle *f* is turned up to its full extent, the serrated or tooth portions of the arm E and standard A are drawn forcibly together and clamped rigidly in any required position.

A similar arrangement of parts (although not represented in the drawings) may be applied, and is also claimed as a part of my invention, where the center of motion of the bow-frame is placed in the lower part of the standard A, and the slot *a* reversed in position, being made upwardly convex instead of concave, as represented, the other parts remaining substantially as described.

Having thus fully described the nature of my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, viz:

1. In an adjustable buggy or carriage top, the combination of the central bow-iron, C, pivoted to the standard A, and having two diverging tangs or shanks, *c c*, and arm E, with serrated inner surface, the standard A, with correspondingly serrated outer surface and concentric slot *a*, the sliding stud *e*, stop *e'*, binding lever-handle, with cam or eccentric *f*, and washer *g*, substantially as set forth.

2. The concentric circular slotted plate A, sliding stud *e*, binding lever-handle *f*, with cam or eccentric, and washer *g*, arranged and combined substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM DAVIS.

In presence of—

C. J. STEEL,
Of Montreal, Law Student.

A. S. ISAACSON,
Of Montreal, Notary Public.