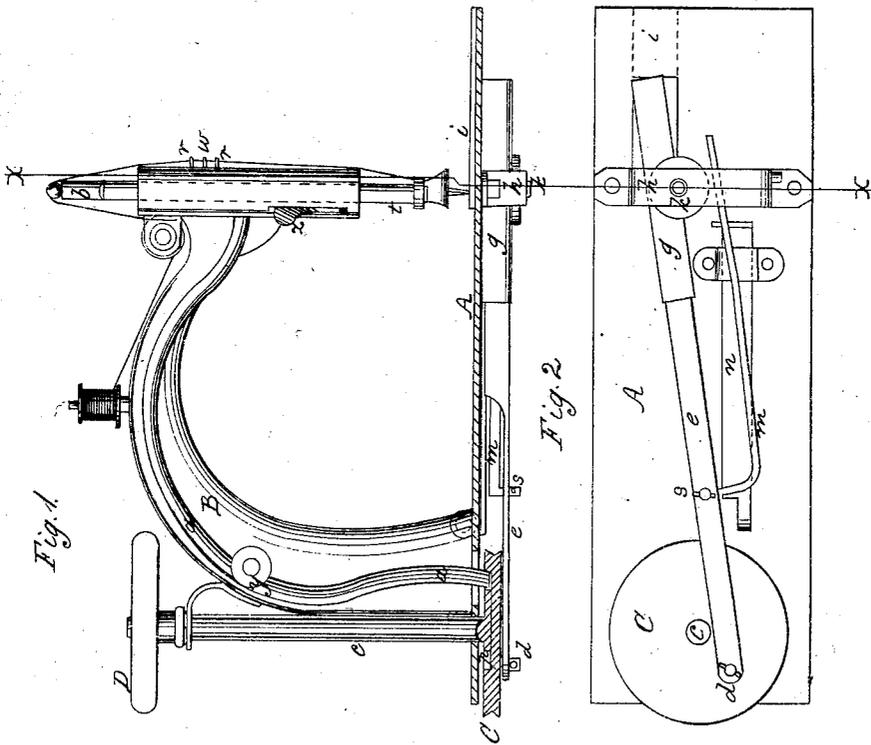
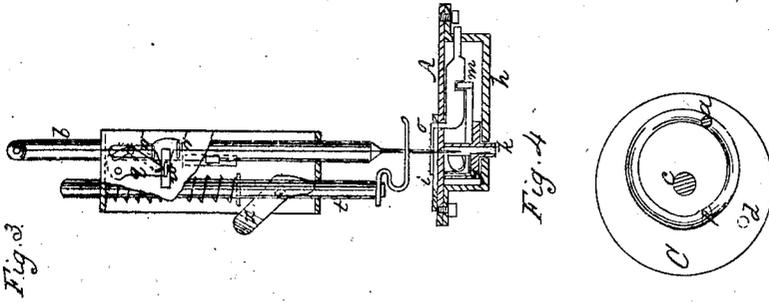


A. H. Halbert.  
Sewing-Machine.

N<sup>o</sup> 76076

Patented Mar. 31, 1868



Witnesses  
Chas. Trusche  
S. Alison Frazer

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A. H. Halbert  
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# United States Patent Office.

A. W. HALBERT, OF TAYLOR, NEW YORK, ASSIGNOR TO HIMSELF AND J. F. STARK, OF THE SAME PLACE.

Letters Patent No. 76,076, dated March 31, 1868.

## IMPROVEMENT IN SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. W. HALBERT, of Taylor, in the county of Cortland, and State of New York, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the working parts of a sewing-machine of my invention, partly in section.

Figure 2 is a bottom view of the same under the bed.

Figure 3 is a vertical sectional view, taken in the line  $x$ , figs. 1 and 2.

Figure 4 is a detached view of the driving-wheel, showing the eccentric groove therein for giving motion to the needle-bar.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in the construction of sewing-machines, and consists in the construction and arrangement of mechanism whereby the working parts are much simplified, and movement is given to them all by one wheel directly connected with the needle-bar, the shuttle, and the feed-plate, as hereinafter more particularly described.

A represents the bed-plate, on which is fastened the curved arm B, for supporting the head of the machine, and the curved lever  $a$ , having its fulcrum at  $y$ , and giving motion to the needle-bar  $b$ . At the rear end, on the under side of the bed-plate A, is placed a horizontal driving-wheel or disk, C, which is hung on a spindle,  $c$ , that runs up through the bed-plate, back of the arm B, by which it is held at the upper end, where it carries a hand-wheel, D. A wrist,  $d$ , on the under side of the wheel C, connects it with a bar,  $e$ , that carries the shuttle on its outer end, enclosed in a guide-box or race,  $g$ , which is pivoted under a strap or stirrup,  $h$ , to oscillate freely by means of the crank-action of the wheel C on the shuttle-carrier bar  $e$ , that slides back and forth regularly in the guide-box  $g$ , while it oscillates. The wheel C is to be moved by a friction-wheel bearing on the periphery, packed with a rubber ring, or in any other suitable way. The pivot  $k$ , on which the shuttle-guide box  $g$  oscillates, is made tubular. It is placed on one side of the box, and the tube opens into it and runs through the bed-plate A, as shown clearly in fig. 3, for the purpose of allowing the needle to enter and connect with the shuttle within the guide-box  $g$ . The shuttle-guide box  $g$  is covered by a slide,  $z$ , on the bed-plate A, which slide is moved out to introduce the shuttle. The shuttle-carrier bar  $e$  has a feed-lever,  $m$ , attached to it by a pin-joint at  $s$ , which lever  $m$  rests in and is held in place by a slide-gauge,  $n$ , that governs the degree of movement of the sliding feed-plate  $o$ , while the movement of the feed-plate itself is effected by the oscillation of the shuttle-carrier bar  $e$  when it works back and forth. The feed-lever  $m$  vibrates on a fulcrum at its point of rest upon the slide-gauge  $n$ . The short arm of the lever is wedge-shaped, and raises the feed-plate  $o$  when it pushes it forward to bear against the cloth, and lets it down clear of the cloth when it draws the feed-plate back. The slide-gauge  $n$  can be moved and set at different points to give more or less movement to the short arm of the lever  $m$  for increasing or decreasing the feed. The needle-bar  $b$  takes its motion from the wheel C by means of an eccentric-groove,  $p$ , fig. 4, on the inner side of the wheel, wherein the lower end of the curved lever  $a$  works, and is carried forward and back in a straight slot in the bed-plate A, running alongside of the foot of the curved arm B, as shown in fig. 1. In the front of the needle-bar is a device for taking up the slack of the needle-thread. The thread passes through two loops or eyelets,  $r$ , in its passage down in front of the needle-bar, and also through a loop,  $w$ , between the loops  $r$ , formed on the end of a short slotted lever,  $q$ , which swings on a pivot inside the face-plate, and is vibrated by a pin on the needle-bar, working in the slot as it moves up and down, to take up the slack thread under the needle as it starts downward. The presser-foot bar  $x$  is provided with a spiral spring, and regulated by a small hand-lever,  $z$ , in the usual way.

It will be observed that the movements are all made directly by the wheel C, in concert with each other, in such manner that the working parts can never change their relative positions to each other. The working parts are few in number, and simple and strong in their construction, and operate together in perfect harmony.

Having described my invention, I claim as new, and desire to secure by Letters Patent—

1. The driving-wheel *C*, the shuttle-carrier *e*, connected therewith by the wrist *d*, and the oscillating shuttle-guide box *g*, pivoted by the tubular pivot *k*, constructed, arranged, and operating substantially as and for the purpose herein described.
2. The combination of the wheel *C*, the shuttle-carrier *e*, the feed-lever *m*, the slide-gauge *n*, and the feed-plate *o*, all arranged and operating substantially as and for the purpose herein described.

A. W. HALBERT.

Witnesses:

EDMUND POTTER,  
CHANCY D. POTTER.