No. 647,253. Patented Apr. 10, 1900.

F. A. CROCKER.

THILL SUPPORT.

(Application filed Dec. 18, 1899.)

(No Model.)

FIG. 1.

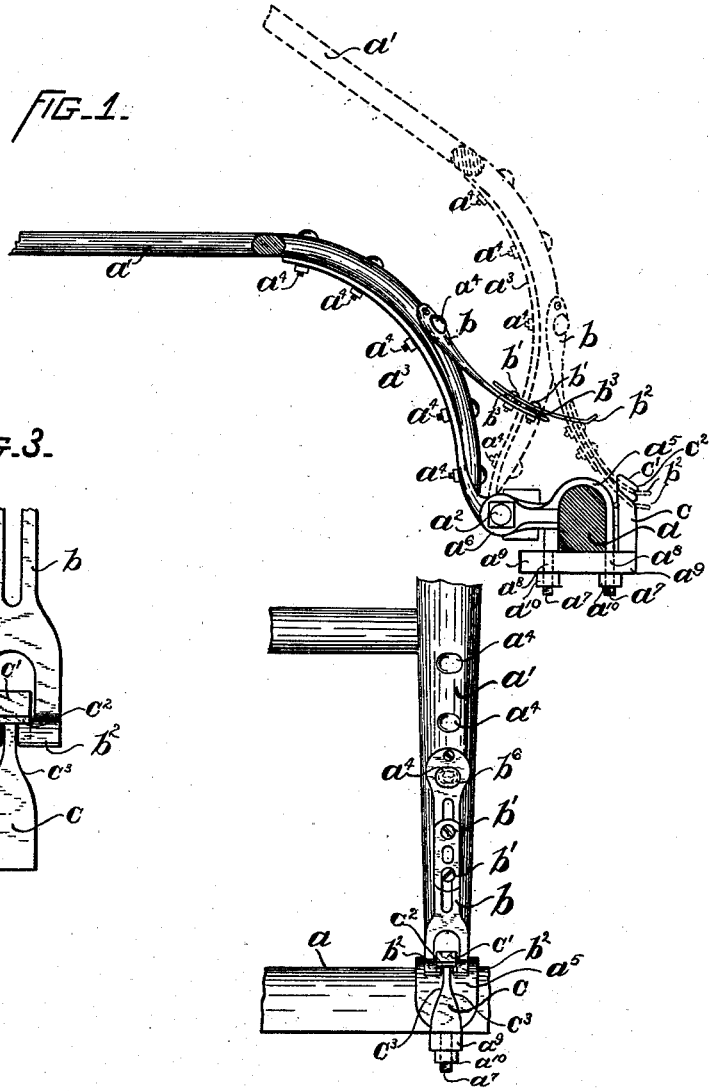

FIG. 3.

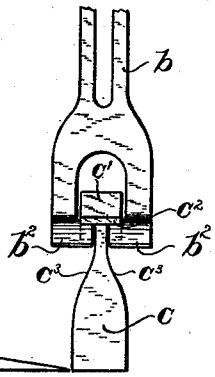

FIG. 4.

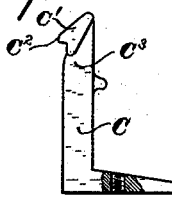

FIG. 2.

WITNESSES.

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FRED A. CROCKER, OF LINCOLN, MAINE, ASSIGNOR OF TWO-THIRDS TO JOHN H. REED, OF SAME PLACE.

THILL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 647,253, dated April 10, 1900.

Application filed December 18, 1899. Serial No. 740,695. (No model.)

To all whom it may concern:

Be it known that I, FRED A. CROCKER, a citizen of the United States of America, and a resident of Lincoln, Penobscot county, Maine, have invented certain new and useful Improvements in Thill-Supports, of which the following is a specification.

This invention relates to vehicles, and has for its object to improve the construction of a device for supporting the thills or shafts in a raised position out of the way, such as is desirable when the vehicle is not in use. Said device is constructed and arranged to work automatically to support or release the thills, so that when said thills are raised to the required position said thill-supporter will automatically lock and support them in said raised position and will automatically release them when they are raised slightly beyond their locked position.

In accordance with this invention the thill-supporter consists of a spring-acting arm adjustably secured to the thill and projecting rearwardly therefrom, having its end bifurcated or forked and cut away to form projections and a catch secured to the axletree of the vehicle and arranged in the path of said arm as said thills are raised, having a cam-surface adapted to engage and guide said arm, and said catch is provided with a shouldered portion over which said bifurcated arm is guided, said projections thereof engaging said shouldered portion of said catch, locking said parts together and supporting said thills. Said catch is cut away on opposite sides, so that when said thills are slightly raised beyond the locked position the spring action of said arm will cause the bifurcated end thereof to pass around said cut-away portion of said catch, releasing said thills.

Figure 1 is a side elevation of a part of a thill and axletree of a vehicle, showing the thill-supporter applied thereto in its locked and unlocked position. Fig. 2 is a front elevation of the parts shown in Fig. 1. Fig. 3 is an enlarged view of a part of the arm and the catch locked together. Fig. 4 is a side elevation of the catch shown in Fig. 3.

The letter a denotes the axletree of an ordinary vehicle, and a' the thills, pivotally connected or hinged thereto in the usual manner. A clip a^5 embraces the axletree a of the front wheels of the vehicle, having two threaded extremities a^7, which pass through holes a^8 in a bar a^9, and nuts a^{10} securely fasten said clip a^5 to said axletree a. Said clip a^5 is provided with a hinge a^6, projecting laterally therefrom, and a strap a^3 is provided, to which said thills a' are secured by bolts a^4, and said strap a^3 has formed in its end an eye, and a pin or bolt a^2 passes through said hinge a^6 and said eye formed in said strap a^3, pivotally connecting or hinging said thills a' to said axletree a, as shown in Figs. 1 and 2 of the drawings.

The thill-supporting device consists of an arm b, which may be rigidly secured to the thill a', and a catch c, secured to or made integral with the bar a^9, which secures the clip a^5 to the axletree a of the vehicle, and said catch c is constructed and arranged to lie in the path of said arm b as the thills a' are raised, so that upon engaging each other said arm b and catch c will lock together, supporting the thills a' in their raised position, as will be described. Said arm b is rigidly secured to the thills a' by a bolt a^4, as shown in Figs. 1 and 2 of the drawings, and may be adjustable laterally by elongating the bolt-hole through said arm b, as shown at b^6, Fig. 2. Said arm b is made of spring-acting metal and formed in two pieces, which are adjustably secured together by bolts and washers b' b', so that it may be lengthened or shortened as may be desired, as shown in Figs. 1 and 2, and by interposing washers b^3 between the members of said arm b a vertical adjustment thereof may also be obtained. Said arm b is bifurcated or forked at its free end and cut away to form oppositely-arranged projections b^2, which are bent at an angle to said arm b to reduce friction between the end thereof and said catch c and to facilitate their locking together. The catch c is rigidly secured to or made integral with said bar a^9, from which it projects upwardly substantially at right angles thereto to a level a little above said clip a^5, as shown in Figs. 1, 2, and 4 of the drawings, having at its upper end an inclined cam-surface c', which is adapted to engage and guide said bifurcated end of said arm b over its surface to a shoulder or notch

c^2, formed in said catch c, said projection b^2 of said arm b engaging said shoulder c^2, locking said arm b and catch c together, as shown in Figs. 2 and 3. The sides of said catch c are cut away, as shown at c^3 in Figs. 2, 3, and 4, so that said bifurcated arm b may pass around said catch c and release said thills a' when they are raised slightly beyond their locked position, as will be described.

The thill-supporter is operated as follows: The thills a' are raised to the desired elevation, the inclined bifurcated end of the arm b coming in contact with and engaging the cam-surface c' of the catch c. Said arm b will be sprung slightly upward and upon a further slight raising of the thills a' said arm b will be guided over said cam-surface c', said projections b^2 of said arm b dropping into said notch or shoulder c^2 and locking said catch c and arm b together, supporting said thills. To release the thills, they are raised slightly beyond their locked position, whereupon the spring action of said arm b will cause the bifurcated end thereof to drop into said cut-away portions c^3 of said catch c, as shown in Fig. 1 by dotted lines, when said bifurcated end of said arm b passes around said catch c as the thills are lowered, releasing them.

The arm b is herein shown as capable of adjustment in the direction of its length laterally and vertically, so that it may be easily brought into exact alinement with the catch c, which may be made integral with the bar a^9 or in a separate piece, as shown in Fig. 4. It is obvious from the construction of the thill-support that the parts thereof may be interchanged without departing from the scope of this invention and in such case the catch c will be secured to the thill and the arm b to the axletree a of the vehicle.

I claim—

1. A support for the thills of a vehicle, consisting of a spring-metal arm formed in two parts adjustably secured together and a catch having its sides cut away, said arm having a bifurcated end bent at an angle and carrying inclined projections constructed and arranged to engage and lock with said catch as said thills are raised, and to be sprung into said cut-away portion of said catch to release said thills, when slightly raised beyond their locked position, substantially as described.

2. A support for the thills of a vehicle, consisting of a spring-metal arm adjustably attached to said thill and a catch rigidly secured to the axletree of said vehicle, said arm having a bifurcated end cut away and bent to form inclined projections, and said catch having a cam-surface constructed and arranged to engage and guide said bifurcated end of said arm over a shoulder of said catch, as said thills are raised, said inclined projections of said arm passing around and engaging said shoulder of said catch, locking said parts together, and supporting said thills, substantially as described.

Signed by me at Lincoln, Maine, this 13th day of December, A. D. 1899.

FRED A. CROCKER.

Witnesses:

C. H. GIFFARD,

J. A. STEVENS.