

O. VENNER.  
Sewing-Machines.

No. 133,814.

Patented Dec. 10, 1872.

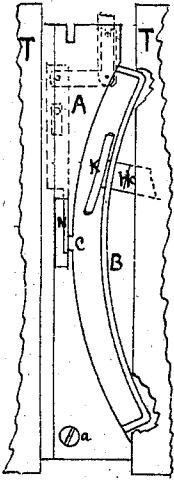


Fig. 1

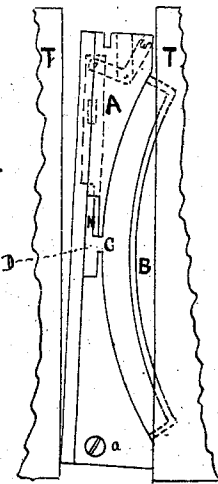


Fig. 3

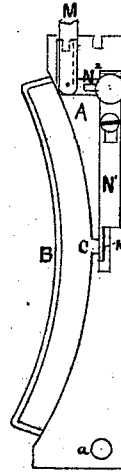


Fig. 6

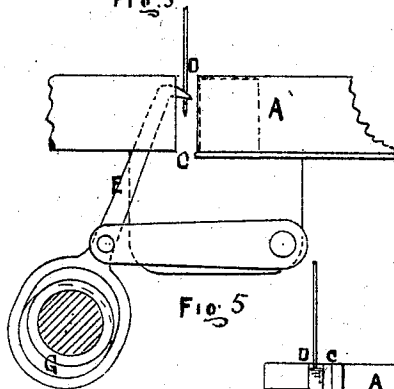


Fig. 5

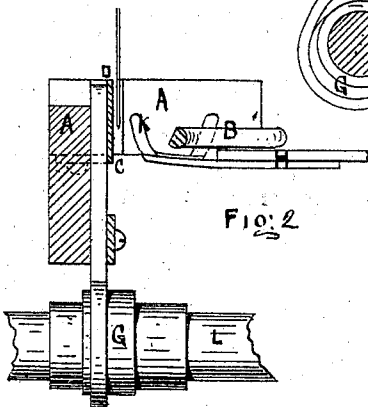


Fig. 2

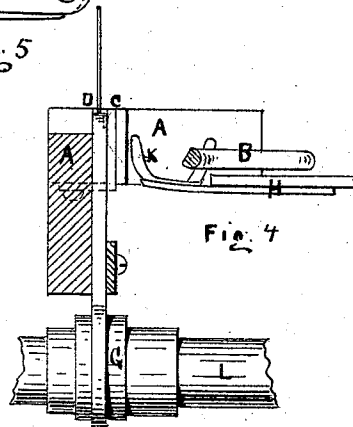


Fig. 4

WITNESSES

*Frankl. Parker*  
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*per William Benson*

# UNITED STATES PATENT OFFICE.

ORANGE VENNER, OF BELFAST, MAINE.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 133,814, dated December 10, 1872.

*To all whom it may concern:*

Be it known that I, ORANGE VENNER, of Belfast, in the county of Waldo and State of Maine, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification:

The nature of my invention consists in combining with a sewing-machine certain mechanical devices, the exact nature of which can be best understood by reference to the drawing and specification; the object of the invention being to construct a machine that will sew either the single or double thread stitch.

### *Description of the Accompanying Drawing.*

Figure 1 is a plan, showing the movable shuttle-race block; also a part of the table T T, the shuttle-race block being represented in the position it will occupy when the machine forms the shuttle-stitch. Fig. 2 shows a section of the shuttle-race block, and also the looping device, the parts being in position for action as a shuttle-machine, the looper performing no function; Figs. 3 and 4 being the same as 1 and 2, except the parts are in position for action as a loop-stitch machine. Fig. 5 shows the looper in connection with the movable shuttle-race block. Fig. 6 shows the shuttle-race block and its adjuncts from the under side.

### *General Description.*

A is a shuttle-race block attached to the table of the machine by the screw *a*, Figs. 1, 3, and 6, and is arranged so as to swing on said screw as a pivot from the position represented in Figs. 1 and 2 to that of Figs. 3 and 4. To the shuttle-race block A the guard B is attached, as shown, so as to form a shuttle-race, the shuttle being driven by the swinging arm H K. The needle-throat or channel *c*, Figs. 1, 3, and 6, shown in section in Figs. 2 and 4, is divided, by a movable plate, N<sup>1</sup> N, into two parts, C and D, Figs. 2 and 4. When the shuttle is to be used the shuttle-race block A and the division-plate N occupy the position shown in Figs. 1, 2, and 6, the plate forming the back of the needle-throat. When in this position the plate cuts off all communication between the needle and the looper, and although the looper is in motion it can have no effect upon the thread. When the looper is to act the shuttle-race block A is swung over

to occupy the position shown in Figs. 3 and 4, the plate N<sup>1</sup> N being withdrawn so as to allow the needle to operate in connection with the looper E to form the loop-stitch. The plate N<sup>1</sup> N is connected to the bent lever N<sup>2</sup>, which, in its turn, is pivoted to the lug M affixed to the body of the machine, so that the side movement of the shuttle-race block A will cause a corresponding longitudinal movement of the plate N<sup>1</sup> N. Thus, when the shuttle-race block A is swung over to the position indicated in Fig. 3, then the plate N<sup>1</sup> N is withdrawn from the groove in the shuttle-race block, into which the needle works, as shown in Fig. 3, the converse of this being also true. The looper E is attached to a hanger on the shuttle-race block A, and is free to move on the cam G, so that it is always in action, though doing no work except when the shuttle-race block is in position for sewing by the loop-stitch.

The character of my invention is such that I have a machine that may be made to sew either a loop or lock stitch by simply changing the relative positions of parts of the same machine. This change may be effected by simply moving the shuttle-race block A and the plate N<sup>1</sup> N, as already described, or by allowing it to remain stationary and moving the plate N<sup>1</sup> N and the needle-bar, pressure-foot, and their adjuncts.

The combination of parts in my invention is a changing one—that is, the needle is a constant element, while the shuttle-race and the looping device alternate as elements. This alternate combination may be effected by moving the needle or by moving the shuttle-race block, which embraces the shuttle and looping devices.

I claim as my invention—

1. The combination of the movable shuttle-race block with the reciprocating plate N<sup>1</sup> N, operating to divide the needle-throat C D, substantially as described, and for the purpose set forth.

2. The combination of the movable shuttle-race block A, the vertical looper E, and the link F with the cam G, arranged substantially as described, and for the purpose set forth.

ORANGE VENNER.

Witnesses:

FRANK G. PARKER,  
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