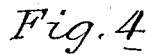
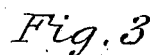


Sewing Machine.

Patented Jan. 24, 1871.



Henry E. Raeder
John Christon

C. A. Macaulay

United States Patent Office.

T. A. MACAULAY, OF NEW YORK, N. Y.

Letters Patent No. 111,129, dated January 24, 1871.

IMPROVEMENT IN SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom it may concern:

Be it known that I, T. A. MACAULAY, of New York, in the county and State of New York, have invented certain Improvements in Sewing-Machines, of which the following is a specification.

The nature of my invention consists in the construction of the shuttle in such a manner that only the upper part of the same shall bear against the shuttle-race face, while the lower edge or face of said shuttle is cut away so as to allow the loop of the thread to pass freely around the shuttle.

Figure I is a side elevation of a sewing-machine, partly in section, embodying my improvement.

Figure II is a top view of the shuttle-race detached.

Figure III is a cross-section of the same.

Figures IV V VI are different views of the shuttle. Similar letters represent similar parts.

A represents the frame of the sewing-machine;

B, the needle-arm, which receives from a crank on the shaft C a regular reciprocating motion;

D is the shuttle-race; and

E, the shuttle, operated in the usual manner.

In the lower part of the shuttle-race D a recess, *a*, is made communicating with the recess C, made for the passage of the needle into the shuttle-race and extending some distance forward, to give sufficient room for the thread-loop to lie in the same.

The face of the shuttle E, which is represented in Fig. IV, bears against the face of the shuttle-race D only at its top edge *n*, from the point *b* of the shuttle to a point, *m*, near the end of said shuttle.

The heel *w* of the shuttle and the surface of the bottom edge or face *v* and the toe or point *b* are cut away, as shown in the drawing, as much as the thickness of a heavy or strong thread, to give a free and easy passage for the thread between the spool in the shuttle and the loop lying in the recess *a* while the shuttle passes through the loop-thread.

In machines where the shuttle is moved on the end of a rocking arm the recess *a* in the bottom of the shuttle-race will be dispensed with. This recess *a* being made for the purpose of allowing a regular reciprocating motion being communicated to the needle-arm in contradistinction to a motion which will allow the needle-arm, and, consequently, the needle, to rest while the shuttle passes through the thread-loop, it is, therefore, not essentially necessary to give to the shuttle, as here described and constructed as above specified, a rectilinear motion; but such a constructed shuttle may be combined with any other needle-arm having a regular reciprocating motion and the shuttle moved by any other arrangement or mechanism, and may be carried upon the end of a vibrating or rocking arm, whereby the same object will be obtained, namely—to allow the regular reciprocating motion to the needle-arm and needle and prevent the binding of the thread between the lower face of the shuttle and the surface of the shuttle-race.

In Fig. V a top view of the shuttle is represented, with the face of the lower edge shown in dotted lines, and in Fig. VI, the bottom view of the shuttle is represented.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The shuttle E, having its lower edge and heel and toe cut away so that only its top wall and point will touch the race-face, substantially as described, and for the purpose set forth.

2. The shuttle E, constructed as described, when operating in connection with a needle and shuttle-carrier having a regular and reciprocating movement, as and for the purpose set forth.

T. A. MACAULAY.

Witnesses:

HENRY. E. ROEDER,
JOHN CHRISTEN.