(No Model.)

S. S. HEPBRON.

Thill Coupling.

No. 232,966. Patented Oct. 5, 1880.

Fig. 1.

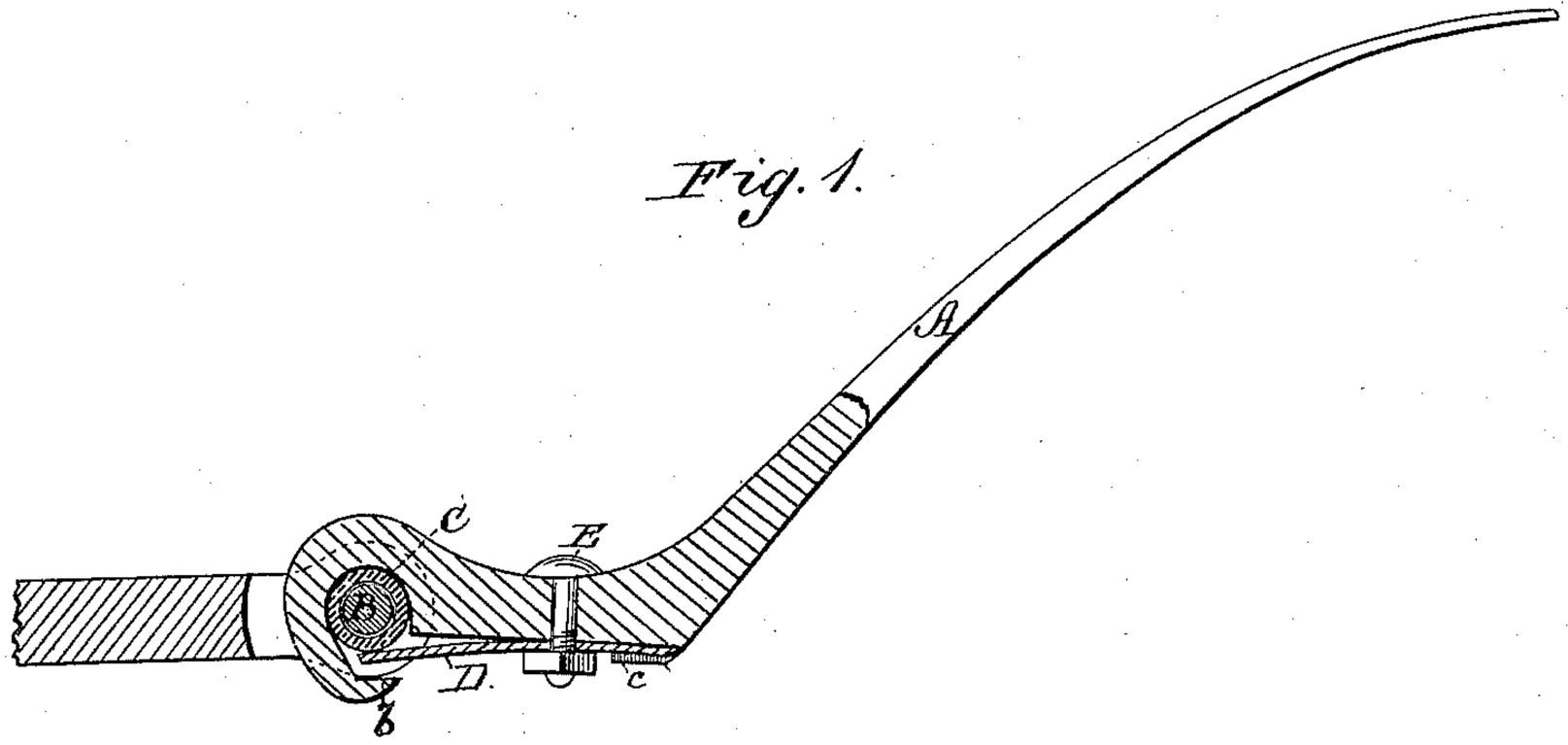
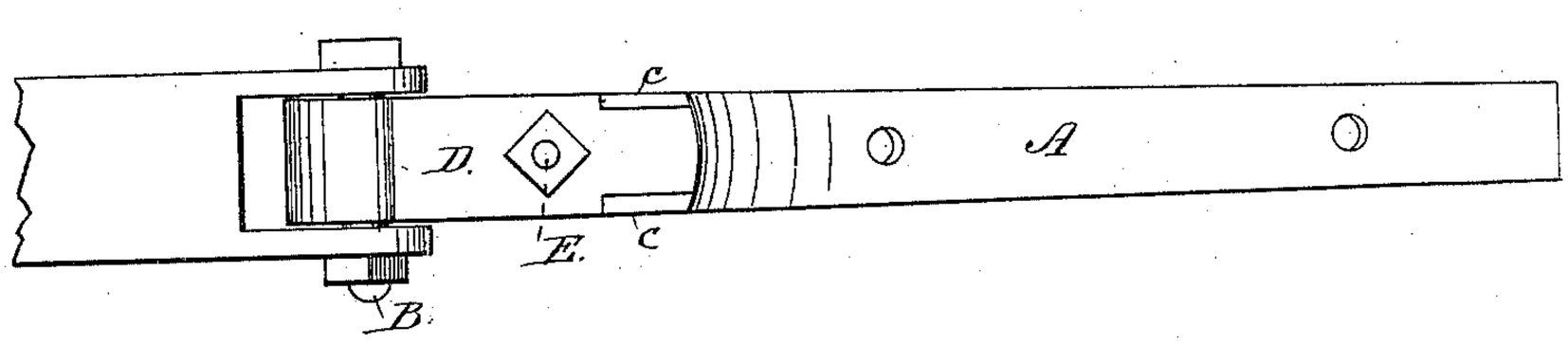


Fig. 2.



WITNESSES:

W. W. Hollingsworth

Amos W. Hart

INVENTOR:

S. S. Hepbron

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SEWELL S. HEPBRON, OF FAIRLEE, MARYLAND.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 232,966, dated October 5, 1880.

Application filed July 27, 1880. (No model.)

To all whom it may concern:

Be it known that I, SEWELL S. HEPBRON, of Fairlee, in the county of Kent and State of Maryland, have invented a new and Improved Thill-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement in the class of thill-couplings in which the thill-iron is secured to the clip-bolt by means of a spring-plate fastened to the under side of the thill-iron by a screw-bolt.

I provide the end of the hook-shaped thill-iron with a transverse lip or claw, and with opposite lateral flanges that are located about two inches from the hook, by which construction the spring-plate that holds the thill-iron on the clip-bolt is prevented from being broken or displaced in use.

In accompanying drawings, forming part of this specification, Figure 1 is a longitudinal section, and Fig. 2 a bottom-plan view, of the parts composing my improved coupling.

The thill-iron A has a hook formed on its rear end, and said hook is provided with a socket suitable to receive the clip or pivot bolt B and the elastic washer C surrounding the same.

The form of the hook and its manner of attachment to the clip-bolt will prevent its accidental disconnection under ordinary conditions of use; but to absolutely prevent such disconnection, and to prevent rattling of the coupling, I employ the spring-plate D, which holds the thill-iron in place on the bolt B and confines the washer C, while allowing the required rotary movement due to raising and lowering the thills or shafts.

Said plate D is preferably constructed of steel, and is secured to the flat under side of the thill-iron by means of a single screw-bolt, E, that passes through it at a point about the middle of its length.

The end of the hook is provided with a lip or claw, *b*, which projects toward the body or shank of the thill-iron, and serves to protect the free end of the spring D, as well as to support the same when pressed against the clip-bolt, (by raising or lifting the thills,) so that the spring is not liable to be broken, and thus allow the thills to become accidentally detached.

In order to prevent lateral displacement of the plate D, I provide the thill-iron A with lips or flanges *c* at the outer extremity of its flat portion and make the outer end of the plate of such width as adapts it to fit in the space between said flanges, as shown in Fig. 2. The parts are so constructed that the free inner end of the spring is not in contact with the thill-iron, and hence it exercises a constant compression on the washer and clip-bolt. This compression may be increased at will as the washer and contiguous surfaces become worn. The wear will, however, be slight.

Practically, therefore, a single bolt, E, serves to secure the plate D to the thill-iron, and also to hold the latter securely coupled to the clip, so as to prevent rattling.

The strength of the thill-iron, the simplicity and economy of the coupling, and its security and freedom from objectionable clatter, together with its adaptation for easy attachment and detachment, commend it to practical use.

I do not claim a thill-iron having a spring-plate attached thereto by a single screw-bolt and pressing upon an elastic washer surrounding the clip-bolt; but

What I claim as new is—

1. The combination of the flat spring-plate D and its fastening-bolt B with the thill-iron A, having an inwardly-projecting lip or claw, *b*, formed on the extremity of the hook, and the opposite flanges *c c* formed on the shank, all as shown and described.

2. A thill-iron having a flat under surface, and provided with flanges or lugs *c* at one end thereof and with a hook and bolt socket at the other, as shown and described, for the purpose specified.

SEWELL STAVELY HEPBRON.

Witnesses:

EZEKIEL H. HAGUE,

J. C. WHEATLEY.