

(No Model.)

2 Sheets—Sheet 1.

W. N. PARKES.
SEWING MACHINE.

No. 591,634.

Patented Oct. 12, 1897.

Fig. 1.

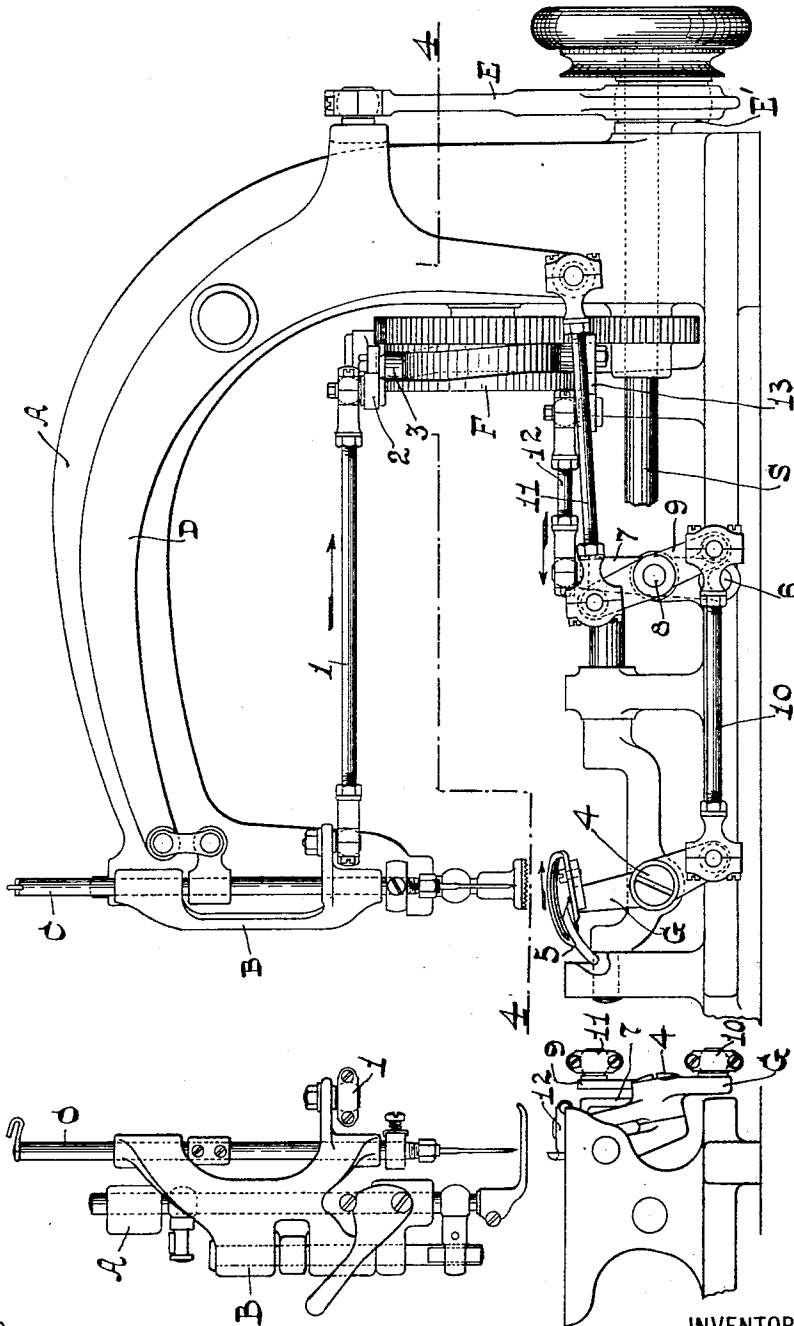


Fig. 2.

WITNESSES:

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Eugene A. Perside

INVENTOR

William N. Parkes

BY

Marked Parkes
ATTORNEY

(No Model.)

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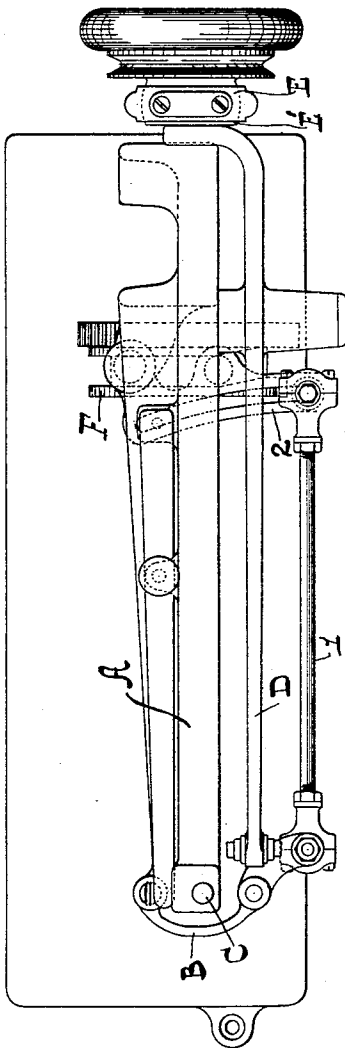


Fig. 3.

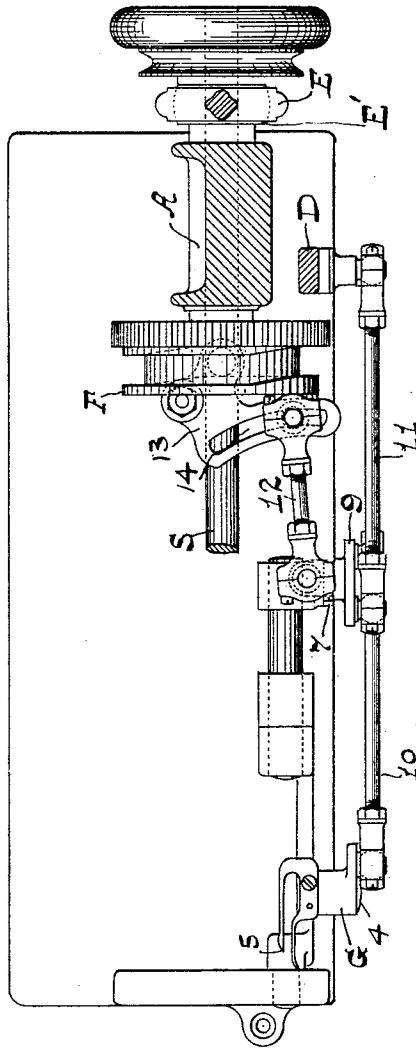


Fig. 4.

WITNESSES:

Eugenie A. Persides.
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UNITED STATES PATENT OFFICE.

WILLIAM N. PARKES, OF BROOKLYN, NEW YORK.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 591,634, dated October 12, 1897.

Application filed February 13, 1897. Serial No 623,244. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. PARKES, a citizen of the United States of America, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

My invention has reference to improvements in zigzag or jump-stitch sewing-machines of that class in which the looper or shuttle is moved laterally in unison with the lateral vibrations of the needle.

The object of my invention is to provide a simple mechanism for machines of this class which is adapted for a high rate of speed.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which—

Figure 1 represents a front elevation of a machine having my improvement applied thereto. Fig. 2 is an elevation of the left-hand end of the machine. Fig. 3 is a plan or top view. Fig. 4 is a horizontal section on the line 4 4, Fig. 1.

Similar letters and numerals of reference designate corresponding parts throughout the several views of the drawings.

Referring to the drawings, the letter A designates the head of the machine. B is the needle-holder gate or frame mounted to swing laterally and guiding the vertically-reciprocating needle-holder C. The said needle-holder is reciprocated vertically by means of its connection with a usual lever D, actuated from the driving-shaft S of the machine through a connecting-rod E and an eccentric E'. The needle-holder gate or frame B is laterally vibrated by a connection with a pattern-cam F, geared to the driving-shaft S of the machine. This connection may consist, as usual, of a link 1, connected with the needle-holder gate or frame, and with a pivoted segment 2, having a roller-stud 3, engaging a groove in the cam F. The means for reciprocating the needle-holder and for laterally vibrating the same may be of any other well-known construction, the same forming no part of my present invention.

G is a usual form of looper-carrier mounted to rock in the usual manner, its motion in one plane being about the stud 4 as a pivot.

The arm of this looper-carrier is, however, extended below the pivot 4. The oscillating motion of the looper-carrier is usually obtained by means of a link directly connecting the lower arm of the lever D with the arm of the looper-carrier above its point of pivoting 4. To laterally vibrate the center of action of the point or nose 5 of the looper, so as to cause the point or nose of the looper to follow the lateral vibrations of the needle, I replace this ordinary link connection of the looper-carrier with the lever D by the following mechanism: To a lug on the bed-plate of the machine is pivoted at 6 a rocker-arm 7, which said rocker-arm carries a stud 8, about which can turn a short lever 9. The lower arm of said lever is connected by a link 10 with the arm of the looper-carrier G, while the upper end of said lever 9 is connected by a link 11 with the lower arm of lever D. Assuming that the rocker-arm 7 is held stationary, the vibrations of lever D will be transmitted to the looper-carrier G through link 11, lever 7, and link 10, imparting to said looper-carrier the usual oscillations. If now said rocker-arm is turned in either direction about its pivot, the center of action of the point or nose of the looper is correspondingly changed or displaced. For vibrating the rocker-arm automatically with the lateral vibrations of the needle I place said rocker-arm in connection with the pattern-cam F by means of a link 12 and segment 13, similar to those used in connection with the needle-holder gate or frame B. The extent of change of the center of action can be changed by adjusting the position of the link 12 in the slot 14 of the segment 13. By properly adjusting the connections on the segments 2 and 13 it will be seen that the extent of the lateral vibrations of the needle and of the center of action of the point or nose of the looper will be the same and in unison. It is of course to be understood that the center of action of an oscillating shuttle can be similarly varied.

I do not wish to restrict myself to the details of construction shown and described, as it is evident that the same can be changed without departing from the spirit of my invention.

What I claim as new is—

1. The combination with a sewing-machine

having a stitch-forming mechanism embody-
ing a vertically-reciprocating needle moved
or vibrated laterally through a pattern-cam
and a reciprocating or oscillating loop-taking
5 device, of a lever, an operative connection be-
tween said lever and the loop-taking device,
a connection between said lever and the means
for vertically reciprocating the needle, and
means for vibrating laterally the fulcrum of
10 said lever, substantially as described.

2. The combination with a sewing-machine
having a stitch-forming mechanism embody-
ing a vertically-reciprocating and laterally-
vibrating needle and a reciprocating or oscil-
15 lating loop-taking device, of a rocker-arm, a
pattern-cam, an operative connection between
said pattern-cam and the rocker-arm for vi-
brating the same, a lever pivoted to said
rocker-arm, a connection between said lever
20 and the means for vertically reciprocating the
needle, and a connection between said lever
and the loop-taking device, substantially as
described.

3. The combination with a sewing-machine
having a stitch-forming mechanism embody- 25
ing a vertically-reciprocating needle moved
or vibrated laterally through a pattern-cam
and a reciprocating or oscillating loop-taking
device, of a rocker-arm, an operative con-
nection between said pattern-cam and said 30
rocker-arm, a lever pivoted to said rocker-
arm, a connection between said lever and the
means for vertically reciprocating the needle,
and an operative connection between said le-
ver and the loop-taking device connected with 35
said loop-taking device below its point of piv-
oting, substantially as described.

In testimony that I claim the foregoing as
my invention I have signed my name, in pres-
ence of two witnesses, this 11th day of Feb- 40
ruary, 1897.

W. N. PARKES.

Witnesses:

EUGENIE A. PERSIDES,
A. FABER DU FAUR, Jr.