

J. GEIERMANN.
Sewing Machine.

No. 28,746.

Patented June 19, 1860.

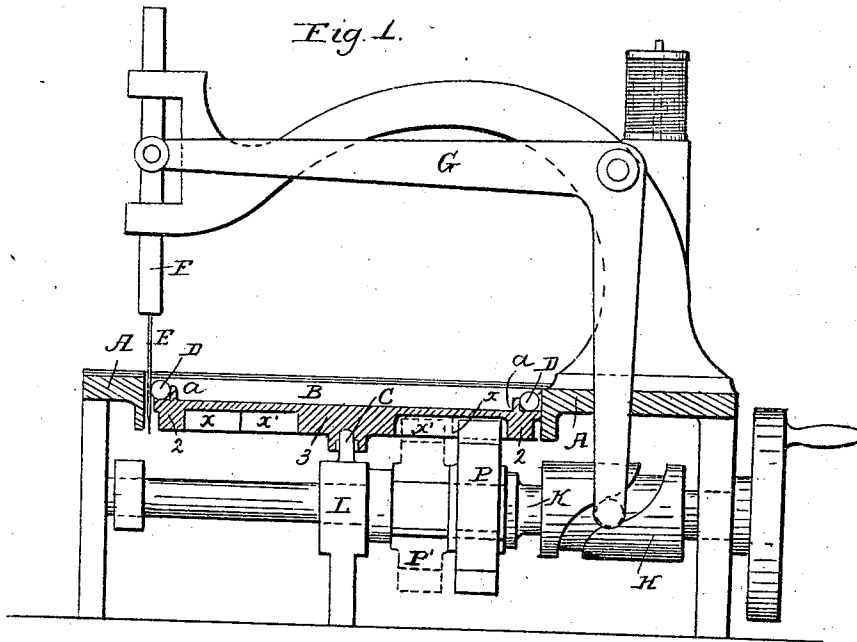


Fig. 2.

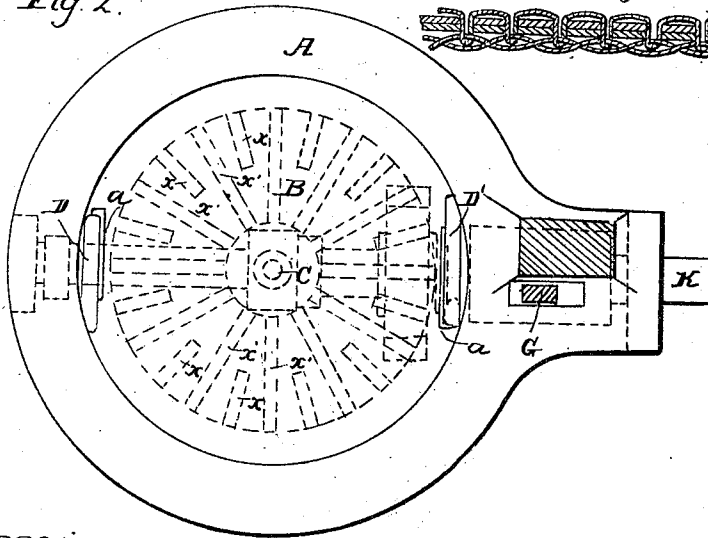


Fig. 3.



Witnesses:
Lawrence
Jas. Luchs.

Inventor
Joseph Geiermann

UNITED STATES PATENT OFFICE.

JOSEPH GEIERMANN, OF ALBANY, NEW YORK.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 28,746, dated June 19, 1860.

To all whom it may concern:

Be it known that I, JOSEPH GEIERMANN, of the city of Albany, in the county of Albany 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 and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure I represents a longitudinal section of the machine. Fig. II shows a top view with the top plate removed, and Fig. III represents the stitch made by my improved machine.

The nature of my invention consists in the manner of combining and operating two shuttles and one needle to make a stitch of a novel character with three threads.

The top part or table, A, of the machine is made with a circular opening, into which a revolving plate, B, is fitted, supported on a center, C. On the upper side of this plate B projections *a a* are made to receive two shuttles, D D', one directly opposite to the other. The outer circumference of this revolving plate B comes close to the needle E when the same is moved downward.

The needle-bar F, to which the needle E is attached, is worked in the usual manner by means of the bell-crank G, operated through the eccentric cam or wheel H, fast on the shaft K.

The under side of the revolving plate B is provided with teeth *x x' x'*. The teeth *x x* extend only one-half of the space between the outer rim, 2, on the under side of the revolving plate B and the central hub, 3, while the teeth *x' x'* extend the whole distance. By this arrangement the number of teeth near the outer rim, 2, will be exactly double of the number of teeth near the center hub, 3. On the axis or shaft K a pinion, P, is placed, having the same number of teeth as there are on the plate B near the center hub, 3, and consequently half as many teeth as there are near the outer rim, 2, of said plate. If, therefore, the pinions P be placed on the shaft K so as to gear into the teeth near the outer rim, 2, the plate B will be made to revolve only once while the

shaft K revolves twice, or while the needle E is moved twice up and down, as the latter receives one up-and-down motion by each revolution of the shaft. When the needle E has been moved downward and passed through the cloth to be sewed, and a loop has been formed, the shuttle D passes through said loop, when the needle is moved upward and the thread tightened. The needle moves then again downward through the cloth, when a second loop will be formed, through which the other shuttle, D', passes, as during this time the revolving plate B, as above described, has only made one-half of a revolution. This third time the needle comes through the cloth and the loop has been formed, the shuttle D will be again in a position to pass through said loop, and the shuttle D' will pass again through the fourth loop, each shuttle passing in this manner alternately through every second loop, and forming thereby a novel and very strong stitch, as represented in an enlarged size in Fig. III.

For light work, when the common stitch will be strong enough, one shuttle may be taken away, and the pinion P moved on the shaft K (in the position represented in Fig. I in dotted lines, and marked P') so as to gear into the teeth *x'* only, which, as above described, being near the hub 3, causes the plate B to revolve as fast as the shaft K, and consequently the one shuttle will always be in a position to pass through every loop as soon as formed, and producing thereby the common stitch.

I do not claim providing radiating teeth or cogs on the under side of the shuttle-plate B, arranged with a shifting pinion for combined operation; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of two shuttles and one needle, operating together so as to form with three threads a stitch, substantially as described, and in the manner specified.

JOSEPH GEIERMANN.

Witnesses:

JACOB HANS,
JOS. LUEKE.