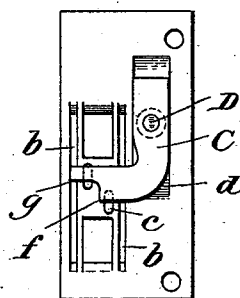
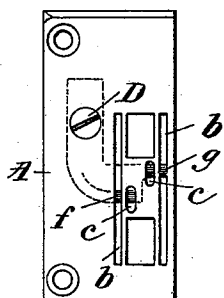
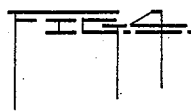
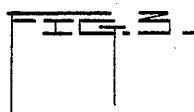
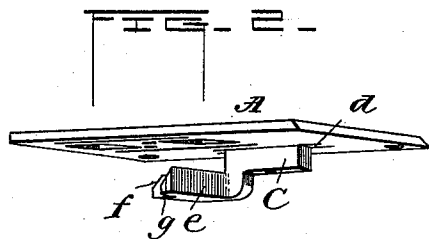
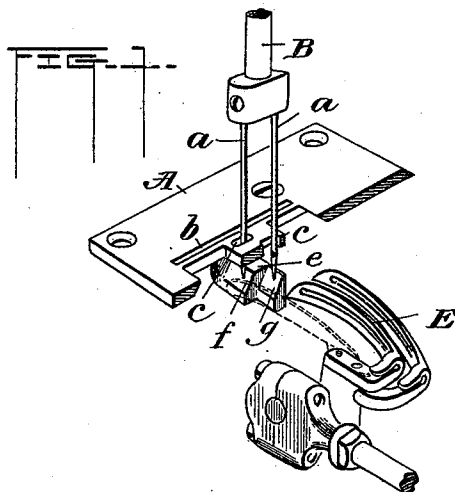


(No Model.)

L. MUTHER.
NEEDLE GUARD FOR SEWING MACHINES.

No. 541,492.

Patented June 25, 1895.



Witnesses:

T. H. Comer, Jr.
Giles P. Moore

In den, or

Loreng Mutter
By Chas. L. Sturtevant
att'y.

UNITED STATES PATENT OFFICE.

LORENZ MUTHER, OF OAK PARK, ASSIGNOR TO THE UNION SPECIAL SEWING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

NEEDLE-GUARD FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 541,492, dated June 25, 1895.

Application filed July 11, 1893. Serial No. 480,151. (No model.)

To all whom it may concern:

Be it known that I, LORENZ MUTHER, a citizen of the United States, residing at Oak Park, in the county of Cook, State of Illinois, have
5 invented certain new and useful Improvements in Needle-Guards, of which the following is a description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My invention relates to improvements in sewing machines, and particularly to means for preventing the needles from being sprung into the path of the loopers.

15 The invention therefore consists in the matters hereinafter described and referred to in the appended claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view showing the loopers and guard and in
20 dotted lines the guard-finger traveling with the loopers. Fig. 2 is a perspective showing the throat-plate and guard from the under side. Fig. 3 is a plan, and Fig. 4 a bottom plan, of the throat-plate provided with my invention.
25

In the drawings, A represents the throat plate of a sewing machine, B a portion of the needle bar, and *a a* the needles, herein shown as two in number and arranged obliquely to
30 each other respecting the line of feed. The throat plate is provided with the ordinary screw holes for attaching it to the machine, and has openings *b* and *c* for the passage of the side feed dogs and needles respectively.
35 Upon the under side of the throat plate is a longitudinal slot *d* in which slot is secured the shank of the needle guard C by means of the screw D passing through from the outside of the throat plate into said shank. That
40 part of the guard C which acts as a guide for the needles is shown at *e*, being arranged below the plane of the shank and extending at right angles to the shank and into the path of the needles. It is beveled or chamfered
45 on one side as shown at *f*, and is cut away at the end so as to leave a narrow, chamfered, projecting point *g*. The parts *f* and *g* serve to guide the outer and inner needles respect-

ively, said inner needle in descending striking on the inclined sides of said guard and being
50 thereby deflected in an opposite direction to that in which the feed of the machine is going, thus avoiding interference with the loopers E in their forward movement, one of said loopers passing between the two needles while the
55 other passes outside the same. A guard finger traveling with the loopers, shown in dotted lines in Fig. 1, serves the usual purpose of such fingers. The loopers are operated in the usual way, as shown in Fig. 1.
60

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

1. In a sewing machine the combination with a feeding device having feeding movement in a defined path, of a plurality of vertically reciprocating needles disposed in a vertical plane at an oblique angle to the path of feed, a needle guard located between the
65 needles and the forward limit of the feed path and having a plurality of needle deflecting surfaces disposed respectively in the path of movement of the needles, said surfaces being arranged substantially in parallelism in vertical, oblique planes, and complemental
70 stitch forming mechanism; substantially as described.

2. In a sewing machine and in combination with the stitch forming mechanism thereof, comprising a plurality of needles and a plurality of loopers, of a guard plate having a plurality of deflecting surfaces, the latter being located respectively in the path of the needles, and a pair of surfaces being arranged
80 relatively substantially in parallelism in vertically oblique planes, and the lateral extent of the surfaces beginning in a vertical plane between two of the needles and tending in opposite directions; substantially as described.
85

In testimony whereof I affix my signature
90 in presence of two witnesses.

LORENZ MUTHER.

Witnesses:

W. S. NORTH,
CHESTER MCNEIL.