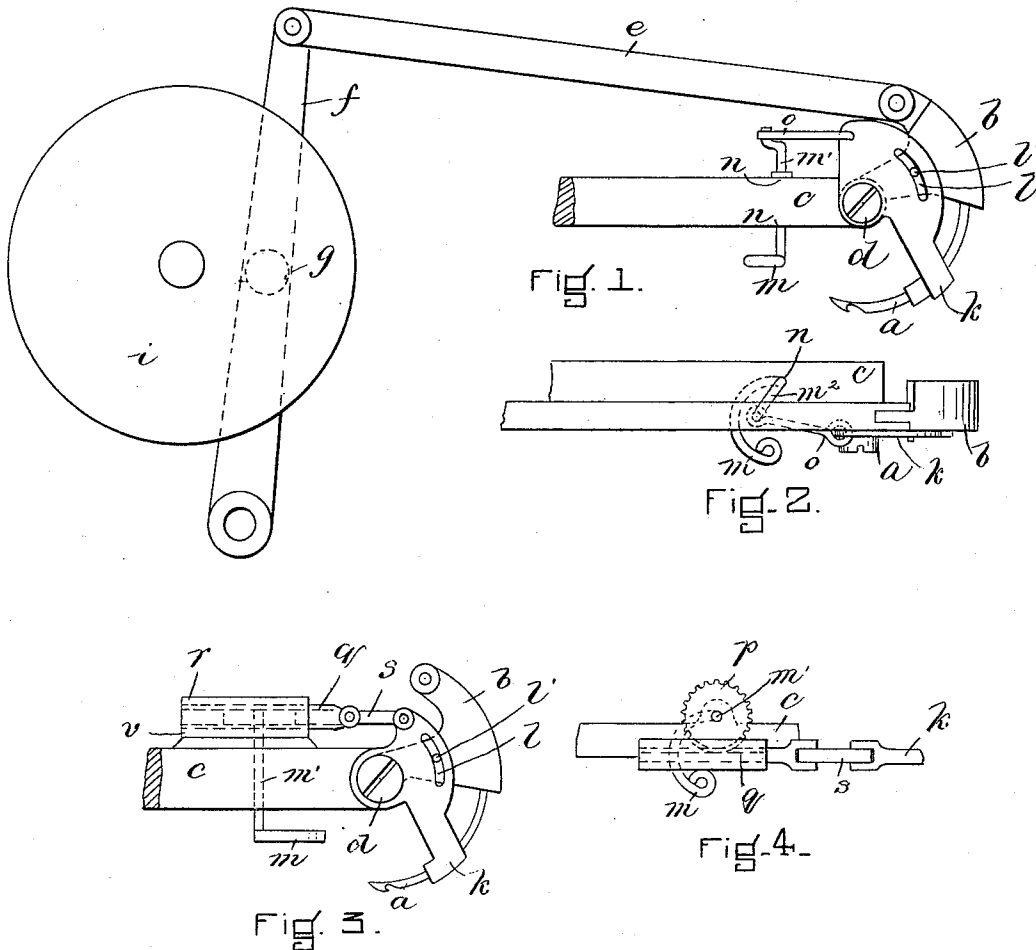


(No Model.)

E. PATTEN.
SEWING MACHINE.

No. 481,266.

Patented Aug. 23, 1892.



WITNESSES.

Robert Wallace,
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INVENTOR -
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UNITED STATES PATENT OFFICE.

ENOS PATTEN, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE LYNN LAST-
ING MACHINE COMPANY, OF SAME PLACE.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 481,266, dated August 23, 1892.

Application filed November 13, 1891. Serial No. 411,813. (No model.)

To all whom it may concern:

Be it known that I, ENOS PATTEN, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates more particularly to sewing-machines of the class which use waxed thread; and it consists in an improved construction and combination of parts providing in a simple and direct manner for the actuation of the thread guide or looper which is employed in such machines and which co-operates therein with a hooked needle and a cast-off in forming the stitches.

My invention will first be described with reference to the accompanying drawings, and then particularly pointed out in the claims at the close of this specification.

Figure 1 is a side elevation of devices embodying my invention. Fig. 2 is a view in plan of certain of the parts shown in Fig. 1; and Figs. 3 and 4 are views in side elevation and plan, respectively, of a modification.

In the drawings, the hooked needle, which is employed in some sewing-machines using waxed thread, particularly those employed in making turn-shoes, is shown at *a*, and *b* is the needle-carrier to which the said needle is secured. The needle-carrier *b* is pivoted to the support *c* on a stud *d*, which is screwed into the said support, and the needle-carrier is shown connected by means of a link or connecting-rod *e* with a lever *f*, carrying a bowl or stud *g*, entering a cam-groove in a cam-disk *i*. The said needle-carrier may be operated by any suitable or known means, that shown being only a convenient example of what may be employed. The needle passes through the tubular portion of the cast-off *k*, which acts in the usual manner in connection with the needle, the said cast-off being pivoted upon the stud *d* and moving concentrically with the needle. The body of the cast-off is formed with an arc-shaped slot *l*, into which projects a pin *l'*, mounted on the side of the needle-carrier *b*, this pin serving to communicate movement to the cast-off whenever in the movement of the needle-carrier

the said pin strikes against one end or the other of the slot *l*. The thread guide or looper *m* is journaled at *n* in the support *c*, and its shaft *m'* is shown in Figs. 1 and 2, provided with a forwardly-projecting arm *m*², which is connected by a rod or link *o* with the cast-off *k*. By this means the cast-off and thread guide or looper are caused to have the proper movement relatively to the needle to enable them to perform their respective functions, and the requisite timing in their movements is secured by means of the slot *l*, which is made of sufficient length to occasion the lost motion necessary to cause the thread guide or looper and cast-off to co-operate properly with the hooked needle.

Instead of operating the thread guide or looper from the cast-off through the connecting rod or link *o* and crank-arm *m*² (shown in Figs. 1 and 2) I may connect the parts, as in Figs. 3 and 4, wherein *p* is a pinion on one end of the shaft *m'* and *q* is a small rack in engagement with the said pinion. This rack moves in guides *r r* on the support *c* and is connected by the link *s* with the cast-off *k*.

I claim as my invention—

1. The combination, with a needle-carrier, of a cast-off operated therefrom and a thread guide or looper operatively connected with the cast-off and actuated therefrom, substantially as described.

2. The combination, with a pivoted needle-carrier and a pivoted cast-off operated from the needle-carrier, of a pivoted thread guide or looper operatively connected with the cast-off and actuated therefrom, substantially as described.

3. The combination, with the pivoted needle-carrier and the pivoted cast-off operated therefrom, of the thread guide or looper, a pinion connected therewith, and a rack in engagement with the said pinion and operatively connected with the cast-off, substantially as described.

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

ENOS PATTEN.

Witnesses:

CHAS. F. RANDALL,
WM. A. MACLEOD.