

S. L. HILL.
Thill-Coupling.

No. 168,491.

Patented Oct. 5, 1875.

Fig. 1.

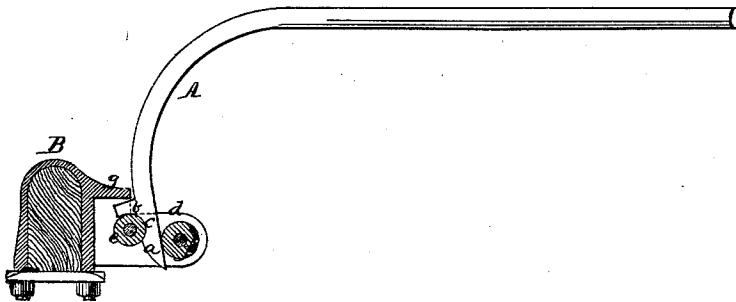
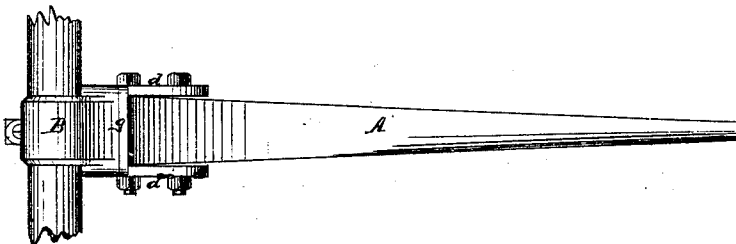


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL L. HILL, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. **168,491**, dated October 5, 1875; application filed September 15, 1875.

To all whom it may concern :

Be it known that I, SAMUEL L. HILL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Thill-Coupling, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse vertical section. Fig. 2 is a plan or top view.

Similar letters indicate corresponding parts.

This invention consists in a recessed toe on the inner end of a shaft or thill in combination with two elastic cushions on the clip, so that when the shaft is brought in a downwardly-inclined position its recessed toe can be readily inserted between or withdrawn from the elastic cushions of the clip, and when said toe has been inserted between the cushions, and the shaft is raised to its working position, it is firmly retained by the recessed toe, while it is free to follow the motions of the draft animal, and at the same time all rattling is avoided. With the recessed toe and the cushions is combined a projecting lip on the shaft, and a stop on the clip, whereby the security of the connection between the shaft and the clip is increased. The cushions or bolts are placed at different levels, so that the recessed toe of the shaft can be introduced when the shaft is down, while said toe, after having been introduced, is firmly retained when the shaft is raised to its working position.

In the drawing, the letter A designates a shaft or thill, which is provided at its inner end with a toe, *a*, and with a projecting lip, *b*. The toe *a* is formed with a recess, *c*. B designates the clip, which is provided with two arms, *d*, between which are secured two elastic cushions, *e f*, each of which is supported by a metallic core. The inner cushion *e* is situated a little higher up than the outer cushion, and on the clip is formed a stop, *g*, above the cushion *e*. The two cushions *e* and *f* are at such a distance apart that the toe of the shaft can be forced down between them, but this operation cannot be effected unless the shaft is brought in a downwardly-inclined

position, so that the lip *b* will clear the stop *g*. When the toe *a* has been forced down between the two cushions, and the shaft is raised to its working position, the toe becomes firmly wedged between the two cushions, while the lip *b* passes beneath the stop *g* and prevents the shaft from rising up, and from becoming disengaged from the clip. At the same time the shaft has perfect freedom to follow the motions of the draft animal, and it works between the elastic cushions of the clip without any noise. In order to disengage the shaft from the clip it is necessary to bring said shaft in a downwardly-inclined position, so that the lip *b* will clear the stop *g*, and then the toe *a* can be withdrawn from between the elastic cushions.

The object in placing the inner cushion *e* at a higher level than the outer cushion is to allow the shaft greater freedom in its motion than it has if both cushions are placed on the same level; and, furthermore, if, instead of using elastic cushions, metallic cushions or bolts are substituted, I am enabled by this position of said cushions to introduce the toe of the shaft when the latter is down, while said toe is firmly retained when the shaft is raised to its working position.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a recessed toe, *a*, on the shaft A, with two elastic cushions, *e f*, on the clip B, substantially in the manner and for the purpose herein shown and described.
2. The combination of a recessed toe, *a*, on the shaft A, with two cushions or bolts, *e f*, secured at different levels in the clip B, substantially as set forth.
3. The combination of a recessed toe and lip *b* on the shaft A, with two cushions, *e f*, and a stop, *g*, on the clip B, substantially in the manner shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 14th day of September, 1875.

SAMUEL L. HILL. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.