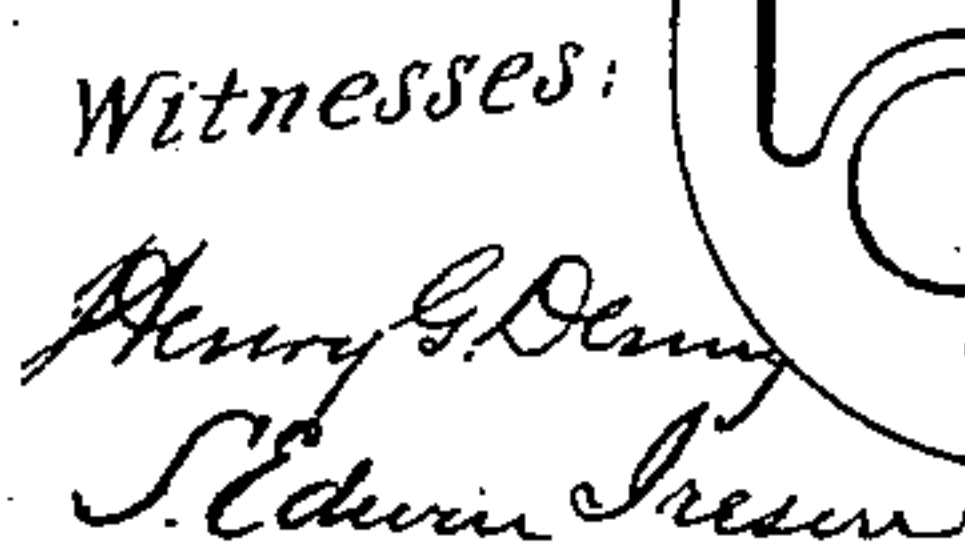


Sheet 1-2, Sheets.

N^o 39207.

Patented Jul. 14, 1863.



Inventor:

Charles W. Balswin

C. W. Baldwin. *Sheet 2 of 25 Sheets*

Sewing Machine

N^o 39207.

Patented Jul. 14. 1863

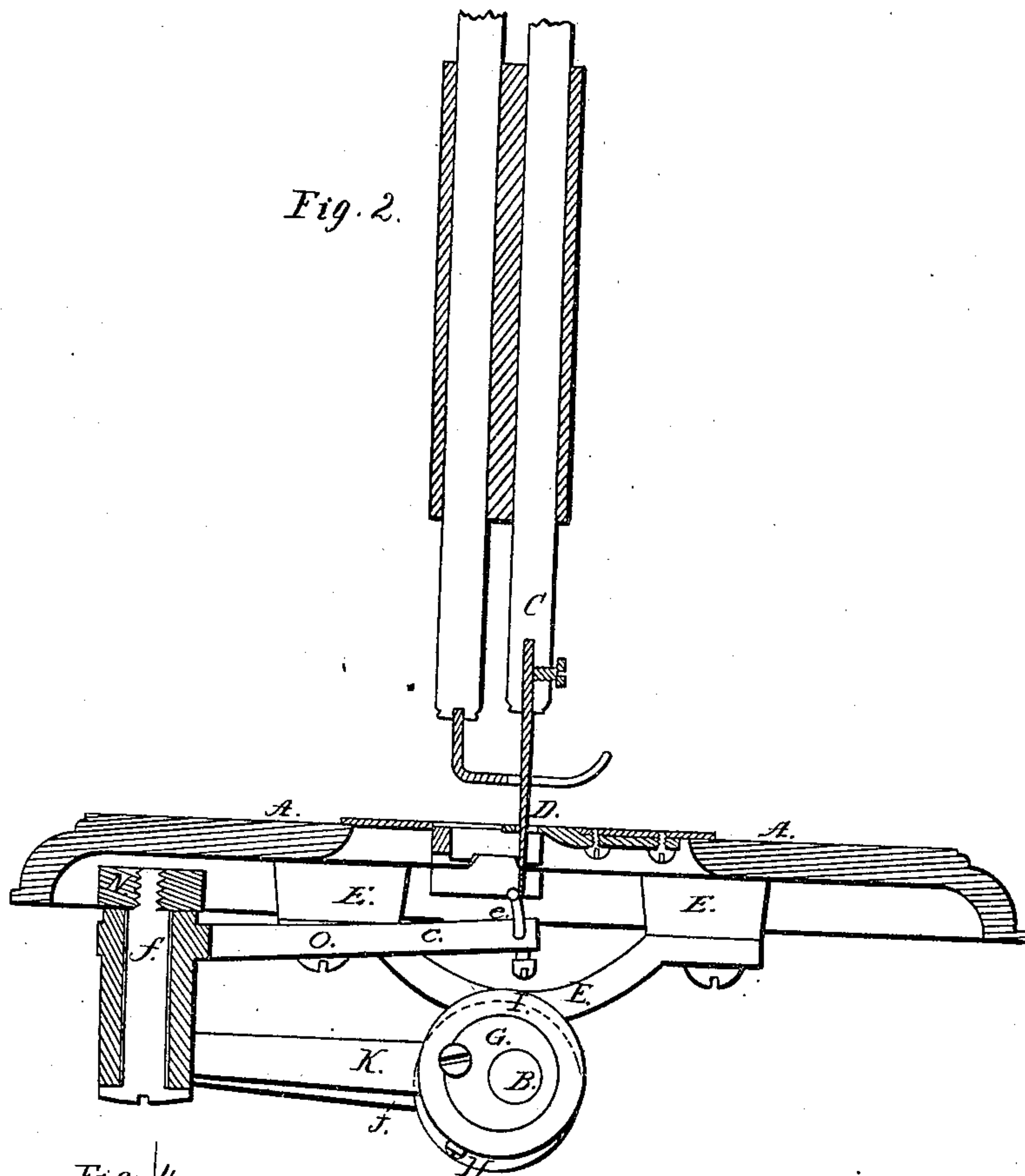
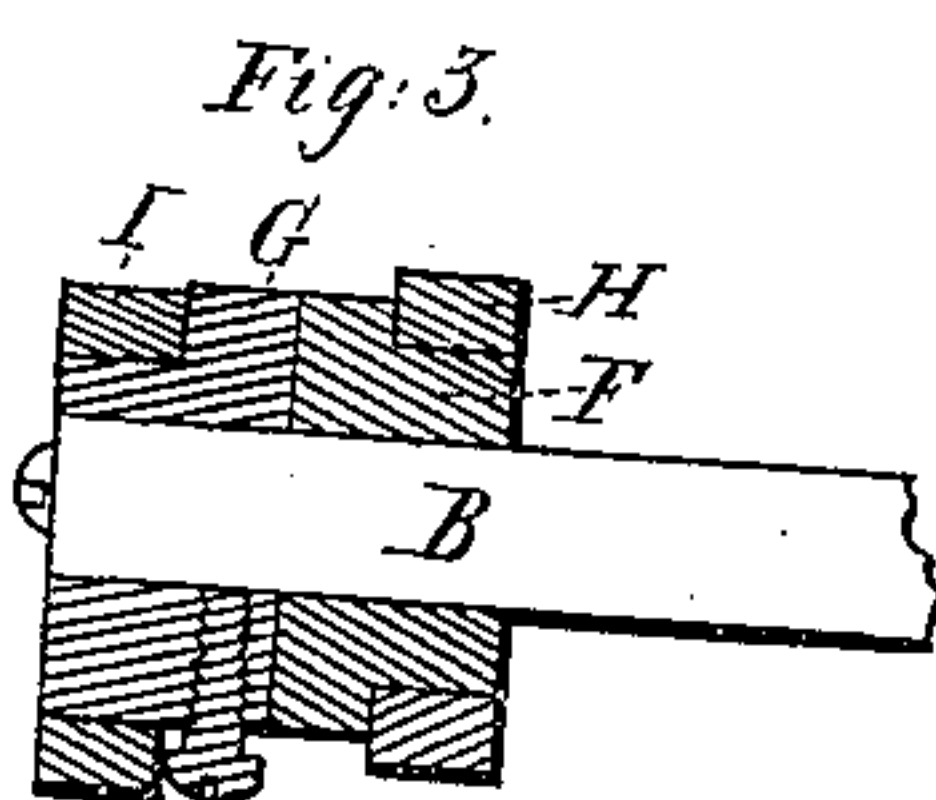
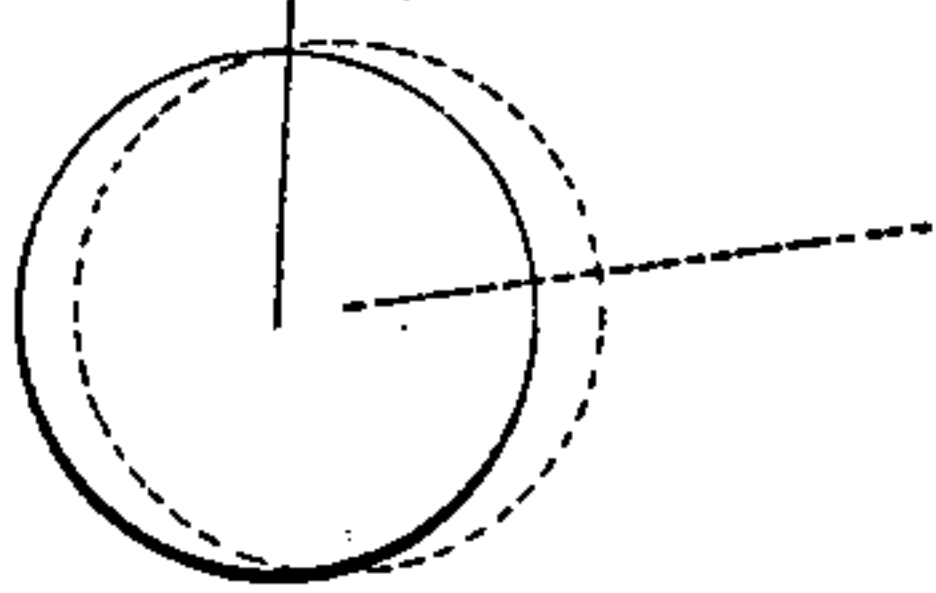


Fig. 4.



Witnesses:
Henry G. Denny
S. Edwin Ineson

Inventor:
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UNITED STATES PATENT OFFICE.

CYRUS W. BALDWIN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 39,207, dated July 14, 1863.

To all whom it may concern:

Be it known that I, CYRUS W. BALDWIN, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, with the letters thereon.

My invention consists of a device or mechanism which, attached to the main shaft of the machine by the eccentric straps and rods hereinafter described, and operating in connection with the upper needle, enables me to construct or make what is known as the "elastic double-loop or chain stitch." My new device for forming this stitch is, so far as I am aware, much more simple and certain than any other in use, as my method for carrying the looper or lower needle around the upper needle renders the dropping of a stitch almost an impossibility, and at the same time dispenses altogether with the spreader used in other machines, which, by its operation, constantly wears and often breaks the thread.

Having described the nature of my invention, I will now describe its construction and operation to enable others skilled in such matters to make and use the same.

In the accompanying drawings, Figure 1 is a bottom view of a sewing-machine constructed according to my invention. Fig. 2 is a vertical and transverse section of the same. Fig. 3 is a vertical and longitudinal section of a portion of the main or driving shaft and the eccentrics secured thereto, as hereinafter described. Fig. 4 shows the relative positions of the eccentrics as secured to the driving-shaft, and the difference between their points of throw.

In these drawings, A represents the table of the machine, B the driving-shaft, C the needle-holder, and D the needle, all these being constructed and operating in a manner common to many sewing-machines.

The driving-shaft B revolves in standards or bearings E E, and on the end of such shaft nearest the needle are secured, by set-screws or otherwise, the two eccentrics F and G, around which pass the bands H and I, which, by the rods J and K and the studs L and M, are connected to the vibrating bars or levers N and O. These eccentrics F and G are attached to

the main or driving shaft in such relative positions that the point of throw or feathered point of one from its center differs from the like point of the other about eighty-five degrees, as seen in Fig. 4, and they impart their motion accordingly.

N is a straight vibrating bar, turning upon the stud P, by which it is secured to the under side of the table, (see Fig. 1,) motion being communicated to it from the eccentric F by means of the band H, the rod J, and the stud M.

O is an angular bar or bent lever, pivoted at and by the stud f upon the straight bar N, and receiving motion therefrom, the long arm of which, c, bears the under needle or looper e, and the short arm of which, b, is pivoted to the rod K at and by the stud L, the said rod K being connected with the band I, which encircles and receives motion from the other eccentric, G. Thus the said bent lever O is subjected to a compound motion made up of the motion received from the straight bar N and that received from the eccentric G. The lower needle or looper, e, attached, as above described, to the arm c of the bent lever O, is by this compound motion carried forward on one side of the upper needle as said upper needle is ascending, and backward on its other side as it is descending, and thus passing in a curve or ellipse completely around the point of the upper needle, and forming in combination therewith a succession of loops which constitute the elastic double-loop or lock stitch in the usual form.

I have here described in detail only the mechanism comprised in my present improvement, the other operating parts of the machine being common to many sewing-machines.

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

The vibrating bars or levers N and O, as operated by the eccentrics F and G, by means of the bands H and I, the rods J and K, and the studs L and M, or their equivalents, in combination with each other and with the looper or lower needle, operated as above described, and for the purposes herein set forth.

CYRUS W. BALDWIN.

Witnesses:

HENRY G. DENNY,
S. EDWIN IVESON.