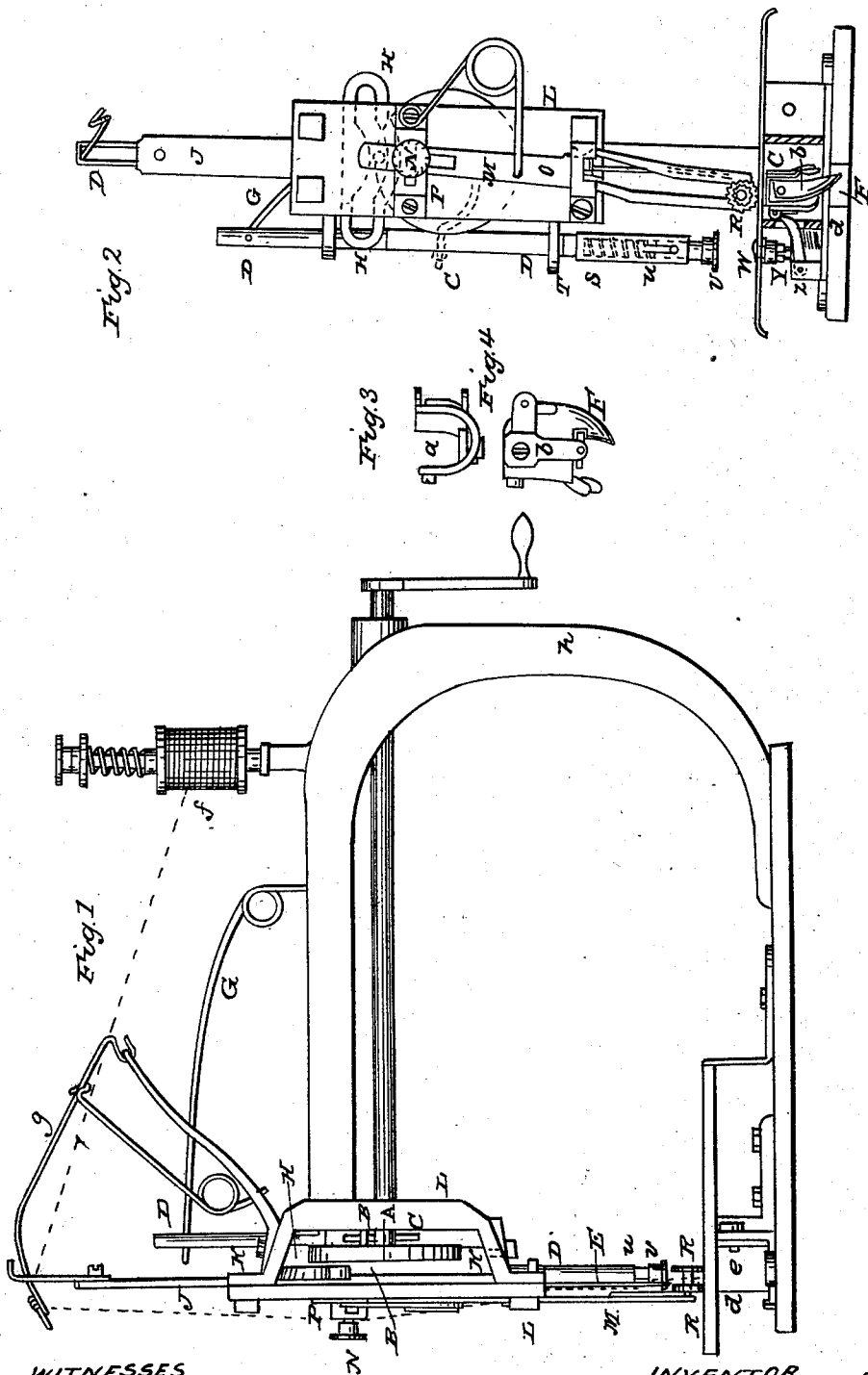


T. M. BRADLEY.

Sewing Machine.

No. 74,492.

Patented Feb, 18, 1868.



WITNESSES
W. W. Phelps
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United States Patent Office.

THOMAS M. BRADLEY, OF CHESTNUT LEVEL, PENNSYLVANIA.

Letters Patent No. 74,492, dated February 18, 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, THOMAS M. BRADLEY, of Chestnut Level, Lancaster county, State of Pennsylvania, have invented new and useful Improvements in Sewing-Machines; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 represents a side elevation of the sewing-machine.

Figure 2, a front view.

Figure 3, a perspective view of the shuttle-box; and

Figure 4, the shuttle-box and shuttle.

The nature of my invention consists in the arrangement and combination of the upright lever D with its curved arm C, and the plate H with the needle-bar J operated by the wheel A; also the adjustable feed-bar M, and also the pivoted shuttle-box *a* and its movable hammer W, operating on the inclined lever Z.

A, the circular wheel on the main shaft, having pins B B on each side, and at a distance apart of about an eighth of the circumference of the wheel, the one pin, B, operating on the curved arm C of the upright lever D until the needle E raises up and draws the loop of the thread over the point of the shuttle F, when the pin B passes the point of the curved arm C, and the upper spring G draws the lever D up again. The other pin B (on the opposite side of the wheel A) operates in a curved or eccentric-slot of the plate H, that is attached to the vertical needle-bar J, and moves the bar up and down. The needle-bar J works in guides K K of the frame L, and on the front of the frame L is a feeder-bar, M, with a vertical slot at top, and a regulating set-screw, N, passing through a longitudinally-slotted guide, P, so as to give the bar a slight inclination to either side for the purpose of regulating the length of the stitch, which I style a perfect lock-stitch that will not of itself unravel. The lower part of the feeder-bar M has a vertical inclined slot, in which a projecting pin, Q' (on the lower end of the upright needle-bar) operates, and moves the feed-bar M the length of the stitch required. This pin Q' also holds and fastens the needle to the needle-bar J. At the lower end of the feeder-bar M are two ratchet-wheels R R, operating in one direction, to move the cloth forward, and to prevent the cloth from working back. The lower end of the lever D has an elbow, S, that prevents the lever from rising higher than the guide T. Projecting downwards from the elbow S is an extension-cylinder, U, provided with a spiral spring on the inside for the purpose of allowing the head V to yield as it falls down and strikes upon the head of spring-hammer W, that moves the devices of the movable shuttle F beneath. As the spring-hammer W strikes or presses upon a seat, Y, of an inclined spring-lever, Z, the point of the lever Z is pressed against the side of a semicircular cylinder or shuttle-holder, *a*, (which is suspended on two pins *b b*,) and moves or throws the lower part of the shuttle-holder *a* forward, for the purpose of moving the lower and pointed end of the shuttle F forward, until the loop of the thread has passed over the point of the shuttle F, the point of the shuttle having passed between the thread and the needle while the needle was stationary, and just before moving upwards. The needle-thread passes up and around the top of the shuttle, is interlocked with the shuttle-thread, and is drawn up against the lower side of the cloth, forming a secure lock-stitch. The shuttle F has a curved point, as shown, is round at the top, and has a bobbin in the inside. There are two springs, *c c*, on the outside of the shuttle-holder *a*, for the purpose of keeping the shuttle F to its proper place as the thread passes over the point, and also the flat side of the shuttle against the face-plate *d* of the box or case *e*, in which the shuttle-holder *a* operates. The needle passes down and up in a groove in the side of the face-plate along the side of the shuttle F. The spool *f* is regulated by a spiral spring and set-screw at top. *g* is a wire spring, to regulate the tension of the thread; *h*, the frame to support the devices.

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

1. The arrangement and combination of the upright lever D with its curved arm C, the plate H, the needle-bar J, and the wheel A, as herein described, and for the purposes set forth.
2. I also claim the movable hammer W, inclined lever Z, and pivoted shuttle-box *a*, as combined and operated by the upright lever D, as herein described, and for the purposes set forth.

T. M. BRADLEY.

Witnesses:

J. FRANKLIN REIGART,
EDM. F. BROWN.