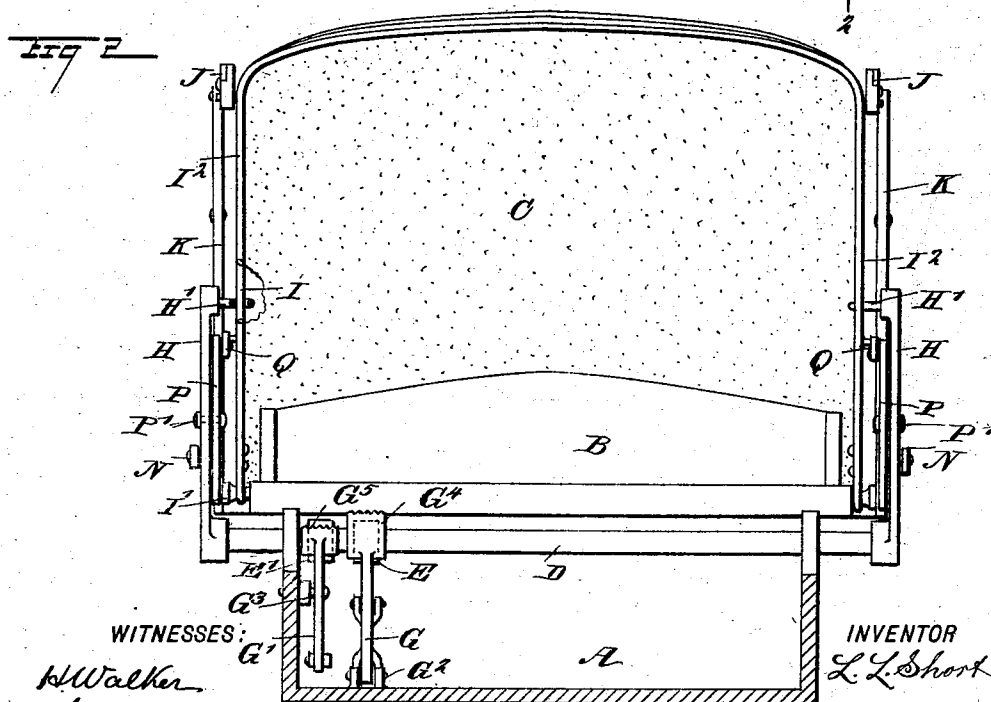
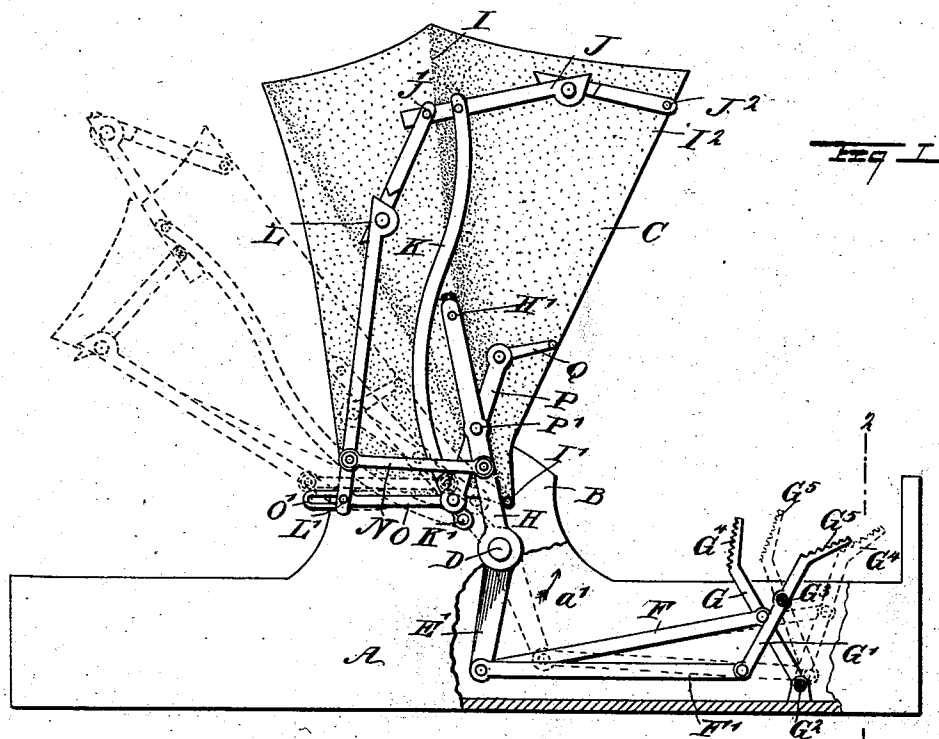


(No Model.)

L. L. SHORT.
FOLDING DEVICE FOR CARRIAGE TOPS.

No. 506,558.

Patented Oct. 10, 1893.



WITNESSES:

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LACROTA LEE SHORT, OF RUSSELLVILLE, MISSOURI.

FOLDING DEVICE FOR CARRIAGE-TOPS.

SPECIFICATION forming part of Letters Patent No. 506,558, dated October 10, 1893.

Application filed June 16, 1893. Serial No. 477,857. (No model.)

To all whom it may concern:

Be it known that I, LACROTA LEE SHORT, of Russellville, in the county of Cole and State of Missouri, have invented a new and Improved Folding Device for Buggy-Tops, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved device for conveniently and rapidly folding or extending buggy tops, while the vehicle is in motion, and which device can be readily attached to the ordinary buggy tops now in use.

The invention consists principally of a shaft journaled in the box of the vehicle, and provided with arms for connection with the buggy top frame, and foot levers for imparting a rocking motion to the said shaft to open or close the buggy top.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of the improvement as applied, part of the box being in section; and Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1.

The improved device as applied to a vehicle of ordinary construction, is arranged in such a manner that the operator seated in the vehicle can readily open or close the buggy top by actuating one of two levers by the foot, the one lever serving, when actuated, to extend the buggy top, and the other to fold the same. As shown in the drawings, the vehicle is provided with the usual box A, containing a seat B, on which is fulcrumed the buggy top C, in the usual manner. In a box A directly under the seat B is journaled the transversely-extending shaft D, provided with the downwardly-extending arms E and E', arranged at angles to each other, and pivotally-connected by links F and F', respectively, with the foot levers G and G', respectively, fulcrumed at G² and G³ in the forward part of the box A. The upper ends of the foot levers G and G' are formed with serrated foot pieces G⁴ and G⁵, respectively, adapted to be

engaged by the operator's foot, so as to impart a swinging motion to the corresponding lever to rock the shaft D, it being understood that when one lever is actuated to swing forwardly, the other lever is caused to swing backward, as will be readily understood by reference to the full and dotted lines in Fig. 1.

On each outer end of the shaft D is secured an upwardly-extending arm H, provided near its free end with an eye H', adapted to engage the side of the middle frame arm I, of the buggy top C, so that when a rocking motion is given to the shaft D by the operator actuating either of the foot levers G or G', then the said arm H opens or closes the top C, owing to its connection with the arm I of the frame for the buggy top. The upper end of this arm I is connected at J' with the toggle lever J connected at J² with the front arm I² of the buggy top C.

The lower ends of the arms I and I² are pivoted at I' to the sides of the seat B, as illustrated in Fig. 1, and as is usual. The lever J is pivotally-connected with a link K, likewise pivoted at K' to the side of the seat B close to the pivot I' for the frame of the buggy top. The pivot J' is connected with a toggle lever L, pivotally-connected at L' to the side of the seat B near the rear end thereof, as plainly shown in Fig. 1. The lower part of the lever L is connected by a link N, with the arm H so that a swinging motion given to the latter opens and closes the lever L to permit of conveniently folding the buggy top frame, as hereinafter more fully described.

The pivot L' is engaged by the slotted end O' of a link O, pivotally-connected with a lever P, fulcrumed at P' on the arm H and pivotally-connected by a link Q, with the arm I² of the buggy top frame between the pivots J² and I'.

The operation is as follows: When the several parts are in the position as shown in Fig. 1, the buggy top is extended, and when it is desired to close the buggy top, the operator located on the seat B presses with his foot on the foot piece G⁴ of the lever G so as to impart a forward swinging motion to the said lever thus causing a rocking of the shaft D in the direction of the arrow a'. This movement of the shaft causes a rearward and downward swinging of the arm H so that a like

rearward and downward swinging motion is imparted to the buggy top C to fold the latter. The folding is accomplished by the action of the links K, levers L and P, and their connections, so that when the buggy top finally passes into a lowermost folded position the several parts assume the positions illustrated in dotted lines in Fig. 1. Now, when the buggy top is folded and it is desired to raise or extend the same, then the operator presses on the foot piece G⁵ which has assumed the position shown in dotted lines in Fig. 1, so that a rocking motion is imparted to the shaft D in the inverse direction of the arrow a', whereby the arm H is caused to swing upward and forward, thus moving the buggy top to an extended position, the several parts of the buggy top frame being drawn out by their levers J and L, and their connections as above described.

It will be seen that by this arrangement, the operator seated on the seat B can by pressure of the foot, readily open or close the buggy top at any time, while the vehicle is in motion. It will further be seen that the device for folding the buggy top can be readily applied on the ordinary buggy tops, as now used.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A buggy top folding device, comprising a shaft having arms connected with the buggy top frame, whereby to positively open and close said top and foot levers for imparting a rocking motion to the said shaft for opening or closing the top, substantially as shown and described.

2. A buggy top folding device, comprising a shaft provided with upwardly-extending arms having a loose connection with the buggy top frame, downwardly-extending arms standing at angles to each other and also secured on the said shaft, foot levers, and links for connecting the said foot levers with the said arms standing at angles to each other, substantially as shown and described.

3. A buggy top folding device, comprising a shaft provided with upwardly-extending arms having a loose connection with the buggy top frame, downwardly-extending arms standing at angles to each other and also secured on the said shaft, foot levers, links for connecting the said foot levers with the said arms standing at angles to each other, and links and levers connecting the said first named arms with the buggy top frame to open and close the individual parts thereof, substantially as shown and described.

4. A buggy top folding device comprising a shaft having arms connected with the buggy top and separate foot levers connected with said shaft and adapted for use in imparting rocking motions to the same whereby such shaft may be positively rocked to open or close the top all substantially as set forth.

5. A buggy top folding device comprising a shaft having arms connected with the buggy top frame and connections between said arms and the toggle levers of the buggy top substantially as set forth.

6. The buggy top having a frame and toggle levers combined with a shaft having arms connected with the frame and connections between said arms and the toggle levers whereby the oscillation of the shaft may set and release the toggles and may also positively raise and lower the top substantially as set forth.

7. The buggy top having a frame and toggle levers, combined with the shaft having arms connected with the frame, levers fulcrumed between their ends to said arms, links connecting one end of said levers with the top frame, and links connected at one end with the other ends of said levers and having their other ends slotted and engaging the lower pivots of the back toggle levers all substantially as shown and described.

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Witnesses:

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