L. C. SPENCER & P. BARRETT.
Thill-Couplings.

No. 195,961. Patented Oct. 9, 1877.

Fig. 1.

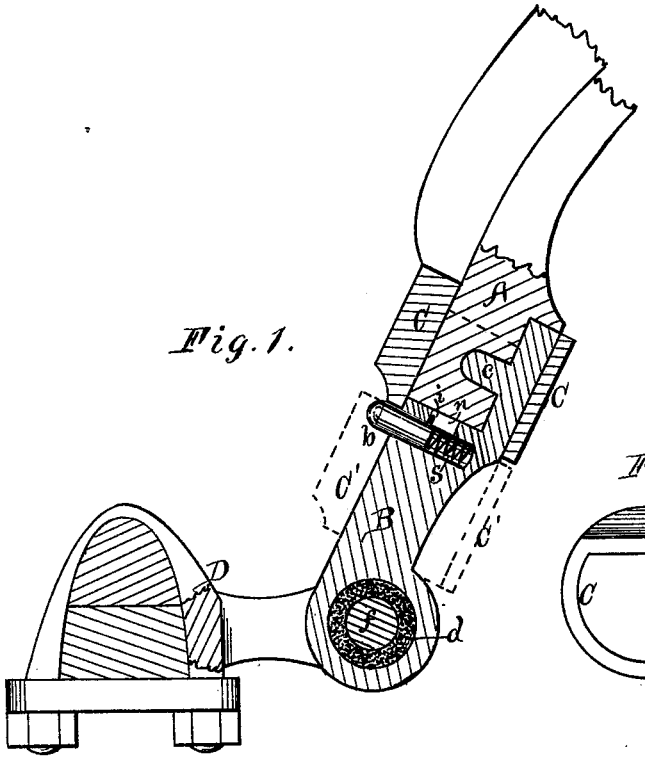


Fig. 3.

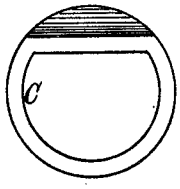
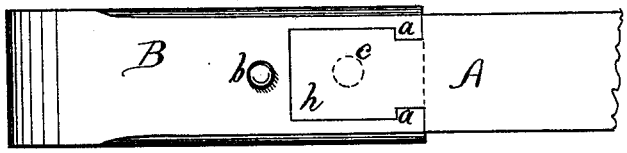


Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

LUTHER C. SPENCER AND PHILANDER BARRETT, OF ROCHESTER, N. Y.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **195,961**, dated October 9, 1877; application filed August 11, 1877.

To all whom it may concern:

Be it known that we, LUTHER C. SPENCER and PHILANDER BARRETT, of Rochester, in the county of Monroe, and State of New York, have invented a new and useful Thill-Coupling; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side sectional elevation of our invention as applied to the "clip" and to the thill. Fig. 2 is a top or plan view of a section of the thill-stock A and of the coupling-shank B, with the sliding annulus or clamping-ring C removed. Fig. 3 is an end view of the annulus C detached.

Great inconvenience is experienced in changing the thills for the pole, and vice versa, as their attachments have been heretofore made, the rubber cushion almost universally employed in thill-couplings at the present day, to prevent rattling, &c., greatly increasing the difficulty.

The object of this invention is to provide a simple and efficient means for accomplishing these changes, and in the most expeditious manner, and at the same time permit the use of any "anti-rattler" desired.

It consists in a peculiar construction of the detachable joint of this class of thill-irons.

The shank B is formed with a shouldered recess in its outer end, as shown. Into this recess is nicely fitted the end of the draw-iron or stock A of the thill or pole, and the annulus or clamping-sleeve C is fitted to slide upon the shank, so as to encircle the lap or joint between the shank and the draw-iron, or be moved back against the ears of the clip D.

The head *h* of the draw-iron A should be made long enough to afford sufficient support within the shank B, when the annulus is adjusted over the joint, to prevent any spring at that point.

The shoulders *a* hold the head *h* from being withdrawn by the draft when the annulus is in position.

Instead of the shoulders *a* and the corresponding form of the head, the latter may be made dovetail-shaped, and the recess to correspond.

In either case, we prefer to use the dowel or lug C, Fig. 1, cast upon the shank B, and a corresponding hole formed in the lower face of the head *h* to receive it.

It is believed the dowel would be quite sufficient of itself to resist any strain or draft which the other portions of the irons could sustain, and that method of uniting the parts would greatly simplify and perfect the mechanical fitting, which would only require a male and female burr to size the pin and the hole and make a perfect fit.

The annulus C is locked in its effective adjustment by the spring bolt or pin *b*. This may be secured in its place by inserting a small pin, *i*, projecting through a slot, *n*, opening into the cavity in which the head is placed.

A small spiral spring, *s*, is inserted under the bolt, or a rubber cushion may be used. The outer end of this bolt is preferably made spherical.

All the advantages afforded in any style of anti-rattling thill-coupling may be retained in the employment of our invention, as it is formed entirely independent of the joint of the thill-coupling.

The shanks B we preferably connect by means of a rubber cushion, *d*, through which the bolt *f* is inserted, and these shanks need never be detached, the attachment or detachment of the thills or the pole being effected by simply pressing the pin *b* down, so as to permit the annulus to be moved down to the position indicated by the dotted lines C′, Fig. 1, to uncover the head *h* of the thill-stock A.

The annulus on each side of the vehicle being moved down is all that is necessary to be done to release the thills or the pole, as the case may be.

What we claim as our invention is—

1. In combination with the stock A, shank B, and clamp C, the locking-bolt *b*, the latter having a pin and a spiral spring, *s*, both be-

ing secured in a cavity in the shank, as shown and described, and operating in the manner set forth.

2. In combination with the clamp C, stock A, and shank B, the dowel *c* and its corresponding recess, formed and arranged to interlock in the manner set forth, either with or without the enlargement or shoulder *a* on the head *h*, for the purpose of receiving and sustaining the draft between the parts, as described.

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