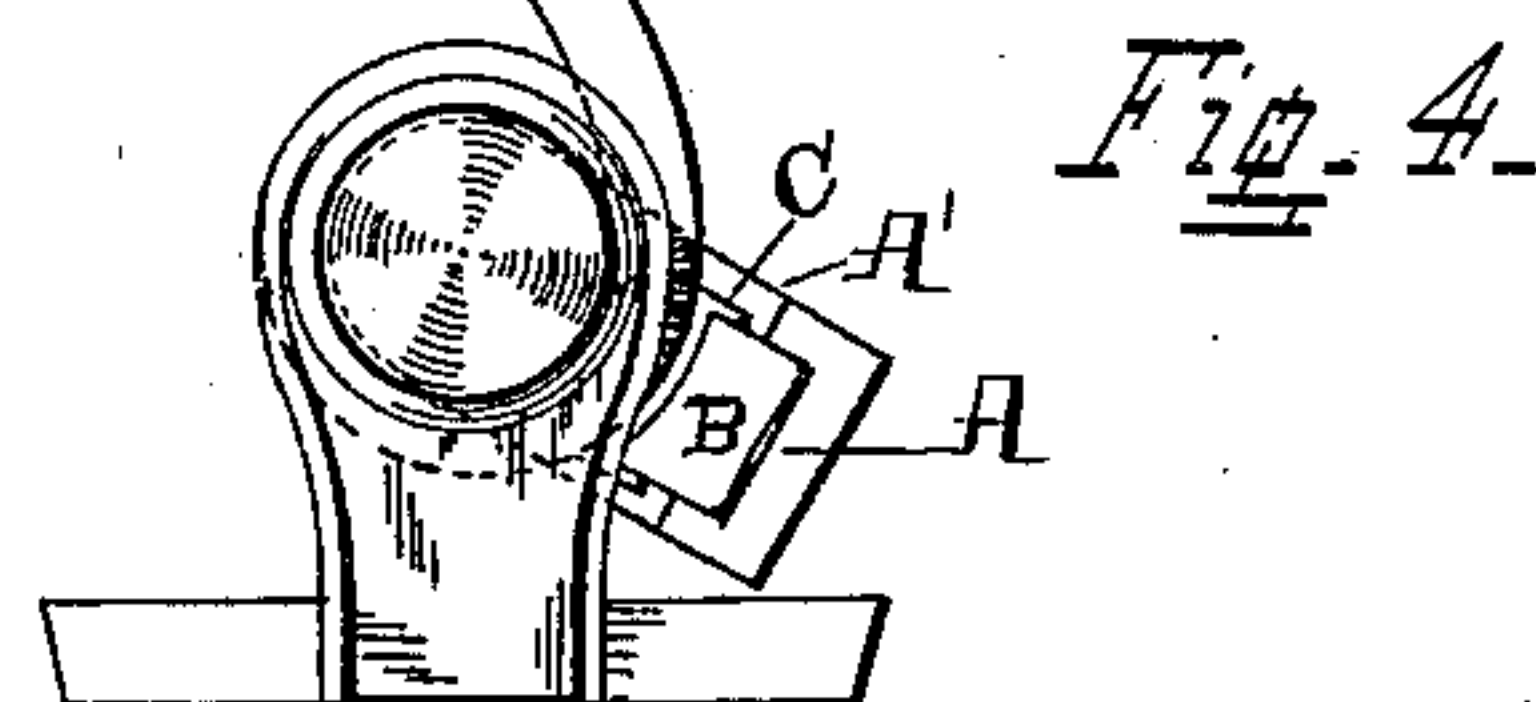
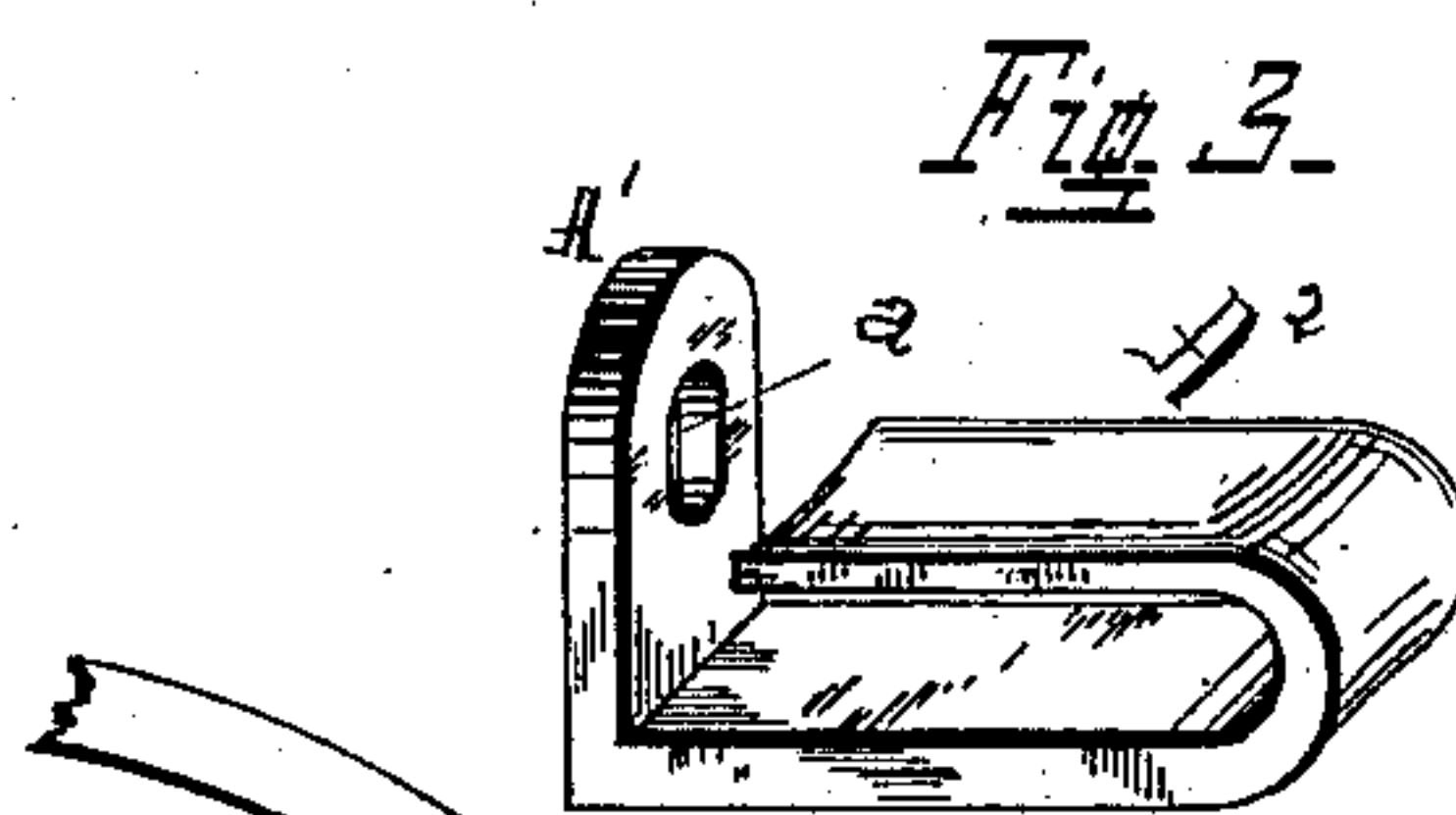
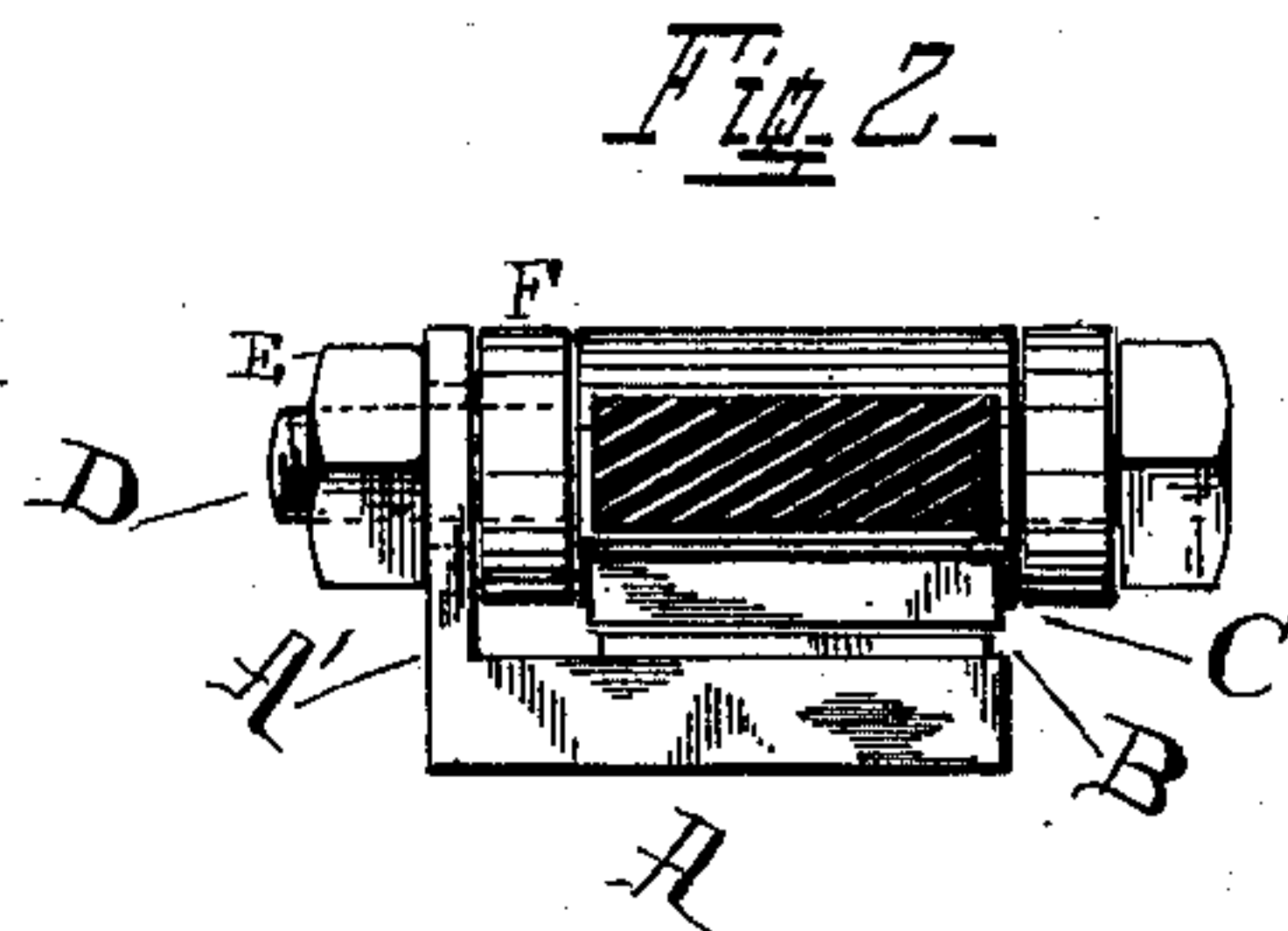
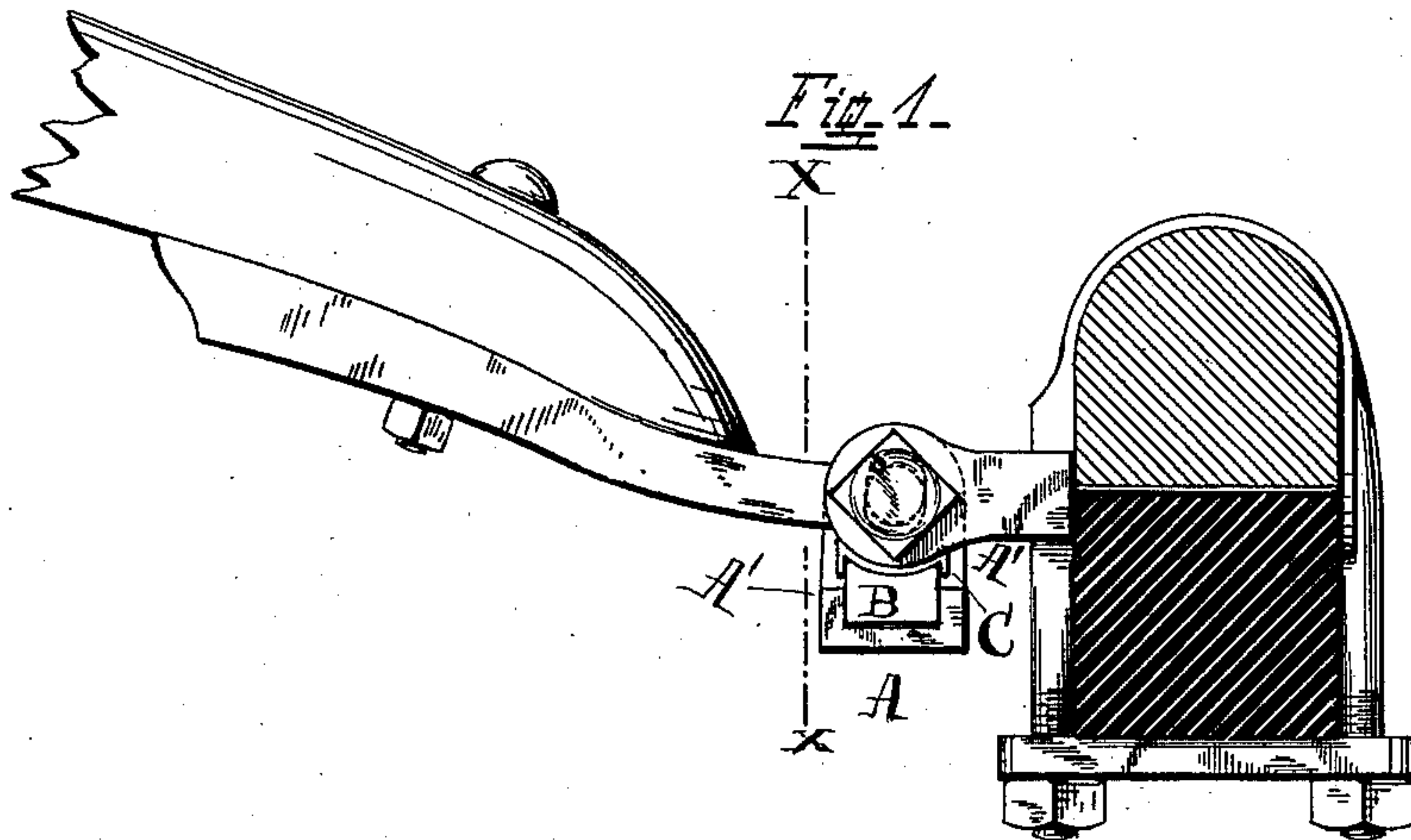


(No Model.)

I. C. HART.
THILL COUPLING.

No. 359,387.

Patented Mar. 15, 1887.



Attest
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UNITED STATES PATENT OFFICE.

ISAAC C. HART, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM D. McCracken, OF SANFORD, FLORIDA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 359,387, dated March 15, 1887.

Application filed December 20, 1886. Serial No. 222,069. (No model.)

To all whom it may concern:

Be it known that I, ISAAC C. HART, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Attachments for Thill-Couplings and Vehicle-Shackles, of which the following is a specification.

The object of my invention is to prevent the rattling of thill-couplings, spring-shackles, and the like parts of the running-gear of vehicles; and it consists of a cheap simple device, which may be easily applied to any of the vehicles now in use without change of the parts.

In the accompanying drawings, in which like parts are represented by the same reference-letter, wherever they occur throughout the various views, Figure 1 is a vertical section through the axle and axle-bar of a buggy, showing in side elevation the customary clip and coupling and the end of the thill having my improvement applied for use. Fig. 2 is a vertical section taken through line *x x*. Fig. 3 is a perspective view of a modified form of my device, and Fig. 4 is a side elevation of the end of a spring and its shackle to which my device is applied.

The coupling attachment, Figs. 1, 2, and 4, consists of a metal box, A, having a lug, A', at right angles to it, a rubber block, B, fitting snugly within the box, and a curved sheet-metal cap, C, which fits the top of the rubber block B, to protect it from wear, and having its edges turned down upon each side of the block to retain the cap in place. The

lug A' has an elongated perforation, *a*, through which the bolt D of the coupling passes.

The device is applied for use by simply removing the nut E, Fig. 2, passing lug A' over bolt D and forcing it up against the lug F of the coupling. The elongated opening *a* in the lug A' permits the box A and its capped cushion B C to be pushed under the boss of the thill-iron at an angle to it. Then by tightening up the nut E against lug F the cushion is compressed against the boss of the thill-iron, which is held with elastic pressure to its bolt. All rattling is thus prevented.

The modification shown in Fig. 3 is made of a single piece of spring-steel, the returned part A², which bears upon the boss of thill-iron, serving as the cushion. If greater pressure is desired, or should the parts become loose from wear, a rubber block may be forced between the part A² and the base A.

What I claim as my invention is—

1. The attachment for thill-couplings hereinbefore described—to wit, an angle-piece comprising a base and perforated lug and an elastic cushion supported by the base—as a new article of manufacture.

2. The combination, substantially as specified, of the angle-piece consisting of box A and perforated lug A', the rubber block B, secured in said base, and the sheet-metal cap C.

ISAAC C. HART.

Witnesses:

CHAS. BARNES,
PETER RENNER.