

M. M. BARNES.

Presser-Rollers for Sewing-Machines.

No. 158,565.

Patented Jan. 12, 1875.

Fig. 1.

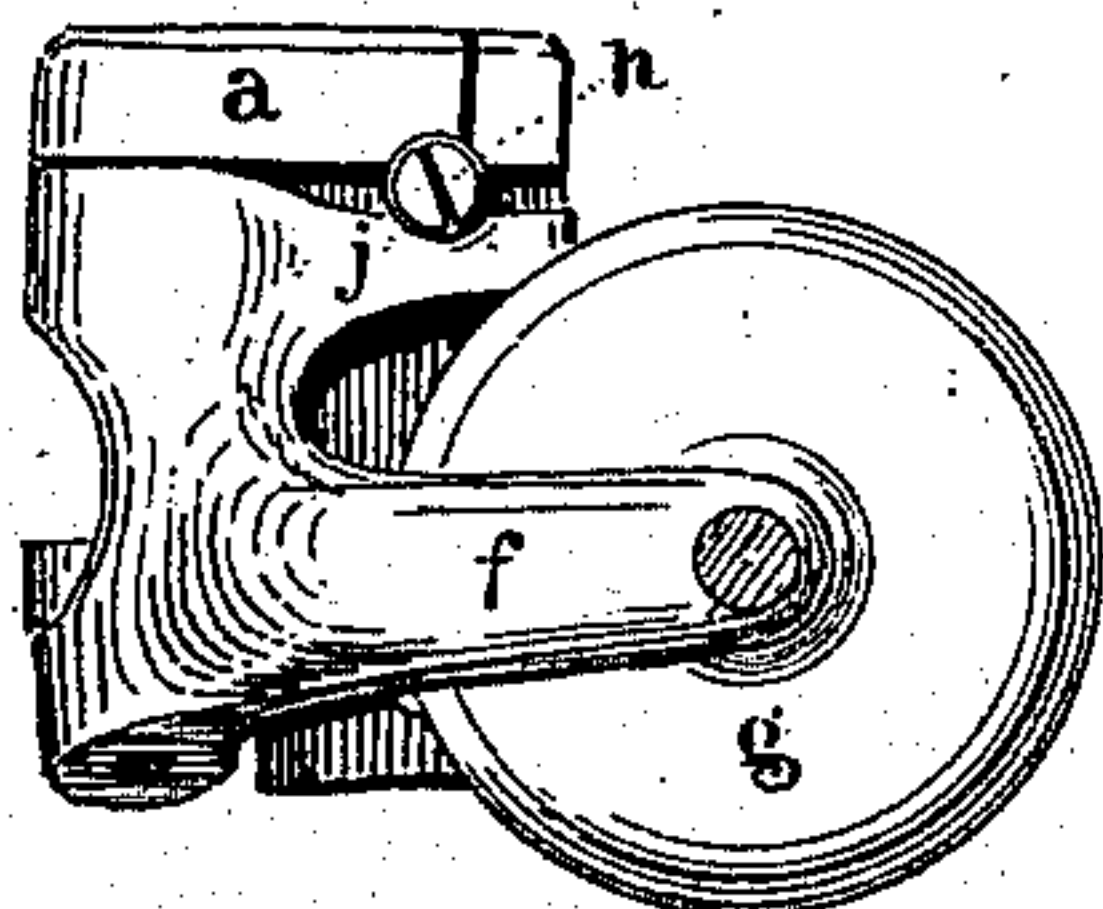


Fig. 2.

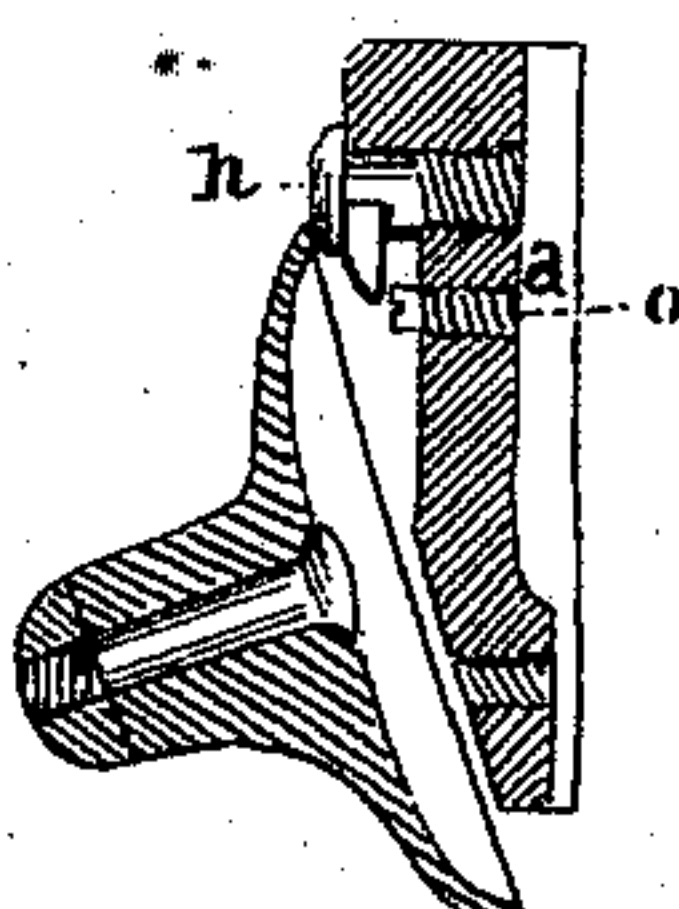


Fig. 3.

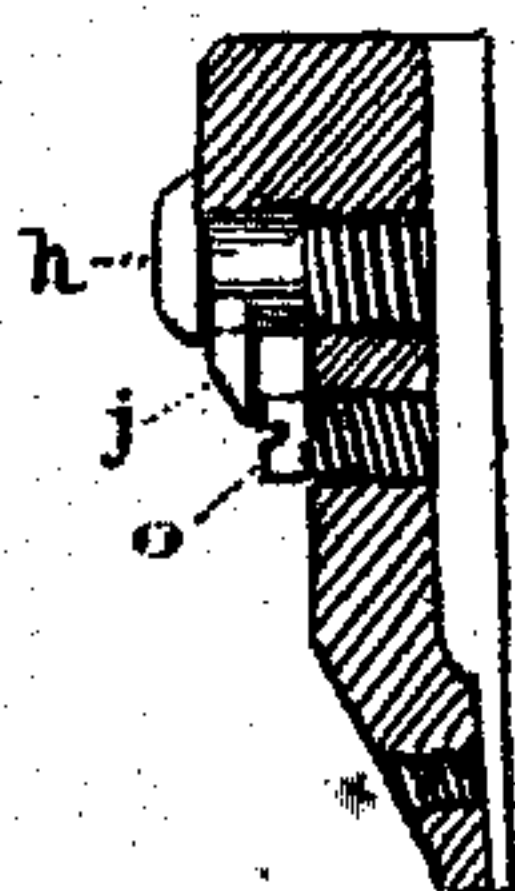


Fig. 4.

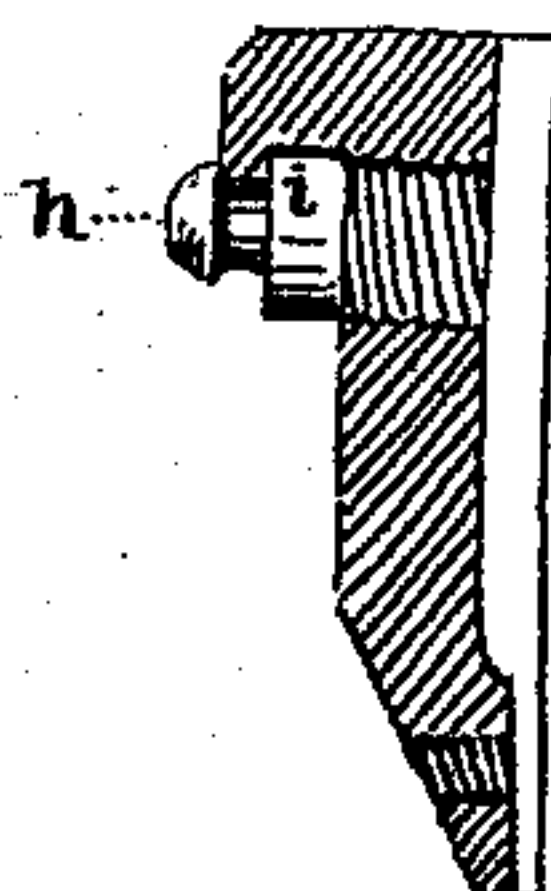


Fig. 5.

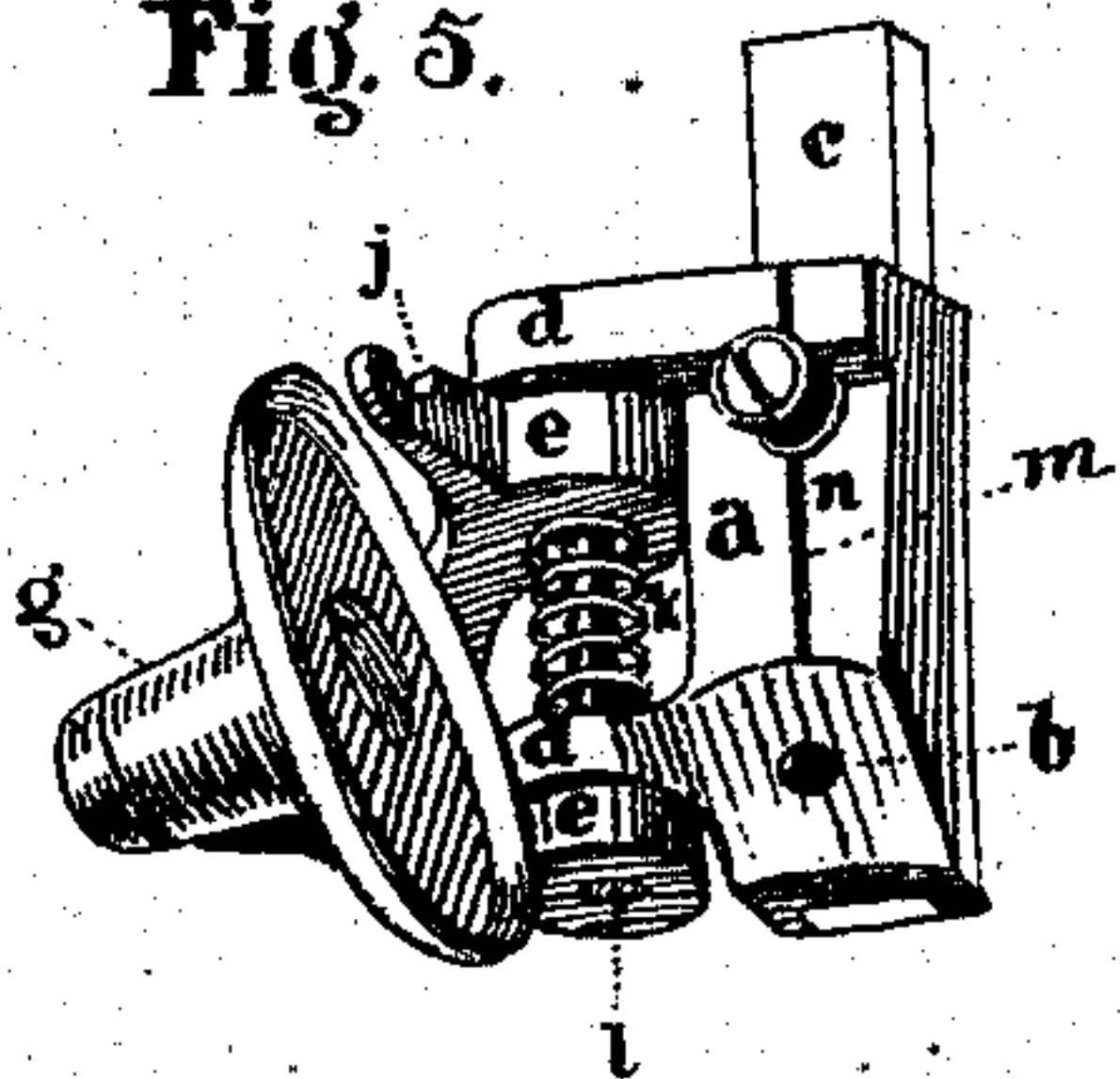
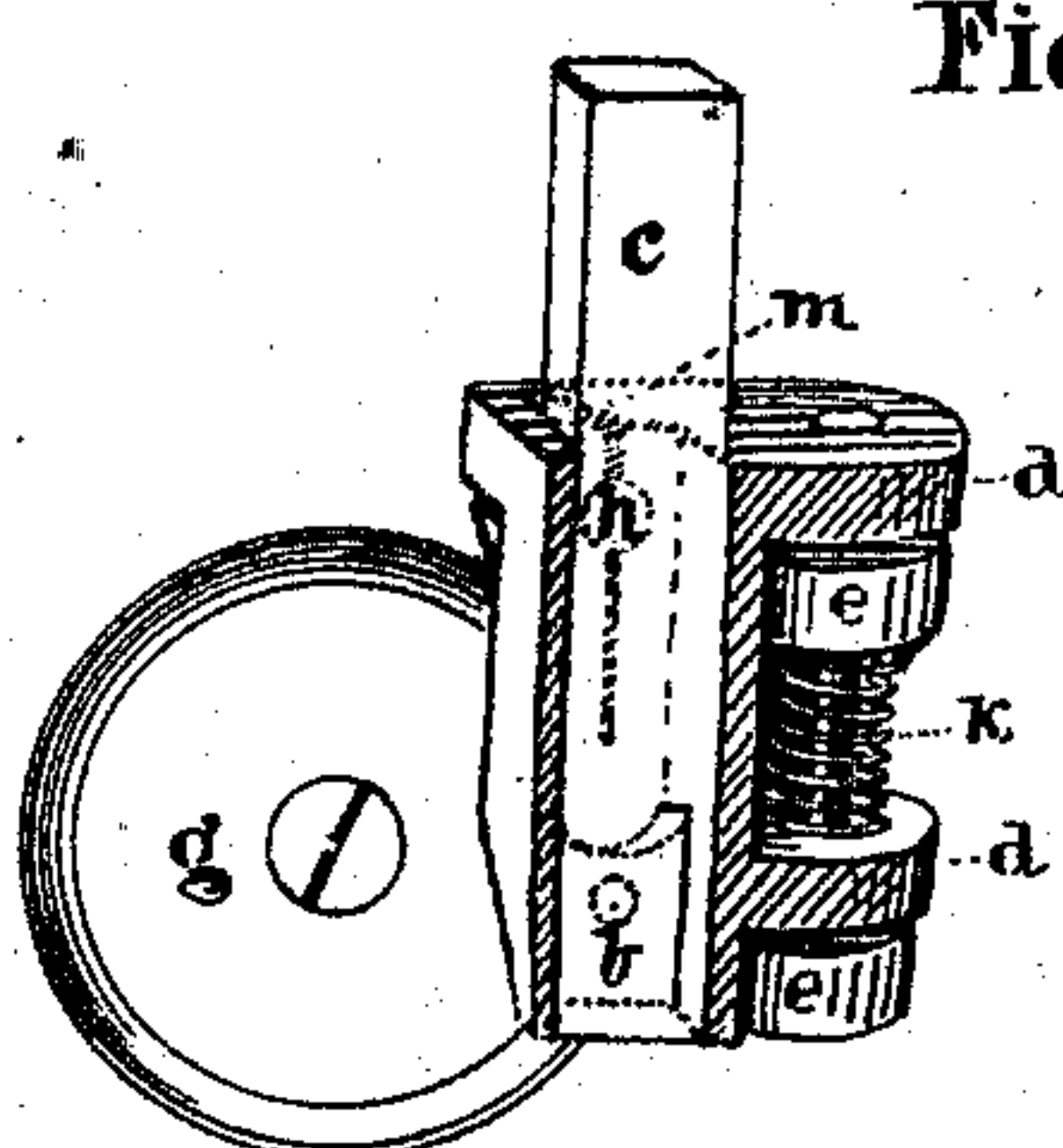


Fig. 6.



Witnesses.

John N. Harbourn.
Isaac S. Morse.

Inventor.

Merrick M. Barnes.

UNITED STATES PATENT OFFICE.

MERRICK M. BARNES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PRESSER-ROLLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **158,565**, dated January 12, 1875; application filed July 31, 1874.

To all whom it may concern:

Be it known that I, MERRICK M. BARNES, of Boston, Massachusetts, have invented an improved method of attaching, adjusting, and locking the presser-roller to the presser-bar of a sewing-machine, of which the following is a specification:

The purpose of this invention is to provide a method of attaching and adjusting the presser-roller to the presser-bar of a sewing-machine, and locking the presser-roller automatically when adjusted firmly in its place, preventing any shaking or rattling. The roller thus attached may be easily and readily unlocked and swung back out of the way, so that the needle may be got at to be threaded, or removed and replaced. The adjusting-screw allows the roller to be placed as near the needle as is required, according to the size of the needle used and the kind of work to be sewed.

A stationary butt with two jaws—upper and lower—is fastened to the presser-bar of a sewing-machine by a screw. A swinging arm, carrying the hollowed circular roller, is attached by a tapering pin passing through the jaws of the butt, and of the swinging arm, the lower jaw of the arm being placed under the lower jaw of the butt, and the upper jaw of the arm under the upper jaw of the butt. A spring is inserted between the upper jaw of the arm and the lower jaw of the butt, entwining around the tapering pin. The pin fits tightly in the upper and lower jaws of the butt, and loosely in the jaws of the arm, so that the roller presser-arm will turn easily on the tapering pin, backward or forward.

The adjusting-screw has a shoulder at the proper distance from the head of the screw, and between these the spline, or the roller-arm having a groove, enters on being shut, and is thereby fastened firmly by the upward pressure of the spring. The shoulder on the screw is made broader than the head to prevent the spline on the arm from slipping by, and thus bringing the roller in contact with the needle, and so breaking it; or a smaller set-screw can be used, as shown in Figs. 2 and 3, to accomplish the same purpose.

A slot is cut in the butt, somewhat diagonal to the plane of the top of the butt, downward sufficient to form a jaw and produce a pinch-

ing action to hold the adjusting-screw firmly in its place. Being cut diagonally, the pressure of the screw is brought to bear on the solid portion of the butt, and not in a line with the slot. By turning the adjusting-screw inward or outward the distance of the roller-presser from the needle is regulated.

To unlock the arm and to remove the roller it is necessary to press the arm down against the spring *k*, so that the spline will slip by the head of the adjusting-screw and allow the arm to swing back. On being shut the spline falls automatically into the neck of the adjusting-screw, and is locked by the action of the spring.

Figure 1 is a front view of my invention. Fig. 2 is a sectional view through the butt and roller-presser. Fig. 3 shows the set-screw in section with the adjusting-screw. Fig. 4 is a section of the butt, showing the adjusting-screw with shoulder. Fig. 5 is a perspective view, showing the roller unlocked and open. Fig. 6 is a back view, showing the diagonal slot, &c.

a represents the butt, to be attached, by a screw at *b*, to the presser-bar *c*. *d d* are the jaws of the butt; *e e*, the jaws of the swinging roller-presser arm. *f* is the swinging roller-presser arm. *g* is the roller-presser. *h* is the adjusting-screw with its shoulder *i*. *j* represents the spline with its concavity or groove for interlocking with the adjusting-screw. *k* represents the spring (used to lock the roller-presser) surrounding the tapering pin *l*. *m* represents the diagonal slot, making a jaw or pinch, *n*, to hold firmly the thread of the adjusting-screw. *o* is the set-screw when used instead of a shoulder on the adjusting-screw.

I claim as my invention—

The combination, substantially as set forth, of the swinging arm of the presser-foot with its grooved spline, tapering pin, and spring, and the adjusting-screw with its shoulder, whereby the presser-foot may be firmly locked automatically when shut, all arranged for the purpose set forth.

MERRICK M. BARNES.

Witnesses:

ISAAC S. MORSE,
JOHN N. BARBOUR.