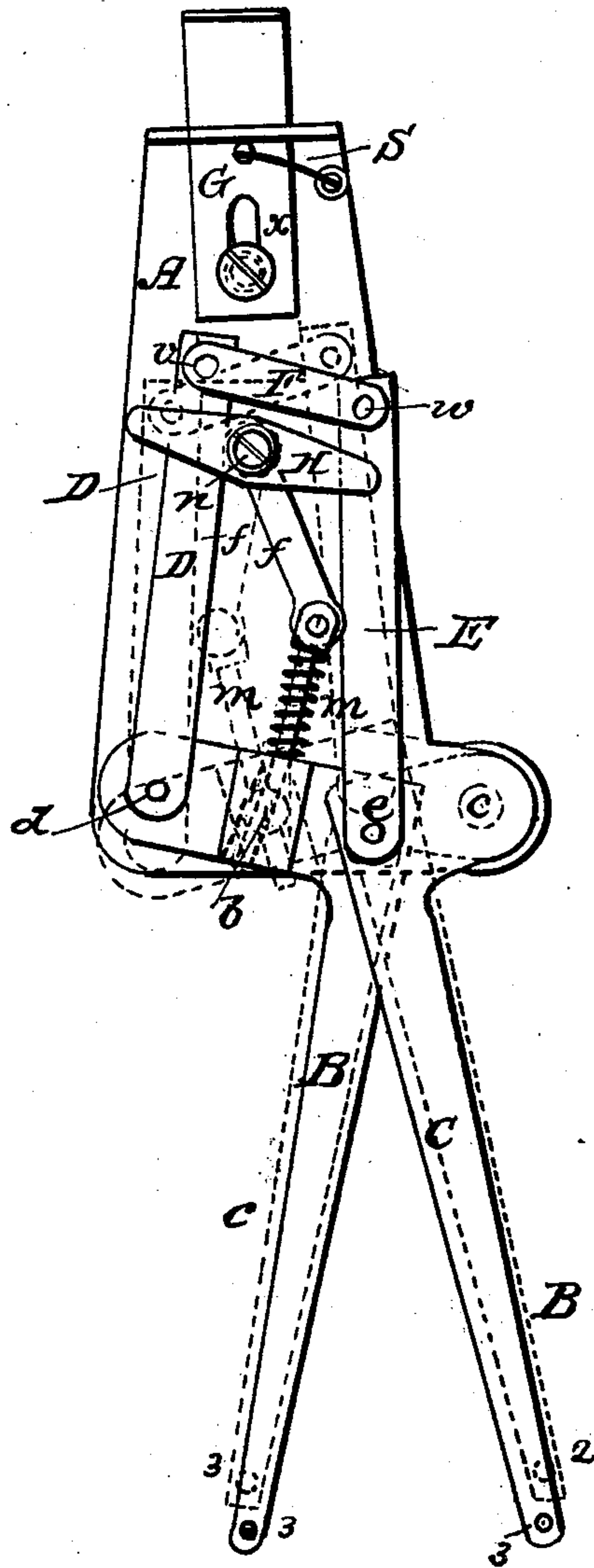


J. THOMAS.

Sewing-Machine Attachment.

No. 89,446.

Patented April 27, 1869.



witnesses
Henry E. Rorder
Wm. Derfer

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United States Patent Office.

JOSEPH THOMAS, OF NEW YORK, N. Y.

Letters Patent No. 89,446, dated April 27, 1869.

IMPROVEMENT IN EMBROIDERING-ATTACHMENT FOR 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, JOSEPH THOMAS, of New York, in the county and State of New York, have invented a new and useful "Braiding-Attachment for Sewing-Machines;" and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement of two or more levers combined together, and operated by an arm or lever attached to the needle-bar, in such a manner that the braiding-material will be made to cross itself alternately from right to left, and from left to right, after each operation of the needle.

In the accompanying drawings—

A represents a light frame, to which the mechanism is attached, provided with a suitable flange or projection to attach the same to the sewing-machine, near the needle-bar.

B and C are two bell-crank levers, turning on centres *b* and *c* in the frame A.

The bell-crank lever B is extended some distance past its centre of motion *b*.

To the upper part of this bell-crank lever B, rods, or bars D and E are attached, by means of pins *d* and *e*, at equal distances from its centre of motion *b*.

The pin *e* is likewise connected with the bell-crank lever C.

The rods, or bars D and E are connected together, near their top ends, by a bar, F, through the pins *v* and *w* in such a manner that the distance from *d* to *v* shall be equal to the distance from *e* to *w*.

H is a bar turning loosely on the fixed pin, or centre *n*, to guide the rods, or bars D and E, so as to allow the same free motion upwards or downwards, as well as laterally.

Through a hub attached to the bell-crank lever B, central with its centre of motion *b*, a rod, *m*, passed, attached to the lower end of a lever, *f*, turning on the fixed pin, or centre *n*.

The rod *m* is provided with a spiral spring.

G is a slide, forced upwards by a spring, *s*, and guided in the top of the frame A, and by a pin, *x*, working in a suitable slot in said slide G.

The frame A, with all the parts as above described

attached, being fastened to the sewing-machine, a suitable lever, fast to the needle-bar, is made to act upon the top of the slide G, after the needle has moved upwards and has come clear of the material.

By this operation, or any other suitable arrangement, the slide G is pushed downwards, acting upon the top of the bar D, to force the same downward and change thereby the position of the bell-crank levers B and C, as indicated in red lines.

By the turning of the lever B, on its centre *b*, the hub through which the spring-rod *m* passes, will likewise be turned in the opposite direction, whereby this rod *m* will move the lever *f*, so as to press, with its lower end against the lever or bar D, forcing the same and consequently the bar E sidewise, until the upper end of the bar E comes in contact with the side of the slide G.

When the slide G is relieved of its downward pressure, the spring *s* will force the same again upward and clear of the end of the bar E, when the action of the spring around the rod *m* will force the lower end of the lever *f* still further outwards, and cause, by its action against the side of the bar D, (see red lines,) the bar E to move nearer towards the centre, ready to be acted upon by the next downward motion of the slide G, whereby the bell-crank levers B and C will be moved back again into their original position, as represented in black lines.

By this operation, the braiding-material, which passes through the small holes 2 and 3, in the lower ends of the bell-crank levers B and C, will be made to cross each other after each operation, or after the completion of each stitch by the needle-bar.

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

The arrangement of the bell-crank levers B and C, turning on centres *b* and *c*, in combination with the rods, or bars D and E, connecting-bar F, spring-rod *m*, and lever *f*, and the slide G, operating together in the manner and for the purpose substantially as set forth and described.

JOSEPH THOMAS.

Witnesses:

HENRY E. ROEDER,
WM. DERFER.