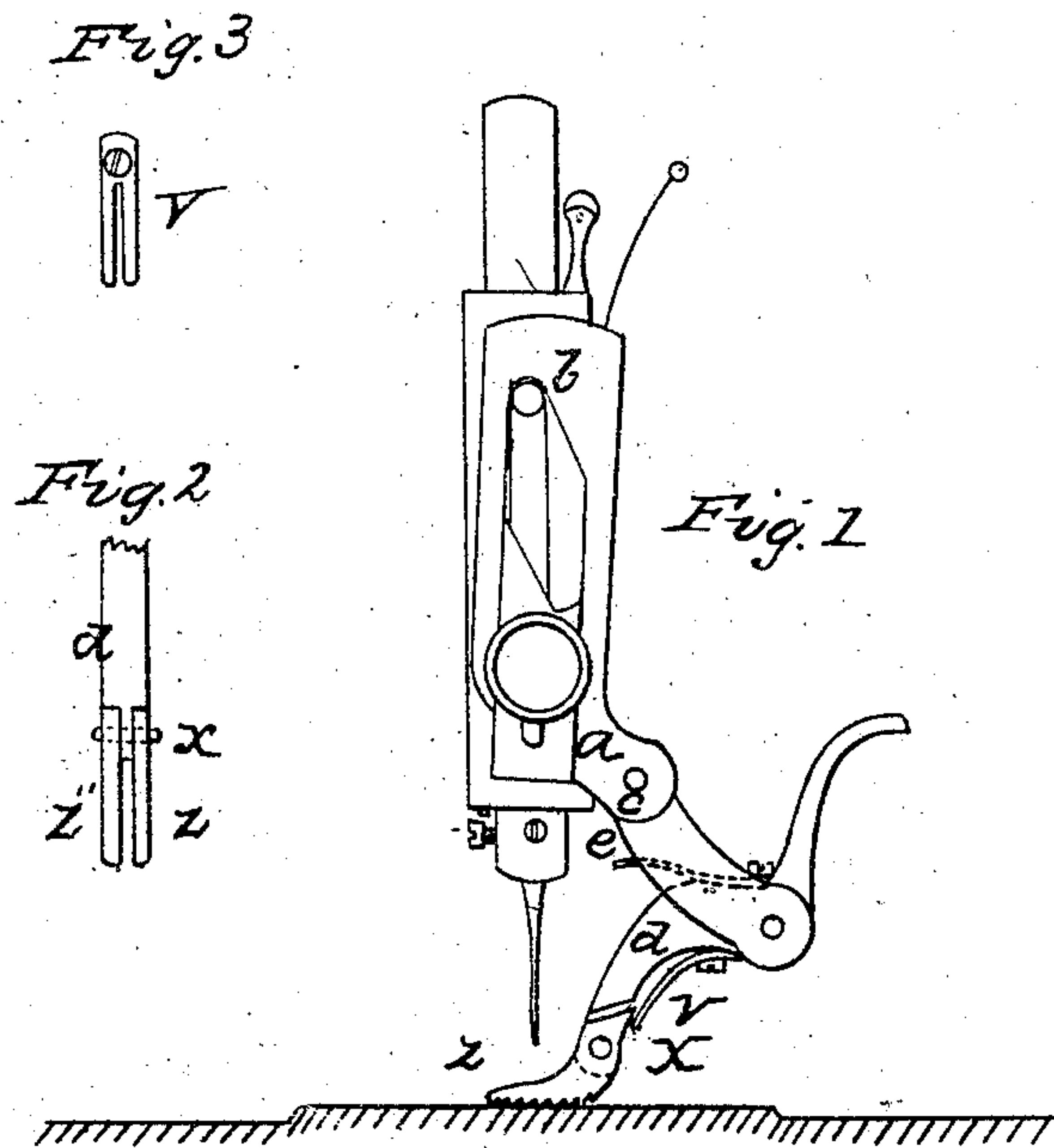


S. G. TYLER.
Sewing Machine.

No. 22,269,

Patented Dec. 7, 1858.



witnesses
Edward Everett,
H. D. Donaldson

Inventor
Stephen G. Tyler

UNITED STATES PATENT OFFICE.

S. G. TYLER, OF QUINCY, ILLINOIS, ASSIGNOR TO HIMSELF, G. J. LAAGE, AND
J. W. BARNUM, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 22,269, dated December 7, 1858.

To all whom it may concern:

Be it known that I, STEPHEN G. TYLER, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements 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, of which—

Figure 1 is a view of part of a sewing-machine with the improvement attached; Fig. 2, a top view of the toes of the feeder, and Fig. 3 a view of the forked spring of the same.

In operating sewing-machines much difficulty has been experienced, owing to the unequal bearing of the feeder when the seam has to be made on or near the edge of the work or a fold of it—as in hemming, felling, cording, &c.—particularly in those machines where the feeder works on each side of the needle, and the needle itself is depended on to retain the work and prevent it from slipping back during the backward motion of the feeder. Its unequal bearing causes its hold on the work to be also unequal, and hence comes the liability to drag the work out of a straight line and cause the stitch to be run out of the desired path in spite of the efforts of the operator. Another bad effect frequently experienced from unequal bearing of the feeder is the liability of the hem to be disarranged from its fold and be drawn obliquely or be twisted out of proper shape.

To obviate the difficulties above mentioned, as well as to facilitate the action of the machine in general, is the object of my improvement, which consists in causing the bearing surface or foot of the feeder, through which the needle works in a hole or slot, to be divided, and making the two sides separate from each other and capable of yielding and adjusting themselves to the inequalities of the work, and of pressing with an equal force on its different thicknesses, so as to draw it forward uniformly and prevent the tendency to move the work obliquely or disarrange the fold to be sewed down.

An advantage incidental to my improvement is the superior facility with which it allows the work to be turned under it as compared with the stiff feeder, as it is found that the di-

vision and independent working of the feeding-surfaces allow of an easier adaptation to any curves desired.

In the drawings the improvement is represented as applied to the machine known as "Harris's Boudoir Machine." The vibrating lever *a*, Fig. 1, receives its motion from the pin *b*, projecting from the needle-bar, impinging on the inclines at the extremities of the slot in its upper part, and works on a fixed pivot at *c*. At its other end is jointed the feed-arm *d*, which presses on the work by the action of the spring *e*. The lower extremity or foot, instead of being made in one piece with the arm, as heretofore used, is made with its two toes, *z'* *z''*, between which the needle works, jointed to the arm *d* at *x*, being pressed down on the work by the two-pronged spring *v* acting on their upper extremities. The toes, jointed to the extremity of the feed-arm, are shown in a top view in Fig. 2, and the pronged spring in Fig. 3. The two toes *z'* and *z''*, pressing independently of each other, are at liberty to adapt themselves to different thicknesses of work, and, both having an equal hold on the work, feed it along regularly—as, for instance, when sewing a hem, it is desirable to run the stitch close to the edge, one toe, *z''*, bears on the fold of the hem, while the other, *z'*, bears only on the single thickness of the work, and at the same time the work is guided by the edge of the hem running in contact with the inner side of the toe *z'*, so that the needle working between the toes makes the stitch as close as possible to the edge without liability to run off or too far on. It also admits of the hem being sewed when inverted or folded under, which is very desirable in single-thread machines, as the chain-stitch then only shows on the wrong side.

It will be obvious that this improvement may be applied to other kinds of machines as well as to other modifications of feeding apparatus, and that the pressure-pad, used with under-surface feed, may be constructed with two or more self-adjusting toes, that will operate in the same manner and produce substantially the same results as the feed-foot hereinbefore described.

I do not claim any particular arrangement

of feeding apparatus other than the self-adjusting toes attached to and forming a bearing-surface for such apparatus; but

What I do claim as new and of my own invention, and desire to secure by Letters Patent of the United States, is—

Making the bearing-surface of a feeding-foot or pressure-pad of a sewing-machine, or their equivalents, with two or more parts or toes, each self-adjusting to varying thicknesses or

inequalities of surface, whether cording, hemming, or sewing plain work, and combining the same with a sewing-machine feeding apparatus, substantially as and for the purposes specified.

STEPHEN G. TYLER.

Witnesses:

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W. D. DONALDSON.