(No Model.)

J. THOMAS & G. CRETER.

SHUTTLE CARRIER FOR QUILTING MACHINES.

No. 401,981. Patented Apr. 23, 1889.

Fig. 1.

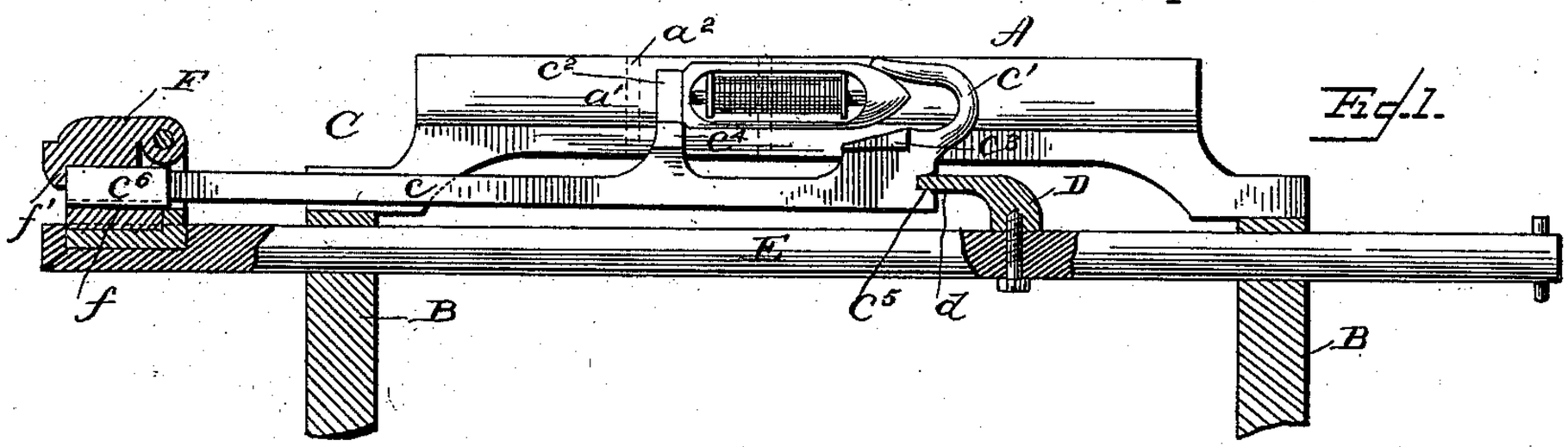


Fig. 2.

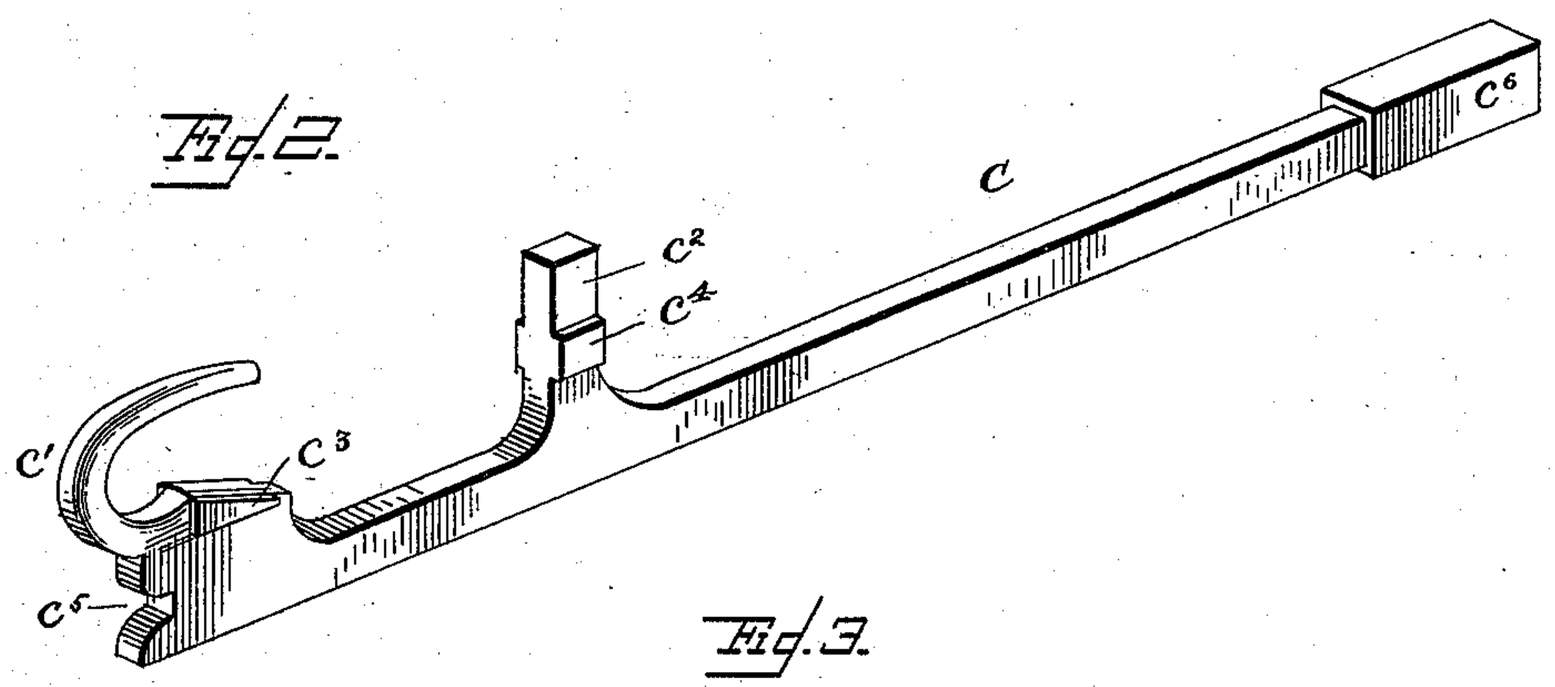
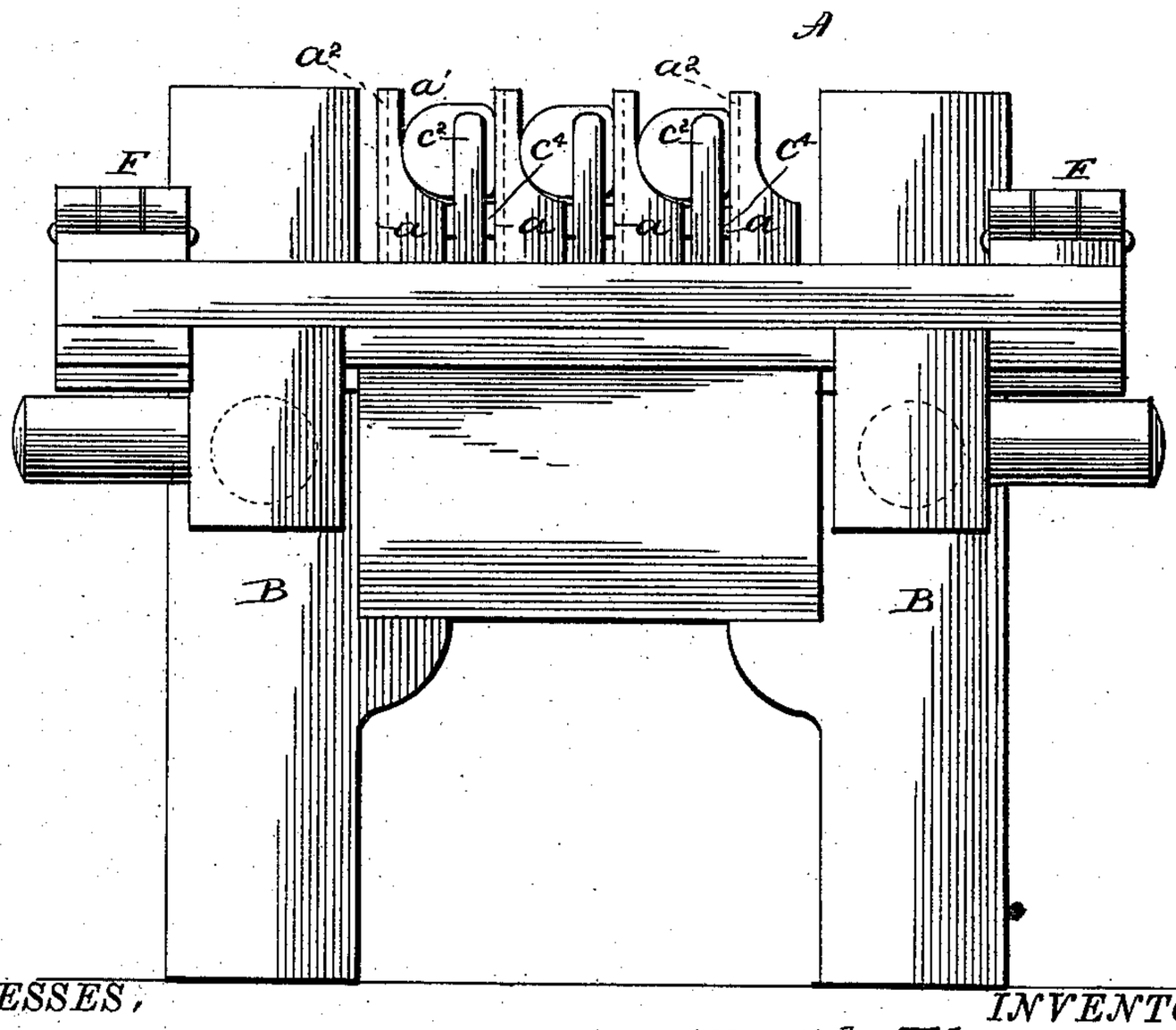


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SHUTTLE-CARRIER FOR QUILTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 401,981, dated April 23, 1889.

Application filed September 10, 1888. Serial No. 285,026. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH THOMAS and GEORGE CRETER, citizens of the United States, and residents of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Shuttle-Carriers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to shuttle-carriers for sewing and quilting machines.

The object is to produce a shuttle-carrier which shall be of such construction that it may be operated almost, if not entirely, free from friction; which will permit the removal of one shuttle of a series without disturbing the others, and which will facilitate the prompt removal of the shuttle-carrier from the race or the shuttle from the carrier should either become injured from any cause; furthermore, to produce a device which shall be simple of construction, durable and efficient in use, and comparatively inexpensive of production.

With these objects in view the invention consists in the improved construction and combination of parts of a shuttle-carrier, as will be hereinafter fully described in the specification, illustrated in the drawings, and more particularly pointed out in the claim.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts, we have illustrated one form of device embodying the essential features of our invention, although the same may be carried into effect in many other ways without departing from the spirit of the same; and in these drawings—

Figure 1 is a side elevation of the race, one side being removed, showing the shuttle-carrier in position therein and the shuttle in place. Fig. 2 is a perspective view of the shuttle-carrier; and Fig. 3 is an end elevation of a portion of a quilting-machine, showing a series of shuttle-races with a series of our improved shuttle-carriers and shuttles in place.

Referring to the drawings, A designates the race, of any convenient length, width, and breadth, with one of its sides, a, plane or flat, and the other side, a', curved to about the same radius as is the curvature of the back of the shuttle, each section of the race being provided on its flat side a with a channel, a^2, for the thread. The sections so constructed are secured to suitable brackets, B, and are so arranged that the curved side of each section will face the flat side of its neighboring section. C designates the shuttle-carrier, consisting of a stem, c, which may be made in any form in cross-section, but preferably square and of a size to fit between the two sections composing the race. One end of this stem terminates in a hook, c', in which one end of the shuttle rests, the opposite end resting against a shoulder, c^2, formed on the stem. On each side of the base of the hook portion is formed a lug, c^3, designed to work between the space formed between the races, similar lugs, c^4, on the shoulders c^2 performing the same function. By this construction it will be seen that the shuttle-carrier will always be kept in the position requisite to its perfect working without generating any friction, which would not be the case were a feather or spline working in a groove in the race employed, as with races of ordinary construction.

In order to hold the shuttle-carrier in place, the end provided with the hook c' has a notch, c^5, cut in it, designed to engage the flange d on the curved shoulder D, secured to the shuttle-driver bar E, which operates the said carriers. The opposite end of the carrier is formed into a shoulder, c^6, somewhat larger than the stem of the carrier and moving in an opening, f, in a hinged clamp, F, secured to the shuttle-driver bar E, and reciprocating with the stem. The upper or hinged portion of this clamp is provided with a downwardly-extending flange, f', which, when closed down, fits over the shoulder c^6 of the carrier and holds the same in position—that is, prevents it from working loose from the flange on the shoulder D. It will thus be seen that by means of the lugs c^3 c^4 the shuttle-carrier will be caused to reciprocate within the race in a perfectly straight line without the necessity of the use of grooved guides for that purpose,

and that it will require less oiling and less attention from this fact. Should the shuttle-carrier or shuttle become injured from any cause, or should it be desired to remove either from the race, it will only be necessary to throw the hinged clamp F back, push the carrier forward, so as to throw it out of contact with the flange on the shoulder D, and then draw the shoulder c^6 of the carrier through the opening *f*, and the carrier and shuttle may be removed; but when it is desired only to place a new shuttle in the carrier it will only be necessary to lift the hinged clamp and draw the shuttle-carrier back. After the shuttle has been put in place, the carrier is then pushed forward, and is secured in place by the hinged clamp, as before described.

It will thus be seen that while this invention is exceedingly simple of construction it will be found highly durable in use, from the fact that little or no friction will be generated in the shuttle-carrier, and that the device may be constructed at a comparatively nominal figure.

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

In a quilting-machine, the combination of a series of races, a series of shuttle-carriers each having a lug on its sides, a notch at one end and a shoulder at the other, and a shuttle-driving bar having a curved shoulder entering the said notch and a hinged clamp to engage the shoulder, substantially as described.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JOSEPH THOMAS.
GEORGE CRETER.

Witnesses:
HENRY FELTMAN,
BENNETT S. JONES.