W. H. BRACE.
Thill-Coupling.

No. 198,074. Patented Dec. 11, 1877.

Fig. 1.

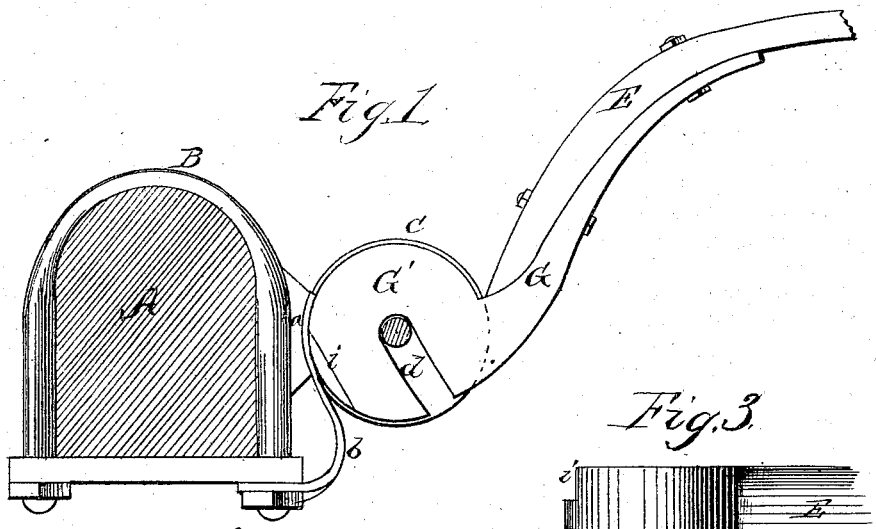


Fig. 3.

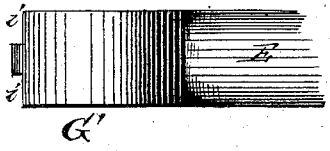
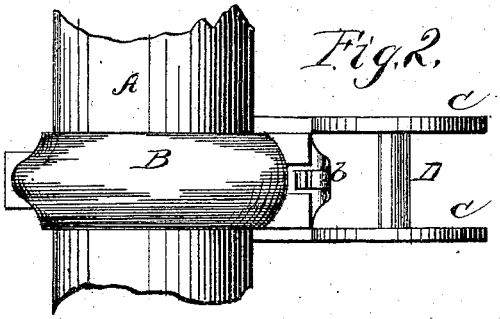


Fig. 2.



Inventor.
Wm H. Brace.

Witnesses.
W. R. McArthur.
C. L. Emert.

per T. H. Alexander & Elliott
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM H. BRACE, OF NUNDA, NEW YORK.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **198,074**, dated December 11, 1877; application filed May 25, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. BRACE, of Nunda, in the county of Livingston and State of New York, 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a thill-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a central vertical section, and Figs. 2 and 3 are detail views, of my invention.

A represents the axle, with clip B around the same, said clip having on its front two forwardly-projecting parallel ears, C C, with a round pin, D, connecting the same, said pin being cast in, or otherwise permanently fastened in, said ears.

The front side of the clip B, between the ears C C, is made concave, as shown at *a*, and in the center thereof is a longitudinal recess, in which lies a flat curved spring, *b*, the lower end whereof is held by the front heel of the clip, as shown.

E represents the thill, having the thill-iron G secured to it in any of the known and usual ways. On the end of the thill-iron G is formed an eye or cylindrical extension, G′, in which is a slot, *d*, extending from the center through the lower side. This slot stands at an angle of less than ninety degrees with the main part of the thill E.

A portion of the back of the cylindrical extension G′ is cut away, as shown at *i*, leaving a flat portion running parallel with the slot *d*. This flat part permits the thill to be dropped in between the ears of the clip, in the direction of the slot, when the point of the thill rests upon the ground, and when they are raised up in working position the cylindrical extension rolls around into the concave or seat *a*, so that it is impossible for the thills to become disengaged while in this position.

I have shown a rib on the cylindrical extension, and a portion, *i*, cut away each side thereof. This rib forms a smooth round surface for the spring *b* to rest against; but it is not essential to the working of the device.

The spring *b* prevents all rattling, and assists in holding the thills in place.

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

In a thill-coupling, the clip B, provided with ears C C and fixed pin D, and formed with concave or seat *a*, having recess for the spring *b*, in combination with the thill-iron G G′, formed with slot *d*, and flat portion *i*, and spring *b*, all constructed substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM H. BRACE.

Witnesses:
J. C. HERRICK,
J. F. OLNEY.