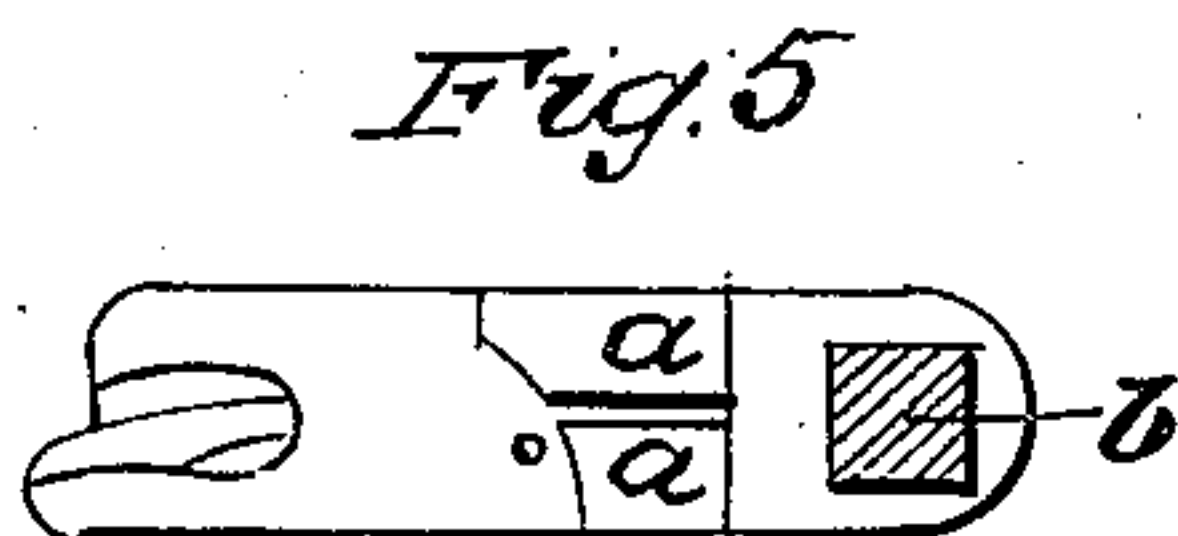
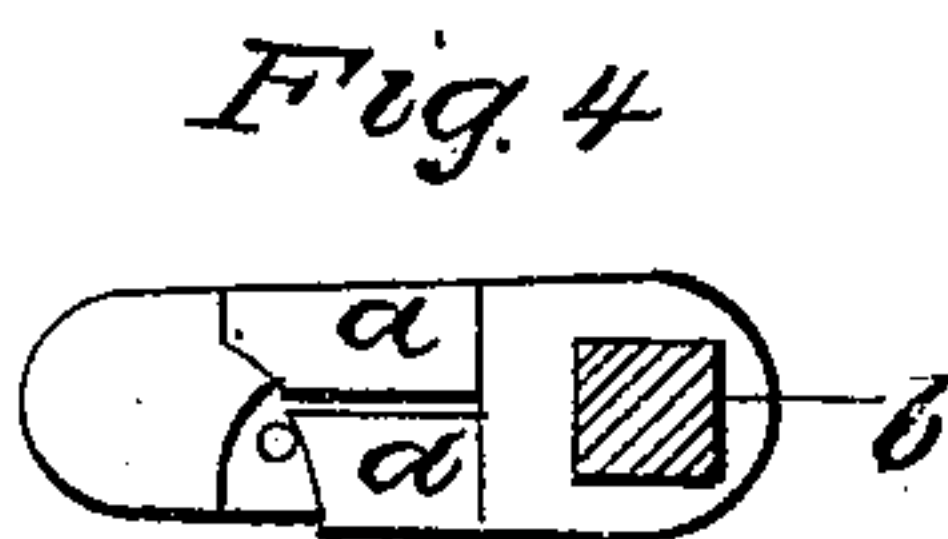
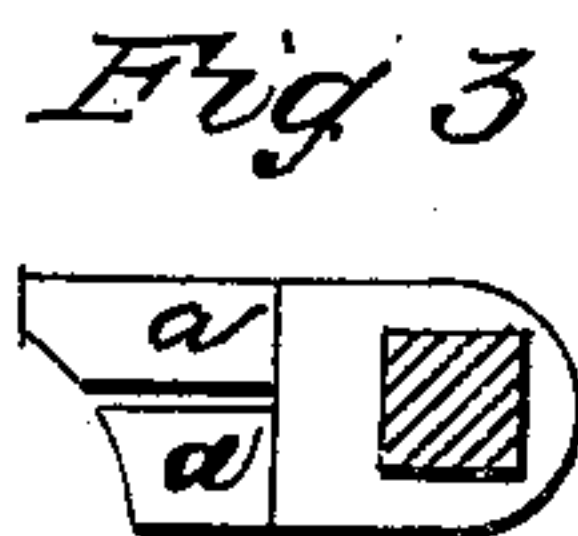
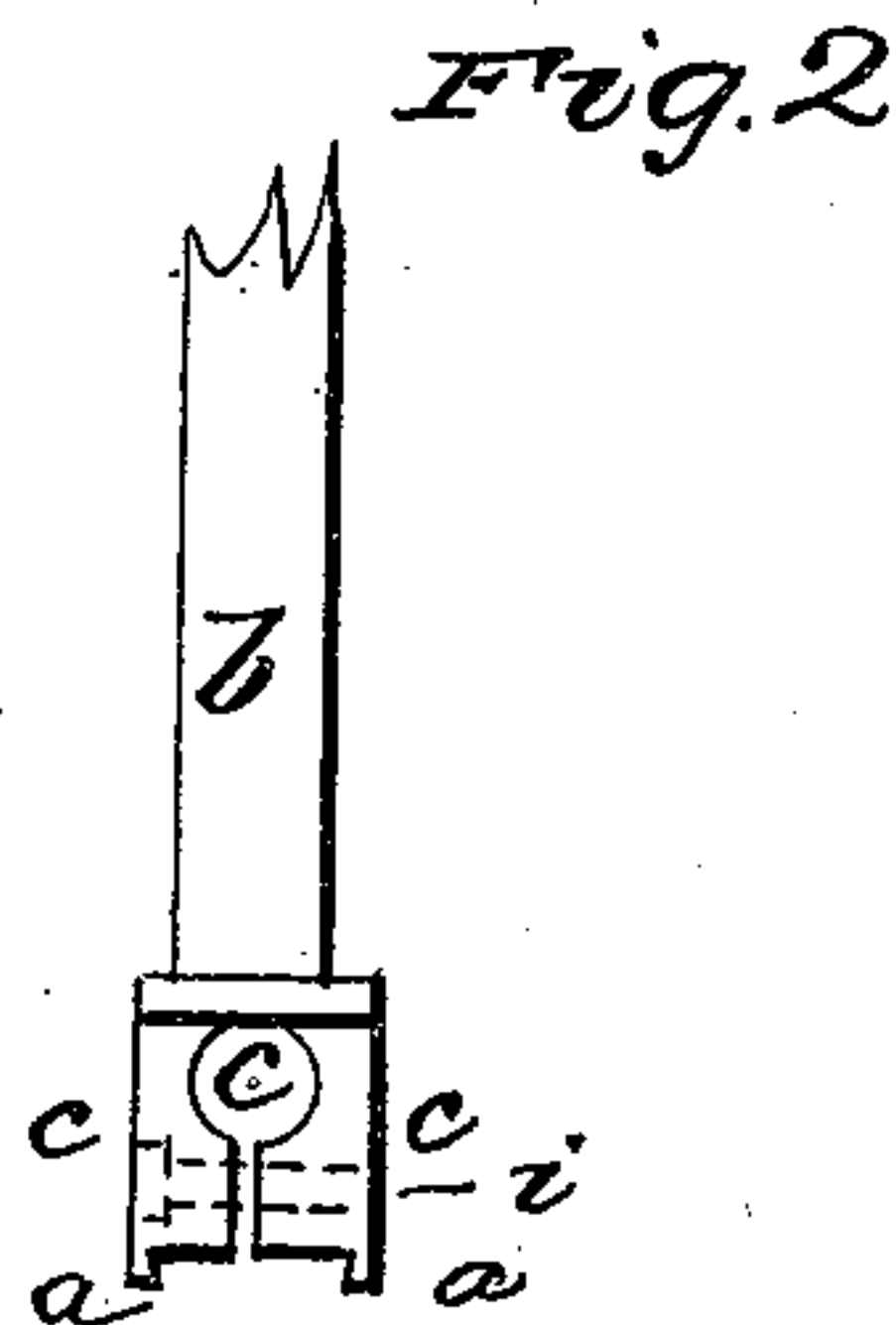
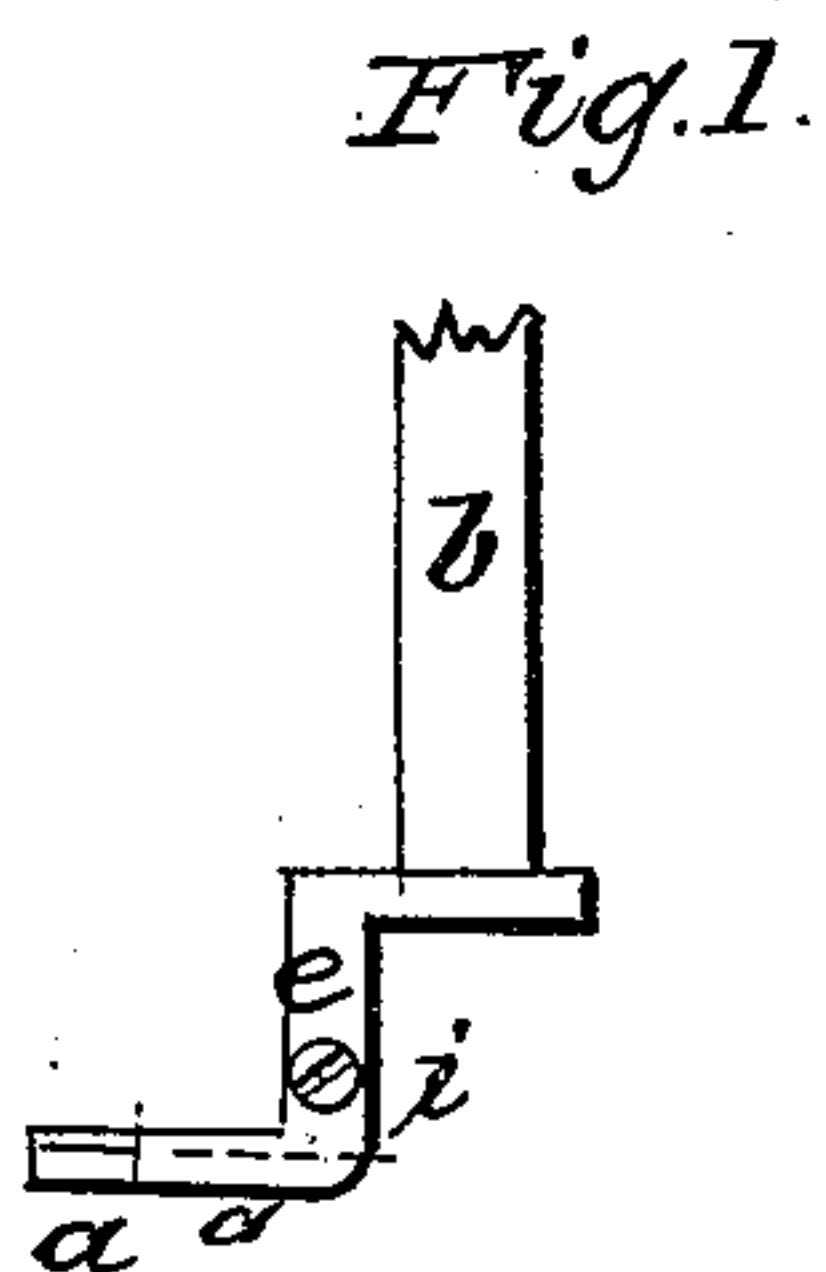


J. BOLTON.

Presser Foot of Sewing Machines.

No. 40,209.

Patented Oct. 6, 1863.



Witnesses

Wilson S. Smith
W. L. Berner

Inventor

James Bolton
by his attorney
C. S. Penwick

UNITED STATES PATENT OFFICE.

JAMES BOLTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO SINGER MANUFACTURING COMPANY.

IMPROVEMENT IN THE PRESSER-FEET OF SEWING-MACHINES.

Specification forming part of Letters Patent No. 40,209, dated October 6, 1863.

To all whom it may concern:

Be it known that I, JAMES BOLTON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in the Presser-Feet of Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a portion of a presser-foot constructed according to my invention. Fig. 2 represents a rear elevation of the same. Fig. 3 represents a plan of the same, and Figs. 4 and 5 represent plans of the presser-foot with foot-plates of different kinds in position.

Previous to my invention presser-feet for sewing-machines have been constructed with removable foot-plates inserted in grooves formed in frames secured to the lower ends of the stems of the feet, and in such cases the foot-plates are held in place by the spring of the two sides or legs of the frame. The construction and arrangement of these feet have been such that the two legs of the frame diverge from a point which is on the same level as the foot-plate. Hence their hold upon the foot-plate is strong only near the point of divergence. Besides, there is no means in such feet of compensating for the wear of the groove or the slacking of the tension of the spring-legs by age. Hence the grip of the frame upon the foot-plate becomes lax after a time, and the foot-plate is not held in with sufficient firmness to be retained in its place.

The object of my invention is to obviate the defects of preceding presser-feet of this description.

To this end the first part of my invention consists in combining the horizontal spring-legs of the frame (which embrace the two sides of the foot-plate, and are grooved or otherwise constructed to hold it from moving vertically in them) with the stem of the presser-foot by upright connections, so that the point of divergence or junction of the spring-legs is raised above the foot-plate. Hence the two legs tend to maintain their parallelism when separating or approaching each other, instead

of diverging in radial lines, of which the junction is the center.

The second part of my invention consists in combining with the first part thereof an adjusting-screw or its equivalent, by which the grip of the two legs upon the foot-plate may be increased, thereby affording a means of compensating wear or loss of elasticity in the legs of the frame.

Both parts of my invention are embodied in the presser-foot, portions of which are represented in the accompanying drawings. In this example the legs *a a* of the frame, at the lower end of the stem *b*, are connected therewith by upright connections *e e*, so that the junction *c* of the two sides of the frame is some distance above the level of the foot-plate, and the two legs, instead of diverging, as if they turned upon a vertical hinge-pin, as in previous presser-feet, separate, as if their connections *e e* turned upon a horizontal hinge-pin parallel with the two legs. The horizontal legs, therefore, tend to preserve their parallelism in separating and approaching each other, and to grip the foot-plate between them equably throughout their length.

In order to hold the edges of the foot-plate, the legs are grooved longitudinally, and the edges of the foot-plate are fitted to these grooves. In order, moreover, that the two legs may grip the foot-plate more equably throughout their length, they are made rigid by extending them over the foot-plate, the two being separated at their nearest parts by a mere slit.

In order to compensate for wear or loss of elasticity, the upright connections *e e* are fitted with a set-screw, *i*, which passes horizontally through them, its head bearing against a shoulder in one connection and its stem being screwed into the other connection, so that the two legs are caused to approach each other by screwing up this adjusting-screw.

Presser-foot plates of different constructions may be used in foot-frames of my construction. Thus Fig. 4 represents a plan of a plain foot-plate so used, and Fig. 5 a similar view of a hemmer foot-plate.

I do not claim to be the first who combined

a removable foot-plate with the stem of the presser of a sewing-machine by means of a grooved frame; but

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

1. The combination of the legs of the frame of a presser-foot (which are grooved to hold a removable foot-plate) with the stem thereof by means of upright connections, so that the junction of the two sides of the frame is above the level of the foot-plate, substantially as set forth.

2. The combination of the first part of my invention with an adjusting-screw, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

JAMES BOLTON.

Witnesses:

WM. H. RAND,

R. G. JAMISON.