

E. H. HARRIS.
TWO NEEDLE SEWING MACHINE.

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UNITED STATES PATENT OFFICE.

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TWO-NEEDLE SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 581,822, dated May 4, 1897.

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To all whom it may concern:

Be it known that I, EDMUND H. HARRIS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Two-Needle Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 In that class of sewing-machines employing two needles for the purpose of simultaneously forming two rows of stitches it is frequently desirable to throw one needle out of operation, so as to temporarily form only a single
15 row of stitches. This desideratum occurs more particularly when it is necessary to turn a sharp corner, so that the inner of two rows of stitches, as in stitching around a square, will not overlap or run to the outer row at
20 the corners. It has heretofore been proposed to make one needle inoperative, so that only one row of stitches will be formed, by providing what is termed a "loop-robbing" device, or a device which prevented the needle which
25 was to be rendered inoperative from throwing out loops to be engaged by the shuttle or looper beneath the work-plate; but this method of rendering the needle inoperative is objectionable in some classes of work (particularly in
30 leather work) for the reason that the punctures made by the needle when not sewing mar the work.

My invention has for its object to provide a simple and convenient device whereby one
35 of two needles may be instantly thrown out of or into action at the pleasure of the operator. To this end I provide the main needle-bar, which is operated from a crank in the usual manner, with a rigid block or cross-head
40 through which a supplemental needle-bar is passed, the latter needle-bar being provided with a notch to be engaged by a locking device, consisting preferably of a spring-pressed pin or slide carried by said block or cross-
45 head, to secure said needle-bar thereto. To the said block or cross-head is connected the upper end of a coil-spring, the lower end of which is connected to the lower part of the supplemental needle-bar in such a manner as
50 to have a tendency to lift the latter. When it is desired to throw the needle carried by

the supplemental needle-bar out of action, it is only necessary to withdraw the spring-pressed pin or slide and the coil-spring referred to will instantly elevate the supplemental needle-bar, so as to throw the needle
55 carried by the latter out of action; and when the supplemental needle is again to be thrown into operation the operator merely presses upon the upper end of the supplemental needle-bar and forces it down until the spring-pressed pin or slide will engage the notch in
60 the needle-bar and lock it in place.

In the accompanying drawings, Figure 1 is a front end view of a sewing-machine head
65 with my invention applied thereto, and Fig. 2 is a side view of the same. Fig. 3 is a detail view of the needle-bars with the supplemental needle-bar and needle in their inoperative positions.
70

A denotes the head or forward end of the bracket-arm of a sewing-machine, and B is the main or driving shaft, having at its forward end the crank *b*, connected by the pitman *c* with the main needle-bar C in the usual
75 manner. To the said main needle-bar C is attached the block or cross-head *d*, having a suitable vertical opening to receive the auxiliary needle-bar D, the latter being provided with a notch *d'*, adapted to receive a spring-pressed pin or slide *e*, suitably fitted in the
80 said block or cross-head and provided with a handle or operating device *e'*, by which it may be retracted. A spiral spring E, connected at its upper end to the said block or
85 cross-head *d* and at its lower end to the lower part of the auxiliary needle-bar D, serves to lift the said needle-bar to the inoperative position shown in Fig. 3, when the said spring-pressed pin or slide *e* is withdrawn from the
90 notch *d'* of the said needle-bar. Thus when the operator wishes to throw the auxiliary needle-bar out of action he merely withdraws the spring-pressed pin or slide *e* from the said
95 notch in the said needle-bar, when the spring E will instantly lift the auxiliary needle-bar, so that its needle will not touch the work; and when the auxiliary needle-bar is again to be
100 thrown into action the operator merely presses the auxiliary needle-bar downward against the stress of the spring E until the notch *d'* comes opposite the spring-pressed pin or slide

e, when the latter will enter said notch and lock the said auxiliary needle-bar in its operative position.

Having thus described my invention, I
5 claim and desire to secure by Letters Patent—

1. In a sewing-machine, the combination
with a main needle-bar, and a cross-head or
block rigidly secured thereto, of an auxiliary
10 needle-bar vertically movable in said cross-
head or block, a spring connected to said
cross-head and auxiliary needle-bar, to lift
the latter, and a locking device for remov-
ably securing the said auxiliary needle-bar
15 to the said block or cross-head.

2. In a sewing-machine, the combination
with a main needle-bar, and a cross-head or
block rigidly secured thereto, of an auxiliary
needle-bar vertically movable in said cross-
20 head or block, a spring connected to said
cross-head and auxiliary needle-bar, to lift
the latter, and a spring-pressed locking de-

vice for removably securing the said auxil-
iary needle-bar to the said block or cross-
head.

3. In a sewing-machine, the combination
with the main needle-bar *C* provided with the
block or cross-head *d* rigidly attached there-
to, of the auxiliary needle-bar *D* freely mov-
able vertically in said block or cross-head and
30 provided with the notch *d'*, the spring-pressed
pin or slide *e* adapted to enter said notch and
provided with a handle *e'* whereby it may
readily be withdrawn therefrom, and the lift-
ing-spring *E* connected at its upper end to
35 the said block or cross-head and at its lower
end to the lower part of said auxiliary needle-bar.

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

EDMUND H. HARRIS.

Witnesses:

THOMAS K. OBER,
E. R. EUSTON.