

E. A. McGOLDRICK.  
THILL SUPPORT.

Patented June 30, 1891.



# UNITED STATES PATENT OFFICE.

EDWARD A. MCGOLDRICK, OF ST. PAUL, MINNESOTA.

## THILL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 454,878, dated June 30, 1891.

Application filed July 11, 1890. Serial No. 358,411. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. MCGOLDRICK, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Thill-Supporters, of which the following is a specification.

My invention relates to improvements in attachments for buggies and other single vehicles for the purpose of supporting the thills or shafts in a raised position while the vehicle is detached from the horse; and it consists in spring-controlled dogs attached to the thills and adapted to engage projections or catches upon the axle.

My invention further consists in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a partial plan view of the forward wheels and axle of the buggy and its thills with my improvement applied thereto. Fig. 2 is a sectional side elevation of the same, taken on the line  $x x$  of Fig. 1. Figs. 3 and 4 are respectively plan view and side elevation of one of the dogs; Figs. 5 and 6, similar views of the rod connecting said dog with the tripping-lever; and Figs. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20 are other details.

In the drawings, 2 represents the forward axle of the buggy; 3, its wheels; 4, the thills attached thereto in the ordinary manner, and 5 their cross-bar. Adjacent to but between the clips 6, to which the thills are connected, are arranged the catches 7, preferably of flat bar-iron, formed with two right-angled bends to embrace the lower side of the axle, and a rearwardly-projecting lip 8. The catch is secured to the axle, preferably by means of the yoke 9, of ordinary construction, placed over the axle-bed and passed through the holes 10 and therein secured by nuts threaded upon the ends of the yoke, the device thus taking the place of the cross-bar ordinarily placed upon the yoke. Secured to the thill, preferably by means of the usual bolts passed through slots or holes in the strap 11, placed on the under side of the thill, is the laterally-projecting clip 12, which serves as a pivotal support for the dog 13, secured therein. This dog is formed preferably with a slight curve and provided with a series

of notches 14 on the under side in such position that they will engage the lip 8 of the catch 7 as the thills are lifted upward and the dog slides backward over the catch, thus serving to support the thills in whatever position they may be lifted to, as clearly shown in Fig. 2, the full lines representing the position of the parts when the thills are supported at about a horizontal position and the dotted lines when they are raised to nearly a vertical position.

In order to conveniently lift both of the dogs from either side of the vehicle to throw them out of engagement with the catches, I prefer to arrange a transverse rod or rock-shaft 15, extending from one thill to the other just back of the cross-bar 5, and pivoted at each end underneath the thill. This rod has near each end an upwardly-extending arm 16, fitted, preferably, with a handle 17, and connected by means of the rod 18 with the dog 13, the rod being pivotally connected to the arm and the dog. It will thus be seen that by throwing either of the arms 16 forward by means of its handle the rod 15 is rocked or turned in its bearings and both of the dogs simultaneously lifted from the catches. To adjust the length of the rod 18 and the throw of the lever, I prefer to form the lever and the connected end of the rod with series of holes 19 and 20 to receive the connecting bolt or pin. In order to hold the dog either in bearing contact with spring-pressure upon the catch 7, so as to automatically engage it when the thills are lifted or out of engagement or contact with the catch when the vehicle is in use, I provide a spring attachment for the rod 15, which tends to hold it in its position at either limit of the throw of the lever. This may be accomplished in any desired manner; but I prefer to use the form shown in the drawings, in which the flat strap-spring 21, having an indentation or groove 22, bears upon the under side of the rod. The rod at the point of contact may be formed with a slight angle or with a projection 23 upon it to lie in the groove 22 of the spring in one position of the lever, and to bear upon the flat surface of the spring outside of the groove when the rod is turned by the throw of the lever to its other limit, the spring yielding to allow the movement of the rod.

Various modifications in the forms and connections of the parts may be made, if desired, without departing from the principle of my invention.

5 In operation one of the levers 16 is thrown backward or toward the vehicle, the spring 21 engaging the rod 15 to hold it in its turned position, and thus by means of the rod 18 forcing the dog 13 down upon the lip 8 of the  
10 catch 7 with elastic pressure. Upon lifting the thills the notches of the dog will successively engage the catch and support the thills at any elevation to which they may be lifted, thus avoiding danger of their being broken  
15 or soiled while lying upon the ground and making it much more convenient for attaching the vehicle to the horse, as the thills can be raised above the back of the animal. When it is desired to drop the thills from their  
20 raised position, they are lifted by the hands slightly to relieve the strain upon the catch and dog, then the adjacent lever 16 is thrown forward, lifting the dogs from the catches and holding them out of engagement with the  
25 same by means of the spring 21, and allowing the thills to be lowered to any desired position, the attachment being left in this position while the vehicle is in use.

I claim—

30 1. The combination, with a wagon and the thills thereof, of fixed catches secured to the axle, pivoted ratchet-toothed dogs carried by the thills, means for throwing them into and out of engagement with said catches, and  
35 spring mechanism holding the same in either adjusted position, substantially as and for the purposes set forth.

2. The combination, with a vehicle and its

thills, of catches rigidly secured to the forward axle, dogs pivoted to the thills and having series of notches or teeth adapted to engage said catches, and spring-controlled mechanism for holding said dogs in or out of engagement with said catches, substantially as described. 45

3. In a device of the class described, the combination of pivoted dogs carried by the thills adapted to hook over catches upon the vehicle and suspend the thills, a rocker-shaft connected to said dogs adapted to throw them into or out of engagement with the catches, and a spring engaging said shaft and tending to hold the same at either limit of its throw, substantially as described. 50

4. The combination of a vehicle having catches upon the forward axle, dogs pivoted to the thills and engaging said catches, a transverse rock-shaft secured to the thills, arms upon said shaft linked to said dogs, and springs engaging said shaft and holding the same in its position at either limit of the throw of the arms, substantially as described. 55

5. The combination, with the vehicle and its thills, of the catches 7, secured to the forward axle, the dogs 13, having the notches 14 and pivoted to the thills, the rock-shaft 15, having the springs 21 and the arms 20, and the rods 18, connecting said arms with said dog, substantially as and for the purposes set forth. 60

In testimony whereof I have hereunto set my hand this 1st day of July, 1890. 70

EDWARD A. MCGOLDRICK.

In presence of—

T. D. MERWIN,  
A. MAE WELCH.