

S. E. BARNEY & E. HUBBELL.  
Improvement in Ruffling-Machines.

No. 126,436.

Patented May 7, 1872.

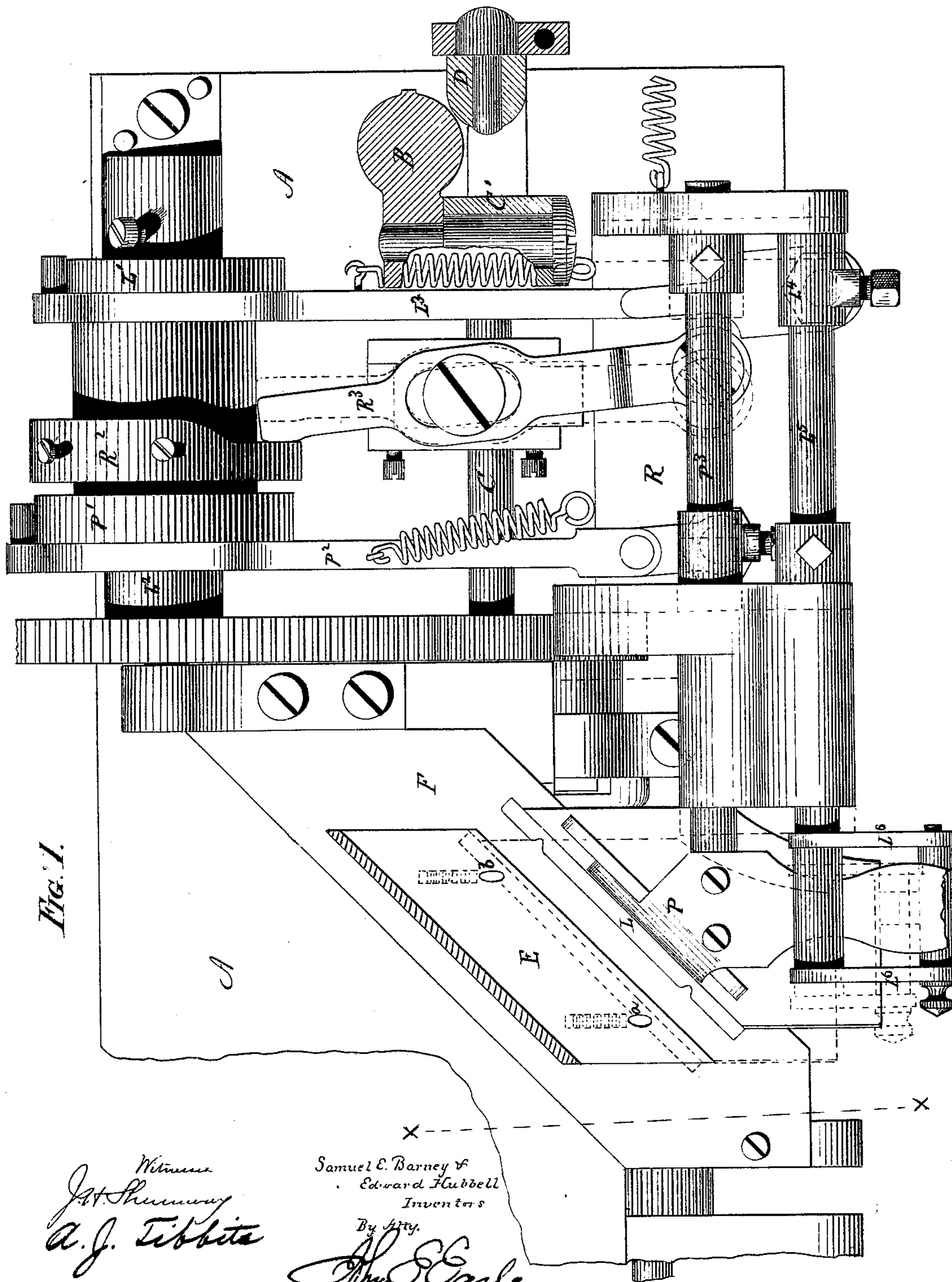


Fig. 1.

Witness  
J. H. Shumway  
A. J. Tibbitts

Samuel E. Barney &  
Edward Hubbell  
Inventors

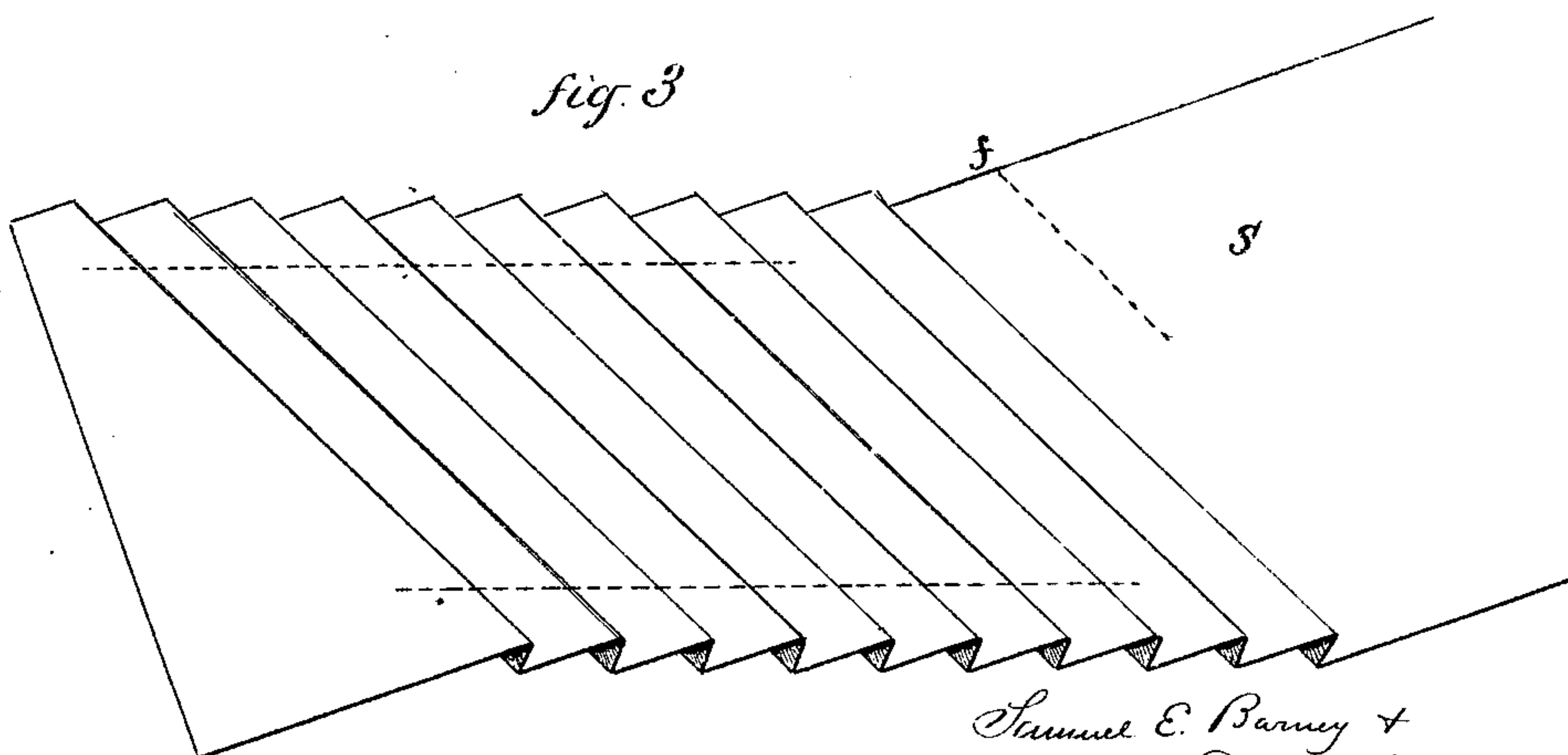
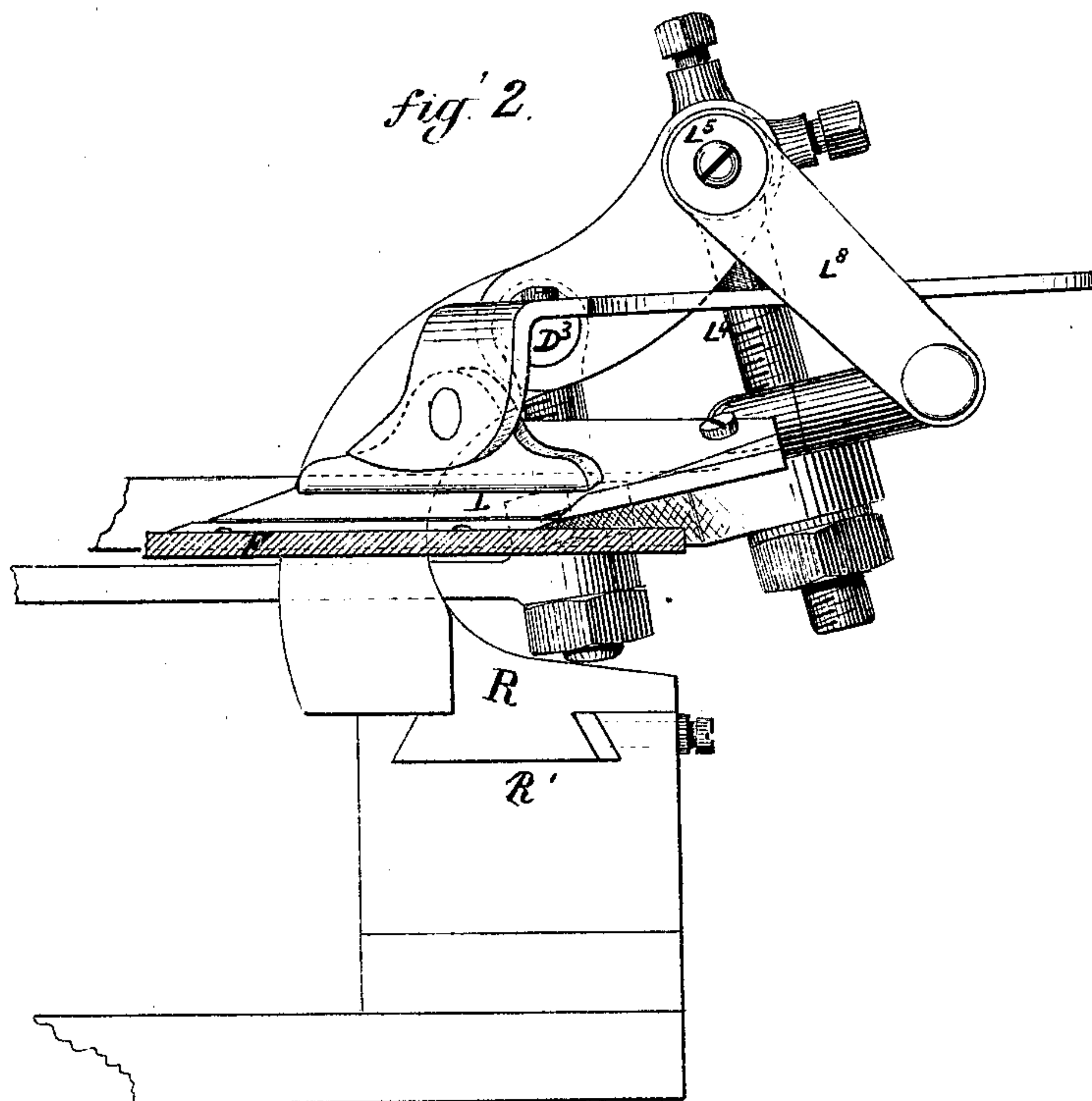
By Atty.  
J. E. Carle

S. E. BARNEY & E. HUBBELL.

Improvement in Ruffling-Machines.

No. 126,436.

Patented May 7, 1872.



Witness  
J. H. Shumway  
A. J. Tinkler

Samuel E. Barney &  
Edward Hubbell  
Inventors  
By Atty.  
John P. Earle



# UNITED STATES PATENT OFFICE.

SAMUEL E. BARNEY AND EDWARD HUBBELL, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE ELM CITY COMPANY, OF SAME PLACE.

## IMPROVEMENT IN RUFFLING-MACHINES.

Specification forming part of Letters Patent No. 126,436, dated May 7, 1872.

*To all whom it may concern:*

Be it known that we, SAMUEL E. BARNEY and EDWARD HUBBELL, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Ruffling-Machines; and we do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1, a top view of the upper works of a sewing-machine, a portion broken away. Fig. 2, a sectional view of the machine on line *x x*, showing a side view of the improvement; and in Fig. 3, a diagram showing the article to be produced.

This invention relates to an improvement in mechanism for forming plaits in frilling-machines, the object being to lay the plaits diagonally; and the invention consists in imparting to the knife or plaiting device a combined longitudinal and transverse movement, as more fully hereinafter described.

A is the bed-plate of the machine, the sewing mechanism employed being, by preference, that known as the Wilcox & Gibbs machine. B represents the post or arm; C', the needle-arm; D, the connection between the driving-shaft and needle-arm, all substantially as in the Wilcox & Gibbs sewing-machine. E is the presser-foot; *a b*, the two needle-holes, it being understood that this machine carries two needles, substantially as in the patent granted to Henry Kellogg and C. O. Crosby, December 2, 1862, except that, in this case, the needles are in a line diagonally across the work-plate, the angle of the needles corresponding to the angle on which the plait is to be laid. F is the work-plate, the feed working through the work-plate, one at each needle, in substantially the same manner as for the single needle in the Wilcox & Gibbs machine. L is what we term the knife, it being a sharp edged plate, which, taking the fabric back of the needles, carries it forward, and doubles it under the presser-foot to form the plaits. The longitudinal or advancing movement of this

knife occurs at the time each plait is to be made, in substantially the manner as in the said Kellogg & Crosby machine. This motion is imparted from the cam L<sup>1</sup>, on a shaft, L<sup>2</sup>, which is driven from the shaft C by gears, as seen in Fig. 1. This cam, by a rod, L<sup>3</sup>, and an arm, L<sup>4</sup>, imparts a rocking motion to the shaft L<sup>5</sup>. On this shaft L<sup>5</sup> another arm, L<sup>6</sup>, connects to the knife, as seen in Fig. 2; hence each operation of the cam L<sup>1</sup> imparts a forward-and-back movement to the knife L. The requisite pressure is given to this knife by a presser-foot, P, actuated by a cam, P<sup>1</sup>, through a rod, P<sup>2</sup>, and the rock-shaft, P<sup>3</sup>, to which the said presser-foot P is attached, the cam operating to bear down the presser-foot P when the knife is carrying the fabric forward, and to release it on its return.

Thus far the operation of making the plait is substantially the same as in the said Kellogg & Crosby patent, it being understood that in that patent the plaits are laid at right angles, and that edge of the knife consequently lies at right angles across the work-plate, instead of diagonally, as in this invention. The fabric passes into the machine in a diagonal line, as denoted by the plain fabric S in Fig. 3; but after it is presented to the needles it passes on in a line at right angles to the shaft.

In laying the plaits, if the knife, taking the fabric on the line *f*, moved only directly forward, the plaits would be laid in the usual manner, and not diagonally; therefore, to carry the fabric to one side, in order to make the diagonal plait at the same time the knife advances, we impart to it a transverse movement, which is done by arranging the rock-shafts L<sup>5</sup> and P<sup>3</sup> upon a carriage, R, working in a longitudinal guide, R<sup>1</sup>, and this carriage is actuated by the cam R<sup>2</sup> through the lever R<sup>3</sup>, so that at the proper time—that is, when the knife advances—the carriage R is moved longitudinally, carrying the shafts L<sup>5</sup> and P<sup>3</sup> and the knife L to the left, as denoted in broken lines, Fig. 1, which lays the diagonal plait as denoted in the diagram, Fig. 3.

We have represented the invention as employing two needles, which would make a line of stitches near each edge, and in this par-

ticular class of plaiting this is desirable; but for a frill only one line of stitches would be required, yet the movement of the plaiting device must be the same.

We claim as our invention—

In a frilling machine, the plaiting device or knife L, having a combined longitudinal and

transverse movement, substantially as herein described.

SAML. E. BARNEY.  
EDWARD HUBBELL.

Witnesses:

A. J. TIBBITS,  
J. H. SHUMWAY.