(No Model.)

G. W. SIMONS.

THILL COUPLING.

No. 317,421. Patented May 5, 1885.

Fig. 1.

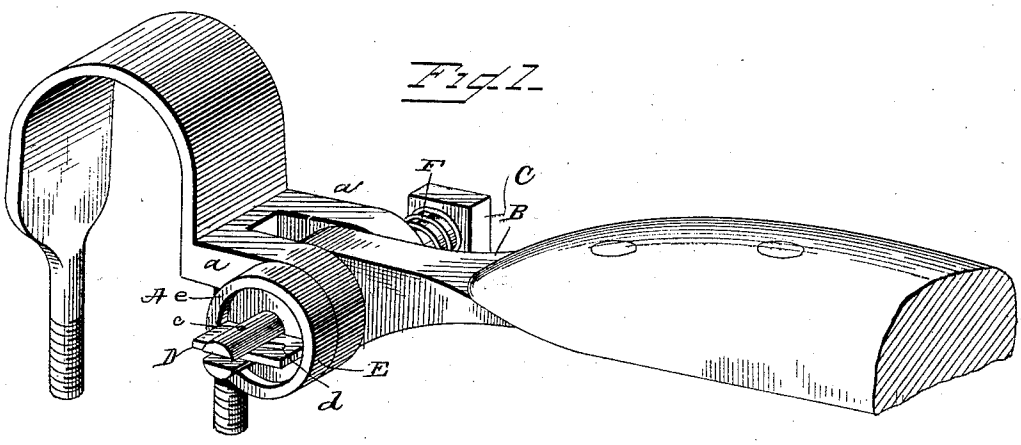


Fig. 2.

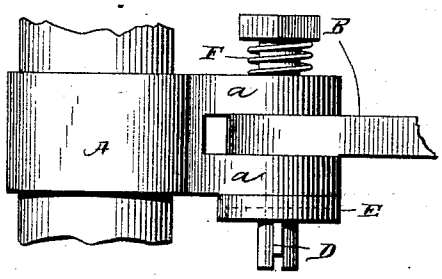


Fig. 3.

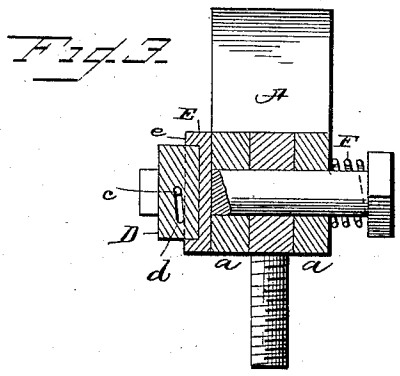
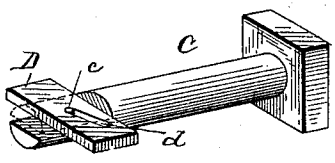


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON SIMONS, OF COOPER'S PLAINS, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 317,421, dated May 5, 1885.

Application filed February 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SIMONS, a citizen of the United States of America, residing at Cooper's Plains, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in thill-couplings, the object of the same being to provide a means for holding the thill-iron to the clip in such a manner that the coupling-bolt will be held securely in position, without the use of nuts, in such a manner that all rattling of the bolt against the side of the clip will be prevented; and to this end my invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, forming a part of my specification—

Figure 1 is a perspective view of my improvement, showing the same applied to the ordinary clip and thill-iron. Fig. 2 is a plan view. Fig. 3 is a sectional view; Fig. 4, a detail perspective view partly in section.

A represents the clip, which is secured to the axle, said clip being provided with the ordinary side pieces, *a a*, which are each provided with openings, through which passes the coupling-bolt.

B is the thill-iron, which is provided with a transverse opening, through which passes the coupling-bolt, by means of which the thill-iron is secured to the clip A.

C represents a headed bolt, which is bifurcated at its end opposite the head, and between the bifurcated portion is secured, by means of a pivot, *c*, a key, D. This key is provided with an inclined slot, *d*, through which the pivot *c* passes. The inclined slot in the key D is nearer one end than the other, said slot terminating near the center of the key at one end and near a corner of the key at the other end, thus locating the slot nearer to one of the vertical sides of the key than to the other. By slipping the key upon its pivot-pin so that it will be in a position near the upper end of the slot, the key may be turned so that its edges will be parallel with the sides of the bolt, and when in this position the bolt may be readily passed through the openings in the side pieces of the clip and the opening in the end of the thill-iron.

I employ in connection with the bolt hereinbefore described a washer, E, which is provided at its edge with a raised rim, *e*, the internal diameter being equal to the length of the key D, and within this rim said key will fit. The washer, as shown, is placed adjacent to one of the side pieces, so that the end of the bolt may be passed through the same.

The bolt, immediately under its head, is embraced by a spiral spring, F, which bears against the under side of said head and one of the side pieces, and has a tendency to draw the key against the washer.

It will be obvious that when the pivot *c* is located in the right-hand portion of the slot of the key the latter can be turned to occupy longitudinally the slot formed in the bolt end; but when the key is turned on said pivot and moved to the other end of the slot its center portion will be within the said slot of the bolt and the key occupy a transverse position sufficient to enable said key to be drawn into the depressed portion of the washer, and thus secure the bolt.

I claim—

1. The combination, in a thill-coupling, with a thill-iron and clip, of a headed pin bifurcated at one end and provided with a slotted key and retaining-pin, which passes through the end of the bolt and the slot in the key, a spring encircling the bolt adjacent to its head, and a flanged washer, whereby the said key may be moved on its pivot and then shifted transversely to enter said washer, substantially as shown, and for the purpose set forth.

2. In combination with the headed pin having a bifurcated end portion, a diagonally-slotted key pivoted between said end portion, a washer with raised edges adapted to receive said key, and a spring encircling said pin and bearing upon the head of the same, the parts being organized substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE WASHINGTON SIMONS.

Witnesses:

GEO. R. SUTHERLAND,
C. R. WOODWARD.