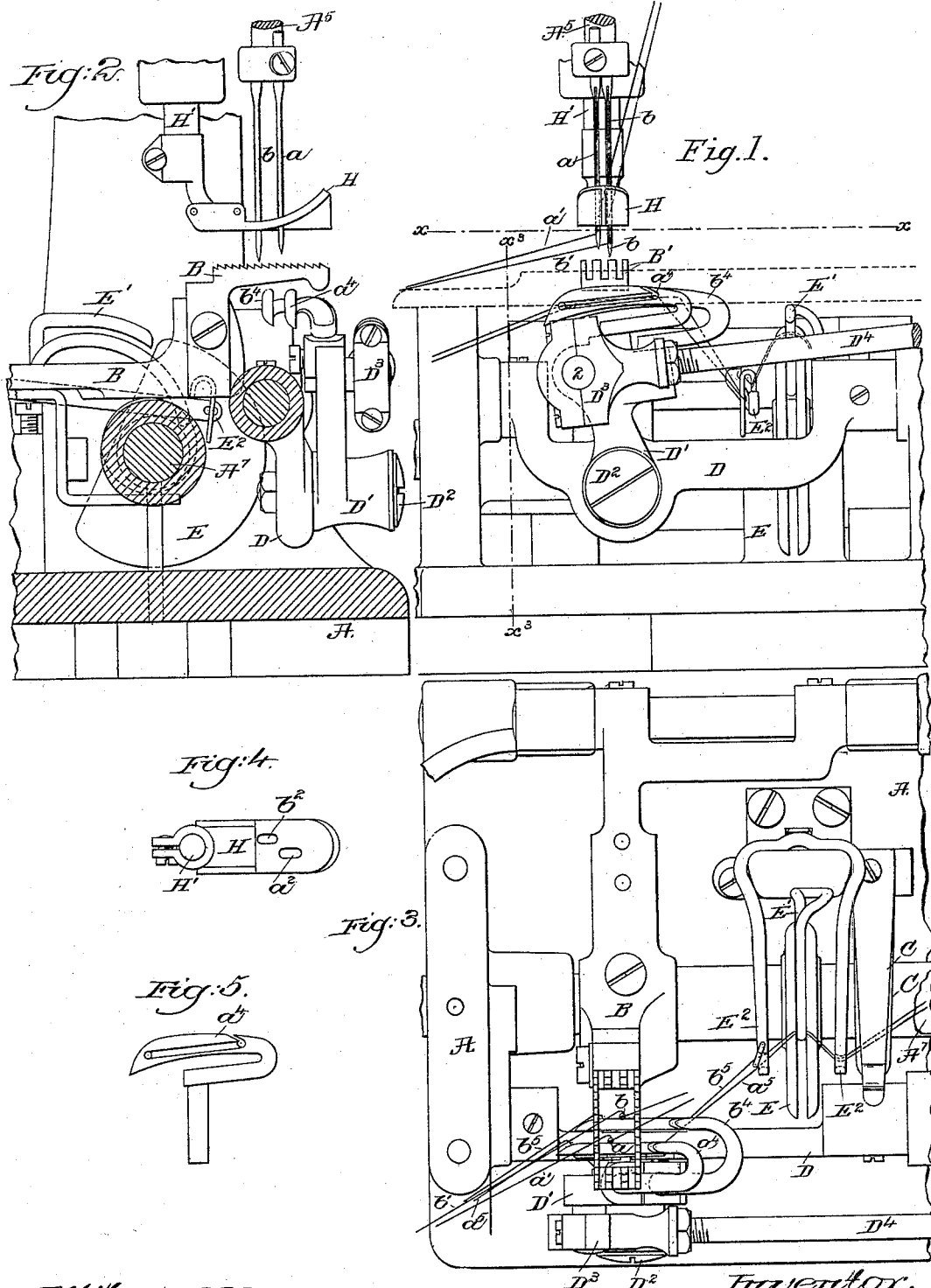


J. W. DEWEES.
SEWING MACHINE.

Patented Apr. 23, 1889.



Witnesses.
Frederick L. Emery.
Fred. S. Chumbley

D³ D² Traveler.
John W. Dewees
by Leroy Gregory *Atty.*

UNITED STATES PATENT OFFICE.

JOHN W. DEWEES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
UNION SPECIAL SEWING MACHINE COMPANY, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,776, dated April 23, 1889.

Application filed January 30, 1888. Serial No. 262,399. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DEWEES, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of a sewing-machine for sewing parallel seams.

Prior to my invention in all sewing-machines known to me for sewing parallel seams the needles have been set exactly opposite each other in a line at right angles to the direction of the feed. In this class of machine, and especially when sewing certain classes of material—such as leather—the material between the two needles set exactly in line, as stated, is liable to be pinched and broken out, especially when the lines of stitching are close together, and so, also, when the needles are exactly opposite the line of stitches cannot be brought close together except by using very fine needles, which are liable to be broken. I have ascertained by experience that parallel seams may be stitched very closely and without breaking or tearing the material and without puckering the material between the seams provided the needles used to pass the threads through the material are arranged in different vertical planes both in the direction of the width and length of the machine, or diagonal to the direction of movement of the feed in moving the material over the usual bed-plate or throat-plate through which the needles and feed work.

My invention consists in the combination, with a sewing-machine with a needle-bar having two eye-pointed needles set in different vertical directions, both in the direction of the width and length of the machine, of two loopers arranged one behind the other in the direction of the feed of the material, and with a looper-carrier, each looper co-operating with one of the said needles in the formation of parallel seams, substantially as will be described.

50 Figure 1 is a front side elevation of a sufficient portion of a sewing-machine embodying

my invention to enable the same to be understood, the bed-plate being shown by dotted lines and the presser-foot elevated. Fig. 2 is a section of Fig. 1 in the line x^3 , the upper and lower threads being omitted. Fig. 3 is a top or plan view of Fig. 1 below the dotted line x . Fig. 4 is a top view of the presser-foot, and Fig. 5 is a detail showing one of the loopers detached to better illustrate the slot leading into one of its eyes.

The main shaft A^7 , the base A , the rocking frame D , the looper-carrier D' , pivoted thereon, the needle-bar A^5 , the take-up E , throw-off E' , guides E^2 , and spring-clamps C C 65 are all substantially as in United States Patent No. 299,569, dated June 3, 1884, to which reference may be had, like parts being designated by like letters.

The looper-carrier D , mounted loosely on the stud-screw D^2 and having a stud, 2, which is embraced by the box D^3 at the front end of the connecting-rod D^4 , deriving its motion from the usual needle-bar-actuating lever, is also common to the said patent, so the said devices need not be herein more fully described. The feed-bar B , having feed-points B' , are and may be as usual.

In accordance with my invention the needle-bar is provided with two eye-pointed needles, a b , each having its own thread a' b' . These two needles are out of line with relation to each other both in the width and length of the machine, and are placed diagonally with relation to each other in the direction of the movement of the feed in feeding the material over the usual cloth-plate, (shown by dotted lines, Fig. 1,) or the said needles are in different vertical planes both in the direction and width of the machine.

The presser-foot H , attached to the presser-bar H' , is provided with two holes or passages, a^2 b^2 , for the needles a b .

The looper-carrier D' has connected to it two loopers, a^4 b^4 , each supplied with a separate thread, as a^5 b^5 , and in practice, for convenience of threading, each of the said loopers will be slotted, as shown in Fig. 5 at 20. The looper a^4 co-operates with the needle a and the looper b^4 with the needle b , and with the needles placed as described it will be seen that by moving the looper-carrier as in the

said patent the two loops each operating with a single needle will make two lines of stitching parallel each to the other; but the stitches in one row will be made one or more stitches
5 in advance of the stitches in the other row. By placing the needles out of line, as described, it will be noticed that the needles may be placed in vertical planes very close together in the direction of the length of the machine;
10 but by placing one needle, as the one *b*, farthest from the operator, or in a plane back of that in which the other needle is set to move, in the direction of the width of the machine, the two needles are never so close together as to injure or break out the material
15 between them, even when the seams are close together.

The machine herein described may be run by power and be used for stitching parallel
20 seams very close together; but the lines of stitching, owing to the position of the needles, cannot have any abrupt bends without destroying the uniformity of distance in the seams; but in staying-seams for shoe-work
25 and stitching stocking-legs, corsets, &c., the

seams are usually straight, or but slightly curved.

I do not claim two needles set in a line at right angles to the feed, as in United States Patent No. 344,493; but prior to my invention
30 I am not aware that a needle-bar has been provided with two eye-pointed needles set oblique to axis of the main shaft.

I claim—

In a sewing-machine, a needle-bar having
35 two eye-pointed needles set in different vertical planes, both in the direction of the width and length of the machine, combined with two loopers arranged one behind the other in the direction of the feed of the material, and with a
40 looper-carrier, each looper co-operating with one of the said needles in the formation of parallel seams, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two sub-
45 scribing witnesses.

JOHN W. DEWEES.

Witnesses:

EBENEZER COBB,
JOHN BUTZ.