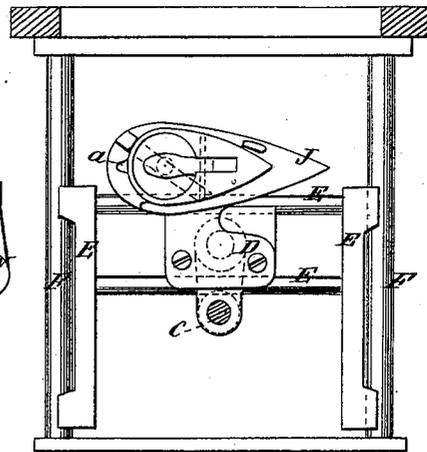
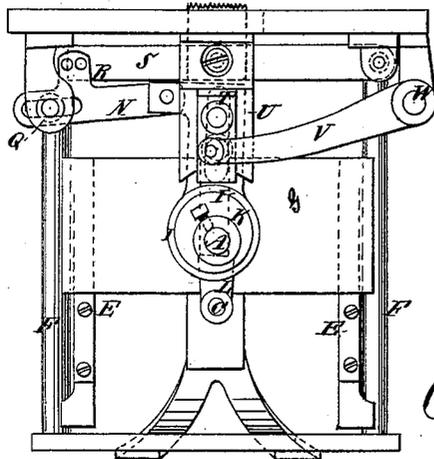
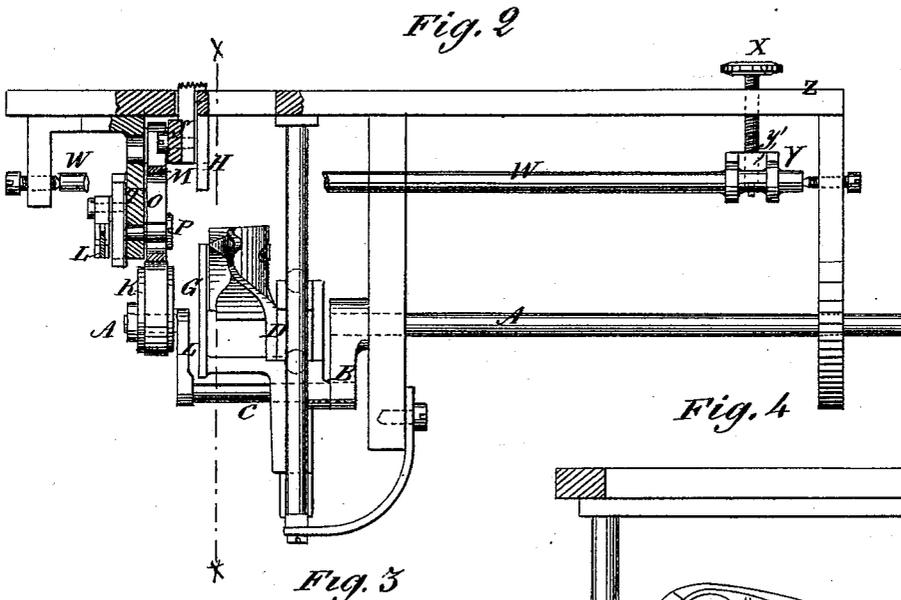
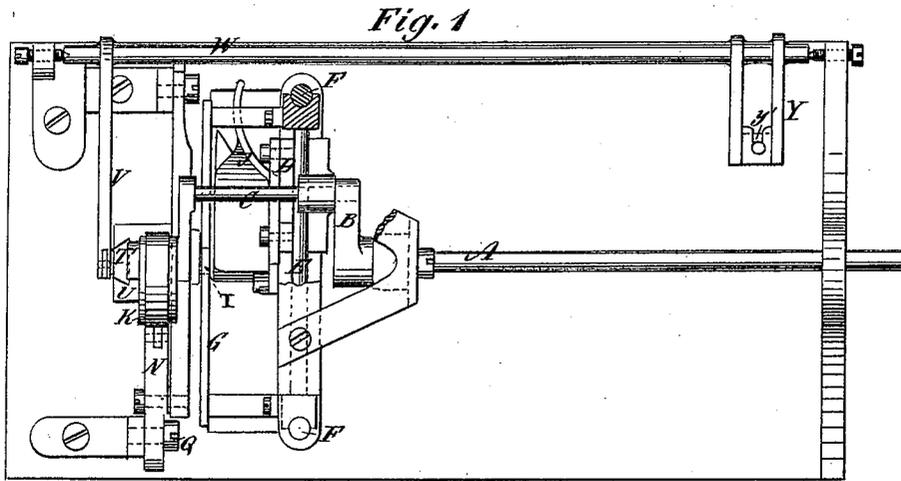


J. GLINES & N. W. STILES.

SEWING-MACHINE.

No. 171,792.

Patented Jan. 4, 1876.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOSIAH GLINES AND NOEL W. STILES, OF POSTVILLE, IOWA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **171,792**, dated January 4, 1876; application filed July 31, 1875.

To all whom it may concern:

Be it known that we, JOSIAH GLINES and NOEL W. STILES, of Postville, in the county of Allamakee and State of Iowa, have invented a new and useful Improvement in Sewing-Machines, of which the following is a specification:

The invention consists in combining a cam-shaft, crank and pin, shuttle-carrier, race and ways; in combining a face-plate, attached to a reciprocating race, with a needle-backing plate, and in combining a rotary shuttle, having thread-escape in heel, with a carrier having guard, all as hereinafter described.

Figure 1 is a plan of the machine inverted and with a portion sectioned. Fig. 2 is partly a side elevation, and partly a longitudinal section. Fig. 3 is an end elevation, and Fig. 4 is a section on the line *xx* of Fig. 2.

Similar letters of reference indicate corresponding parts.

The cam-shaft A has a crank, B, carrying a pin, C, which throws the shuttle-carrier D forward and backward in the race or ways E, and at the same time raises the race on the ways F, to present the shuttle so as to be driven forward through the loop, and lowers it so that the shuttle will be driven back under the loop, thus giving circular motion to the shuttle without twisting the thread. The face-plate G, against which the shuttle runs, is connected to the vertically-moving race E, so as to move up to the position for guiding the shuttle properly when the nose is to enter

the loop, and it has a notch (see dotted lines I, Figs. 1 and 3) to mesh with the stationary needle-backing plate H. The shuttle-carrier has a point-guard, J, projecting forward of the point of the shuttle to prevent the thread from throwing over the latter when it reverses at the back part of its course, and the shuttle is contrived for the thread to pass out at the rear end *a* for the same purpose. The crank-pin C of the crank-shaft is prolonged beyond the connection with the shuttle-carrier sufficiently to work the feed, and it carries an eccentric.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of cam-shaft A, having crank and pin B C, the shuttle-carrier D, the race E, and the ways F, as and for the purpose described.

2. The combination of face-plate G, notched and attached to reciprocating race, with the needle-backing plate H, as and for the purpose specified.

3. A rotary shuttle, having thread-escape in the heel, in combination with carrier having guard J in front of the shuttle-point thereof, as and for the purpose described.

JOSIAH GLINES.
NOEL W. STILES.

Witnesses:

ARTHUR E. STILES,
ELBERT D. STILES.