(No Model.)

J. VANNETT.

SEWING MACHINE.

No. 388,324. Patented Aug. 21, 1888.

Fig 1

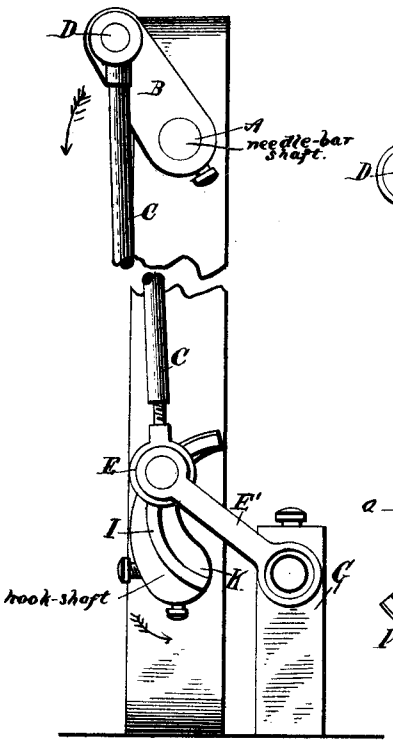


Fig 2

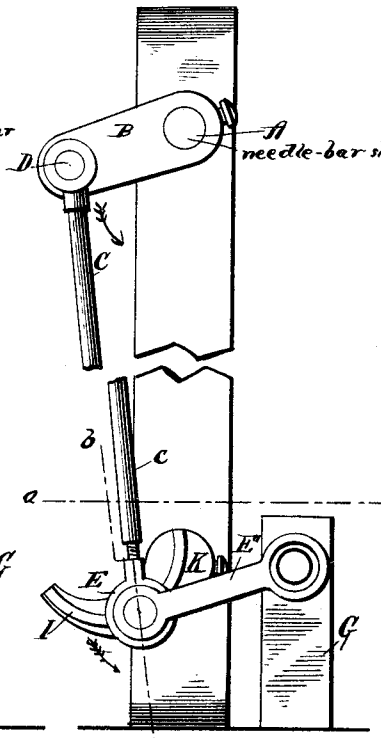
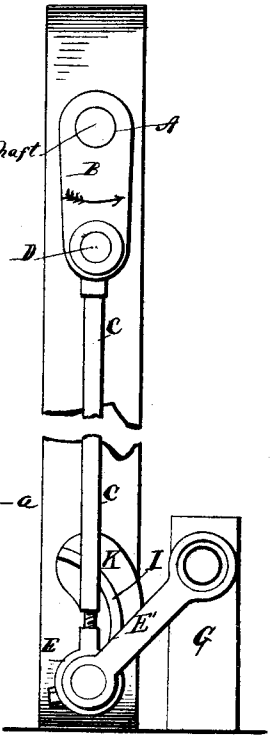


Fig 3



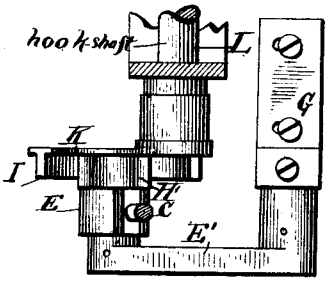


Fig 4

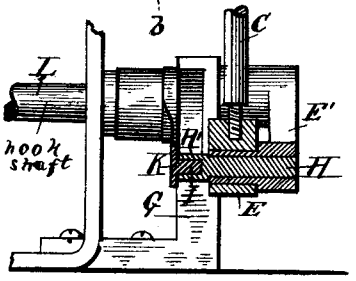


Fig 5

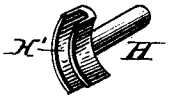


Fig 6

WITNESSES

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UNITED STATES PATENT OFFICE.

JASPER VANNETT, OF TIFFIN, OHIO, ASSIGNOR OF ONE-THIRD TO GEORGE S. YINGLING, OF SAME PLACE.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 388,324, dated August 21, 1888.

Application filed March 3, 1888. Serial No. 266,064. (No model.)

To all whom it may concern:

Be it known that I, JASPER VANNETT, a citizen of the United States, residing at Tiffin, in the county of Seneca and State of Ohio, 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.

This invention relates to certain improvements in that class of sewing-machines known as "oscillating-hook" machines, in which an oscillating movement is imparted to the shaft which actuates the hook from the revolving needle-bar shaft; and it has for its objects to impart an accelerated movement to the hook, so as to properly time the movement of said hook with respect to that of the needle and take-up mechanism, as more fully hereinafter specified. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a rear view of a portion of a sewing-machine, showing my improvement, with the parts of the device in the position they assume when the hook-actuating shaft is idle. Fig. 2 represents a rear view of the same, showing the parts in the position which they assume when the hook-shaft attains its greatest speed. Fig. 3 represents a similar view showing the position of the parts when the hook-shaft is at its lowest rate of speed. Fig. 4 represents a horizontal sectional view of a portion of a sewing-machine, taken on the line *a a* of Fig. 2 of the drawings, showing my invention. Fig. 5 is a sectional view taken on the line *b b* of Fig. 2. Fig. 6 is a detail perspective view of the slotted head or tumbler.

Referring to the drawings, the letter A indicates the needle-bar shaft, and B a crank at the rear end thereof.

C indicates a pitman pivoted at its upper end to the crank-pin D and at its lower end to a boss, E, at one end of an oscillating arm, E′, working on a pin or fixed bearing secured to a standard, G, attached to the frame of the machine. Within the boss, and arranged to partially rotate therein, is a pin, H, having on its outer end a curved slotted head or tumbler, H′, which embraces and rides upon a cam-flange, I, on the rear surface of a curved arm, K, secured to the rear end of a hook-shaft, L.

When the parts of the device are in the position shown in Fig. 1 of the drawings during the rotation of the needle-bar shaft, the slotted head or tumbler will ride upon the cam-flange for a slight distance without moving the arm; but as it travels in the direction shown by the arrow it gradually moves the curved arm until the parts assume the position shown in Fig. 2, at which position the arm and the hook-shaft attain their maximum rate of speed. The parts then travel to the position shown in Fig. 3, during which the speed of the arm and hook-shaft gradually diminishes, from which point the speed is again accelerated until the parts again assume the position shown in Fig. 2, after which the speed is diminished to zero, when the parts again assume the position shown in Fig. 1 of the drawings.

My device is designed especially to be used in connection with the invention for which Letters Patent were granted to me the 16th day of February, 1886, No. 336,456; but it may be employed with any of the oscillating-hook machines of the description mentioned without departing from the spirit of my invention.

In order to provide for the relative adjustment of needle-bar shaft, the hook-shaft, and the connecting parts, the crank on the needle bar shaft and the curved cam-arm on the hook-shaft may be adjustably secured by means of set-screws or otherwise.

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

1. The combination, with the hook-shaft of a sewing-machine, of a cam arm secured to the rear thereof, an oscillating arm working on a fixed bearing, a slotted head or tumbler mounted on a pin working in a boss on said arm and riding upon the curved arm or cam, and the pitman pivoted at its lower end upon the said boss and connecting with the crank-pin of the needle-bar shaft, whereby an accelerated motion is imparted to the hook-shaft, substantially as specified.

2. The combination, with the needle-bar shaft and the oscillating hook-shaft, of the ad-

justable crank secured to the needle-bar shaft, the adjustable curved cam secured to the hook-shaft, the oscillating arm secured to a fixed bearing on the frame of the machine, its slotted head riding on the curved cam and the connecting-pitman, whereby the parts may be adjusted to give an accelerated movement to the hook-shaft at the proper relative positions of the crank-shaft and said hook-shaft, substantially as specified.

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

JASPER VANNETT.

Witnesses:
WM. GALLUP,
HARRY TAGGART.