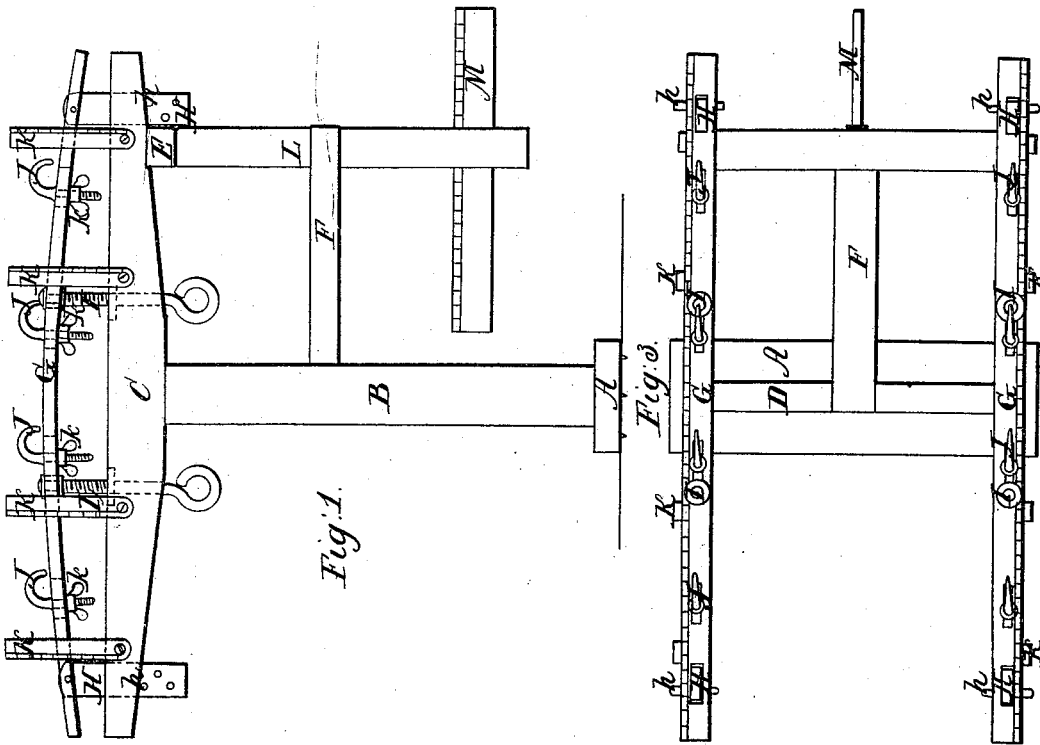
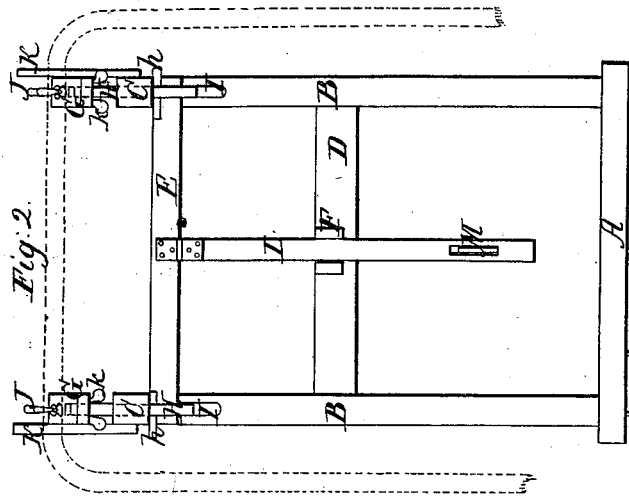


*A. McKinney.*  
*Shifting Rail.*

*No 7,506.*

*Patented Aug. 13, 1850.*



# UNITED STATES PATENT OFFICE.

A. MCKINNEY, OF MONTGOMERY, NEW YORK.

## APPARATUS FOR REGULATING THE SETTING OF BOWS IN WAGON-TOPS.

Specification of Letters Patent No. 7,566, dated August 13, 1850.

*To all whom it may concern:*

Be it known that I, A. MCKINNEY, of Montgomery, in the county of Orange and State of New York, have invented a new and Improved Adjustable Gage for Setting Up the Bows which Carry the Coverings of Wagons or other Carriages Ready for Trimming; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a back elevation. Fig. 3 is a plan as seen from above.

Similar letters of reference indicate corresponding parts in each of the several figures.

The nature of my invention consists in a frame provided with certain adjustable rules and hold fast bolts; the frame is intended to be secured to the seat of the wagon, the hoops are set at the required height and distance from each other plumbed and squared by the adjustable rules and held by the hold fast bolts until they can be secured to the body of the wagon.

The usual mode of setting up the bows is to set up the back one and having plumbed it, and set it at the required height to set up the others separately by measuring from the first or back one which occupies considerable time and generally employs two persons; but in setting up bows by the aid of my improved adjustable gage, it is only required to set the adjustable rules in the required position, and to set the bows by the measurements marked on the rules which may be accomplished very quickly, requiring only the labor of one person.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction, mode of adjustment, and use.

The frame is of wood of suitable strength, and consists of a bed piece A; two uprights B, B, two longitudinal bars C C, cross pieces D, and E, and an arm F.

G, G, are rules of the same length as the longitudinal bars C, C, they are divided and graduated on their upper sides in feet and inches and are attached near their ends by pins to flat rods H, H, which pass through slots near the ends of their longitudinal bars C, C, the said rods H, H, are each provided with a series of holes through any

one of which a pin *h* may be inserted under the bars C, C, for the purpose of adjusting the ends of the rules G, G, at any required height.

I I are adjusting screws fitting in female screws or nuts in the bars C, C, and having their ends secured by riveting to the rules G, G, for the purpose of giving any required arch to the said rules.

J, J, are holdfast bolts having square shanks passing through slots in the rules G, G, and having their lower ends screwed and fitted with thumb nuts *k*, *k*, these holdfast bolts are for securing the upper part of the bows to the rules G, G, and are capable of being moved a convenient distance in the slots according to the distance required between the bows; the rules G, G, may be provided with any required number of holdfast bolts, but as four (4) bows are the usual number employed in a wagon I represent four (4) bolts in each rule.

K, K, are short rules graduated in inches and jointed by pins or pivots to the outside of the longitudinal bars C, C; they are for the purpose of setting the rules G, G, at any required height above the longitudinal bars and giving them the required arch from back to front.

L is a swinging rod jointed by a hinge to the cross piece E, of the frame in such a manner as to be capable of swinging backward and fitting in a fork in the end of the arm F, it is provided with a slot near its lower end.

M is a rule sliding freely in the slot in the rod L.

The position of one of the bows is represented by red lines in Fig. 2.

The mode of adjusting the gage and of setting the bows is as follows: The bed piece A which is provided with small pins or spikes on its under side is secured by a hand screw to the seat of the wagon, the longitudinal bars C, C, being set in line with the sides of the wagon; the finger plates for receiving the ends of the bows having been secured in their required positions on the sides of the wagon.

The rules K, K, are then turned in an upright position (as represented in the drawings) and the rules G, G, are set by the rules K, K, to the required height and arched to the required form of the covering or if required may be set parallel with the bars C, C; the rules K, K, may then be turned

down. The back bow is then placed across the rules G, G, and set at the required distance from the back rail of the seat of the wagon which is measured by the rule M, 5 and is plumbed so that its sides are vertical, its upper part is set to corresponding measurements on the rules G, G, so that it must be square with the sides of the wagon; it is then tightly held down to the rules G, G, 10 by the bolts J, J, and nuts *h*, *h*. The other bows are set at the required distances from the back bow by the measurements on the rules G, G, being set to corresponding measurements on each side and are screwed down 15 by the holdfast bolts J, J, to the rules G, G, the lower ends of the bows are then secured in the finger plates provided to receive them on the sides of the wagon; after which the bolts J, J, may be released and the gage removed. 20

This gage may be used for setting up the bows for wagons having either fixed or folding coverings; for folding tops, jointed finger plates are used, the bows being set

perfectly parallel and square will always 25 fall on each other without breaking or cutting the leather with which they are covered.

Having now described my invention I will now state what I claim as new and desire to secure by Letters Patent— 30

1. I claim the combination and arrangement of the rules G, G, and K, K, the rods H, H, the pins *h*, *h*, the adjusting screws I, I, and the holdfast bolts J, J, arranged 35 and adjusted upon a frame in the manner and for the purposes substantially as herein described.

2. And I also claim the adjustable rule M sliding in the swinging bar L, and attached 40 to the same frame with the before described combination in the manner and for the purposes herein set forth.

A. McKINNEY.

Witnesses:

I. S. MILLSPAUGH,  
H. B. BULL.