(No Model.)

T. & C. L. FERGUSON.

THILL COUPLING.

No. 273,497. Patented Mar. 6, 1883.

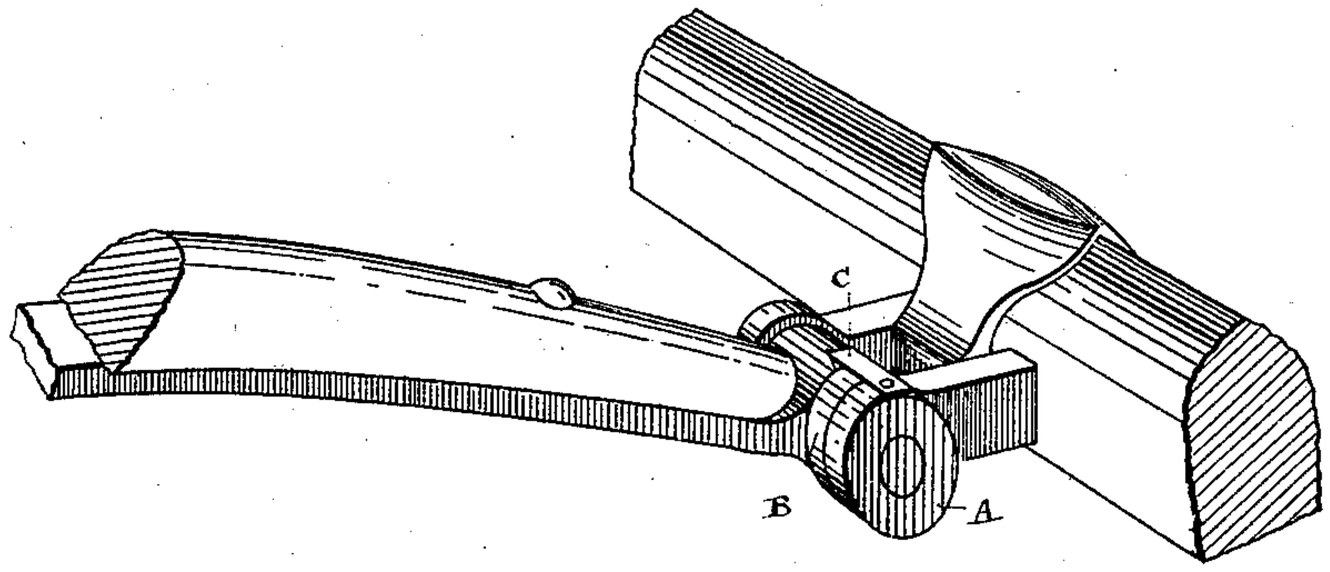
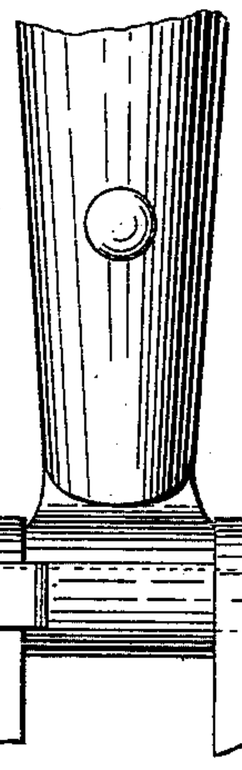


Fig. 1.



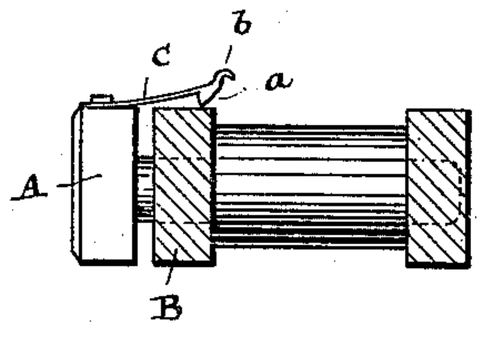


Fig. 2.

Fig. 3.

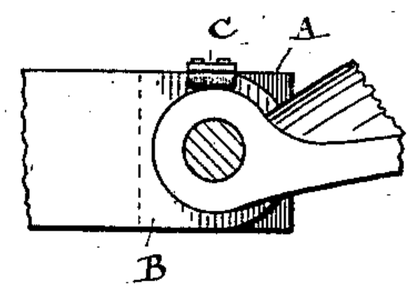


Fig. 4.

Witnesses.

Lewis Tomlinson

Chas. E. Baldwin

Inventors.

Thomas Ferguson

Charles L. Ferguson

by Donald L. Ridout & Co.

Attorneys

UNITED STATES PATENT OFFICE.

THOMAS FERGUSON AND CHARLES L. FERGUSON, OF TORONTO, ONTARIO, CANADA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 273,497, dated March 6, 1883.

Application filed October 10, 1882. (No model.)

To all whom it may concern:

Be it known that we, THOMAS FERGUSON and CHARLES LESLIE FERGUSON, both residing at the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

Our invention relates to that class of thill-couplings in which the thill is journaled on a bolt passing through the thill-socket; and the object of the invention is to provide a simple contrivance for holding the bolt in position; and it consists of a spring-plate fastened upon the bolt-head, having a barbed end, so arranged in combination with the bolt-head and the side of the socket against which the bolt-head will butt that when the bolt is driven home the barb will close over the inner edge of the thill-socket, and thereby fasten the bolt to said socket, substantially as hereinafter explained.

Figure 1 is a perspective view exhibiting the back end of the thill journaled on the bolt passing through the thill-socket, the head of the bolt being provided with a narrow spring-plate secured at one end by a single rivet to the bolt-head, and having a barb formed on its other end to clip over the inner edge of the side of the socket against which the bolt-head butts. Fig. 2 is a front view, showing the spring-plate in the act of springing over the side of the socket. Fig. 3 is a plan of the end of a thill journaled on the bolt passing through the thill-socket, a broad spring-plate with barbed end riveted to the bolt-head. Fig. 4 is a cross-section of Fig. 3.

It will be noticed that in Fig. 1 the bolt-head A is round to correspond with the shape of the thill-socket B. As the end of the thill-socket, as shown in this figure, is round, the spring-plate C must necessarily be narrow. By flattening the top edge of the thill-socket, as shown in Figs. 2, 3, and 4, the spring-plate C may be made much wider, which may be thought advisable by some manufacturers.

a is a barb formed on the end of the spring-plate C. The distance between the inner edge of the barb *a* and the inner edge of the bolt-head A is equal to the thickness of the side of the thill-socket B against which the bolt-head A butts when the bolt is pressed home, as shown in Figs. 1, 3, and 4. When the bolt A is pressed into the hole in the thill-socket, the outer or beveled edge of the barb *a* comes in contact with the outer edge of the socket B, causing the spring to mount onto the top edge of the socket, as shown in Fig. 2, till the inner edge of the barb *a* reaches the inner edge of the side of the socket over which it is mounting, when the spring in the plate C will cause it to assume its original horizontal position, thereby locking the bolt in position through its barbed end fitting over the inner edge of the socket. In order to withdraw the bolt, it is necessary to raise the end of the spring-plate C. To facilitate this we form on the barbed end of the spring-plate a downwardly-curved lip, *b*.

We are aware that it is not new in thill-couplings to use a bolt and spring formed in one piece and with the spring extending over the outer edge of the thill-socket; but such a device is not the equivalent of ours, because the spring is more likely to be broken than ours is, and is not so readily made originally, nor can it be so easily repaired if broken off.

What we claim as our invention is—

1. In a thill-coupling in which the end of the thill is journaled on a bolt passing through the thill-socket, a spring-plate riveted or fastened by a screw to the bolt-head or its equivalent, in combination with a barb formed on the end of the spring-plate and arranged to clip over the inner edge of the thill-socket, substantially as and for the purpose specified.

2. In a thill-coupling in which the end of the thill is journaled on a bolt passing through the thill-socket, the combination of a spring-plate riveted or fastened by a screw to the bolt-head or its equivalent, and having formed on its outer end a barb, *a*, and lip *b*, substantially as and for the purpose specified.

THOMAS FERGUSON.
C. L. FERGUSON.

Witnesses:
JAMES S. GARM,
A. F. MARPLES.