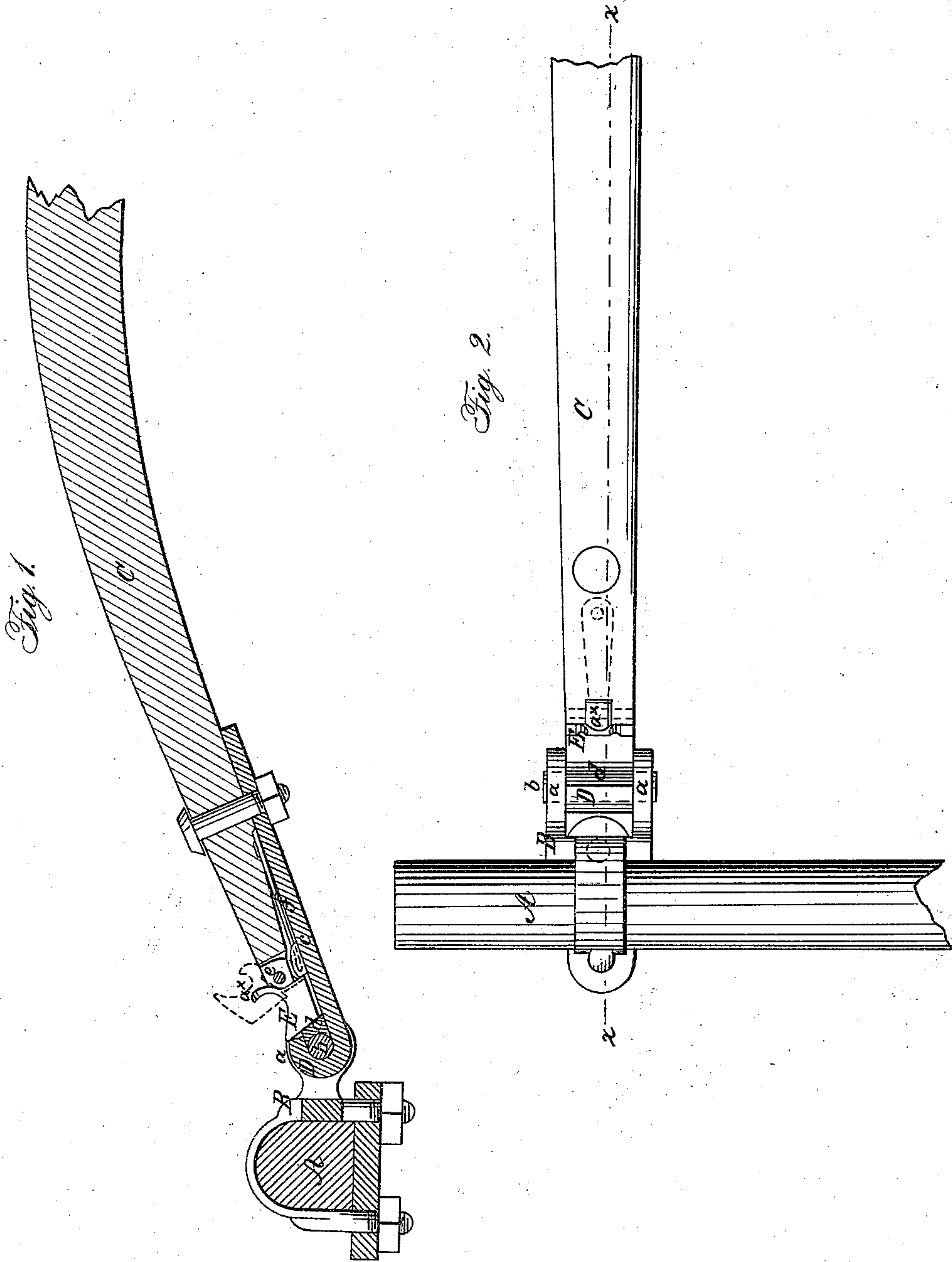


F. L. KIDDER.

Thill-Coupling.

No. 23,173.

Patented Mar. 8, 1859.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

FRANCIS L. KIDDER, OF WILLIAMSBURG, NEW YORK.

ATTACHING CARRIAGE-THILLS TO AXLES.

Specification of Letters Patent No. 23,173, dated March 8, 1859.

To all whom it may concern:

Be it known that I, FRANCIS L. KIDDER, of Williamsburg, in the county of Kings and State of New York, have invented a new and Improved Mode of Attaching Thills to Axles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my invention taken in the line *x, x*, Fig. 2. Fig. 2, is a plan or top view of do.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents the front axle of a vehicle, and B, is a clip which encompasses the same. The clip B, is constructed in the usual way and has the ears *a, a*, projecting longitudinally from it between which a pin or rod *b*, is attached, the ends of the pin or rod being firmly secured in ears *a, a*.

C, represents the back portion of a thill constructed in the usual way and having a metal hook or clasp D, attached to it, the shank *c*, of the hook being attached to the under side of the thill the hook turning upward and over toward the end of the thill, as shown clearly in Fig. 1. The hook C, is made of such a size that it may encompass the pin or rod *b*, and occupy the width of the space between the ears *a, a*, as shown in Fig. 2. The hook C, is a little more than a semi-circle, that is to say its upper end projects a trifle beyond the front side of the pin or rod *b*, as plainly shown in Fig. 1, and a key *d*, is inserted in the open portion of the hook, said key being of any suitable metal and formed of a solid block extending the whole width of the hook and having its inner edge made concave to fit over the front side of the pin or rod *b*. The outer edge of the key *d*, is beveled or inclined, its lower part extending farther outward than its upper part, as shown clearly in Fig. 1.

E, is a metal plate the outer part of which is connected by a joint *e* to the thill C, and *f*, is a flat spring which is attached to the upper side of the shank *c*, of the hook or

clasp, the end of the spring bearing against the outer end of the plate E, beyond the joint *e*, and thereby having a tendency to keep the body of the plate down toward the upper surface of the shank *c*, of the hook. The inner edge of the plate E, is beveled or inclined corresponding inversely to the outer edge of the key *d*, and the beveled edge of plate E, is pressed against the beveled edge of the key *d*, by the spring *f*, and the inner edge of key *d*, will consequently be kept snugly against the pin or rod *b*, and also the hook, all wear being taken up and the hook prevented from being casually detached from the pin or rod *b*. The plate E, has a curved projection *a'*, on its upper side which serves as a thumb piece and enables a person to readily raise the plate E, remove the key *d*, and slip the hook D, off the rod or pin *b*, so that the thill may be readily detached from and attached to the axle.

Although one thill and attachment is only shown and described it will be understood that the attachment of both thills are precisely similar and the description of both therefore unnecessary.

Among the advantages arising from my improvement are these:—The spring (*f*) tends constantly to press the beveled end of plate E, against the key (*d*), and this latter is thus kept at all times snugly in contact with the bolt (*b*); so that wear and rattling are prevented. When it is desired to uncouple the thills, it is only necessary to raise the plate E, on its axis, and the parts are free. All other couplers, so far as I know, require that a bolt or nut shall be unscrewed in order to effect the uncoupling. My method is more speedy and convenient; no wrenches or other tools being required.

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

The arrangement and combination of the pivoted spring plate E, thill C, spring (*f*), hook D, and self-adjusting key (*d*), as and for the purpose herein shown and described.

FRANCIS L. KIDDER,

Witnesses:

WM. TUSCHL,
W. KNAPP.