

(No Model.)

C. P. BUTTON.
THILL COUPLING.

No. 469,933.

Patented Mar. 1, 1892.

Fig. 1.

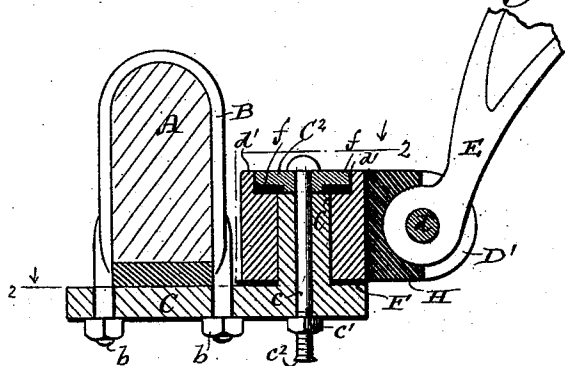


Fig. 2.

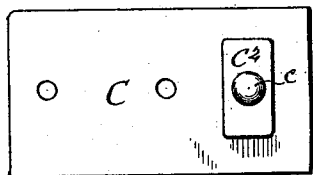
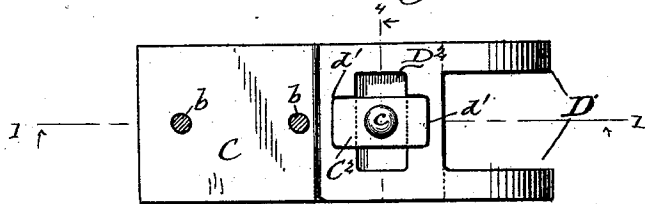


Fig. 3.

Fig. 5.

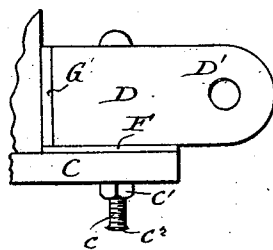
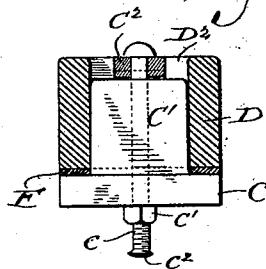


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES P. BUTTON, OF MILWAUKEE, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 469,933, dated March 1, 1892.

Application filed June 1, 1891. Serial No. 394,636. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. BUTTON, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to certain new and useful improvements in thill-couplings; and it consists in the matters hereinafter described, and more particularly pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a sectional view of a carriage-axle with my improved form of thill-coupling applied thereto. Fig. 2 is a plan view of the coupling, taken on line 2 2 of Fig. 1. Fig. 3 is a plan view of the plate, which is secured upon the under side of the axle, and to which the thill is secured. Fig. 4 is a view, partly in section, taken on line 4 4 of Fig. 2. Fig. 5 is a side elevation illustrating a slightly-different arrangement of parts.

In said drawings, A indicates the axle, and B the shackle which embraces it, both of which parts are of the ordinary form of construction.

C is a plate adapted to be secured upon the under side of the axle by means of nuts *b b*, which engage with the threaded lower ends of the shackle B in the usual manner. This plate C is prolonged, so as to extend considerably beyond the front side of the axle, as shown in the drawings, and is provided upon its upper surface with an upwardly-extending post *C'*, upon the upper end of which is provided a button *C²*. As shown in the drawings, this button *C²* is secured upon the upper end of the post *C'* by means of a bolt *c*, which passes vertically through said button and said post and is secured in position by means of a nut *c'*, engaged with its screw-threaded lower end. The extreme lower end of the bolt *c* is slightly upset, as shown in the drawings, so as to prevent the nut *c'* from being screwed entirely off from the end of said bolt, while permitting said nut to be turned upward or downward for some considerable distance upon said bolt.

D is a casting of malleable iron or other suitable material, provided upon its forward side with projecting ears *D' D'*, between which the iron of the thill E is secured in the ordinary manner by means of a bolt or rivet *d*, passed through said ears *D' D'* and the eye formed in the end of said iron E. The casting D is further provided with a vertical passage *D²*, extending through the said casting D, said vertical passage being made of a size and form to correspond with the post *C'*, and, as shown in the drawings, said casting D is fitted over the post *C'* upon the plate C. By the construction shown, the button *C²* being of a size to permit it to pass through the passage *D²* when it is turned lengthwise of said passage, the casting D may be adjusted in position upon the plate C and the button *C²* turned at right angles to said passage, so as to extend across said passage and prevent the casting D from being displaced. I also prefer to provide recesses or depressions *d' d'* at the sides of the passage *D²*, within which the ends of the button *C²* rest when said button is turned into the position shown in Fig. 2.

I provide a packing F, of rubber or other elastic material, between the plate C and the casting D, so as to prevent any rattling of said parts in case the bolt *c* should become loose. I also provide elastic packings *f* between the ends of the button *C²* and the surfaces of the casting D, against which said ends bear, said packings being secured either to the under side of said button or to the upper surfaces of the shoulders, against which said button bears. If desired, elastic packings G may be also provided between the surfaces of the shackle B and the adjacent surface of the casting D, as shown more particularly in Fig. 5; or, as shown in Fig. 1, a space may be left between said surfaces, so as to prevent contact of said parts and consequent rattling. The usual elastic packing H is preferably located between the inner end of the thill-iron and the part D, so as to prevent any liability of rattling of said parts.

The operation of my improved device is as follows: In order to secure the thills to the axle, the user turns the button *C²* into the position shown in Fig. 3, so as to permit the part D to be passed down over said button

and the post C'. The part D being then adjusted in its proper position, (nut c' having been previously unscrewed,) the button is raised so as to lift it out of engagement with the upper end of the passage D², when said button may be freely turned in either direction. The operator then moves said button into a position at right angles to the said passage and drops said button into engagement with the recesses or depressions d' d', as shown in Figs. 1 and 2 more particularly. He then screws up the nut c', so as to draw the parts firmly together, the elastic packings F and ff serving to effectually prevent any liability of rattling of said parts. When it is desired to remove the thills from their engagement with the axle, it is only necessary to unscrew the nut c' sufficiently to permit the button C² and bolt c to be raised so as to free said button from its engagement with the recesses d' d', when said button may be again turned into the position shown in Fig. 3 to permit the part D to be lifted off from the post C'. It will thus be seen that by my improvements I have been enabled to provide a very simple, cheap, and durable thill-coupling, and one that may be readily employed in connection with the thill irons and shackles commonly in use upon vehicles.

I would have it understood that I do not desire to limit myself to the exact form of construction shown in the drawings, and that various modifications may be made in the details of construction without departure from my invention. If desired, the button C² may be made integral with the bolt c, constituting the head of said bolt, and a spring or suitable elastic packing may be placed between the nut c' and the under side of the plate C.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A thill-coupling comprising a plate adapted to be secured upon the under side of the axle and provided with a projecting post, a part pivotally connected with the thill-iron and provided with an aperture or passage adapted to fit over said post, means for locking said parts in engagement with each other,

and elastic packings between said parts, substantially as and for the purpose described.

2. A thill-coupling comprising a plate adapted to be secured upon the under side of the axle and provided with a projecting post, a part pivotally connected with the thill-iron and provided with an aperture or passage adapted to fit over the said post, and a revoluble button of a size and shape corresponding with said aperture engaged with the said post and adapted to be turned so as to coincide with said aperture or passage or to engage with the surface of said part upon opposite sides of the same to lock said parts together, substantially as described.

3. A thill-coupling comprising a plate adapted to be secured upon the under side of the axle and provided with a projecting post, a part pivotally connected with the thill-iron and provided with an aperture or passage adapted to fit over said post, a revoluble button engaged with the said post and adapted to be turned so as to project upon opposite sides of said aperture or passage, and a bolt extending through said button and said post and provided with a nut upon its lower end, whereby said parts may be firmly secured together, substantially as described.

4. A thill-coupling comprising a plate adapted to be secured upon the lower side of the axle and provided with a projecting post, a part pivotally secured to the thill-iron and provided with an aperture or passage adapted to fit over said post, a button located upon the extremity of said post and revolubly engaged with the latter, a bolt extending through said button and said post and provided with a nut, and packings of elastic material between said plate and the adjacent surface of said part and between said part and the adjacent surfaces of the said button, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES P. BUTTON.

Witnesses:

JOHN E. WILES,
N. E. OLIPHANT.