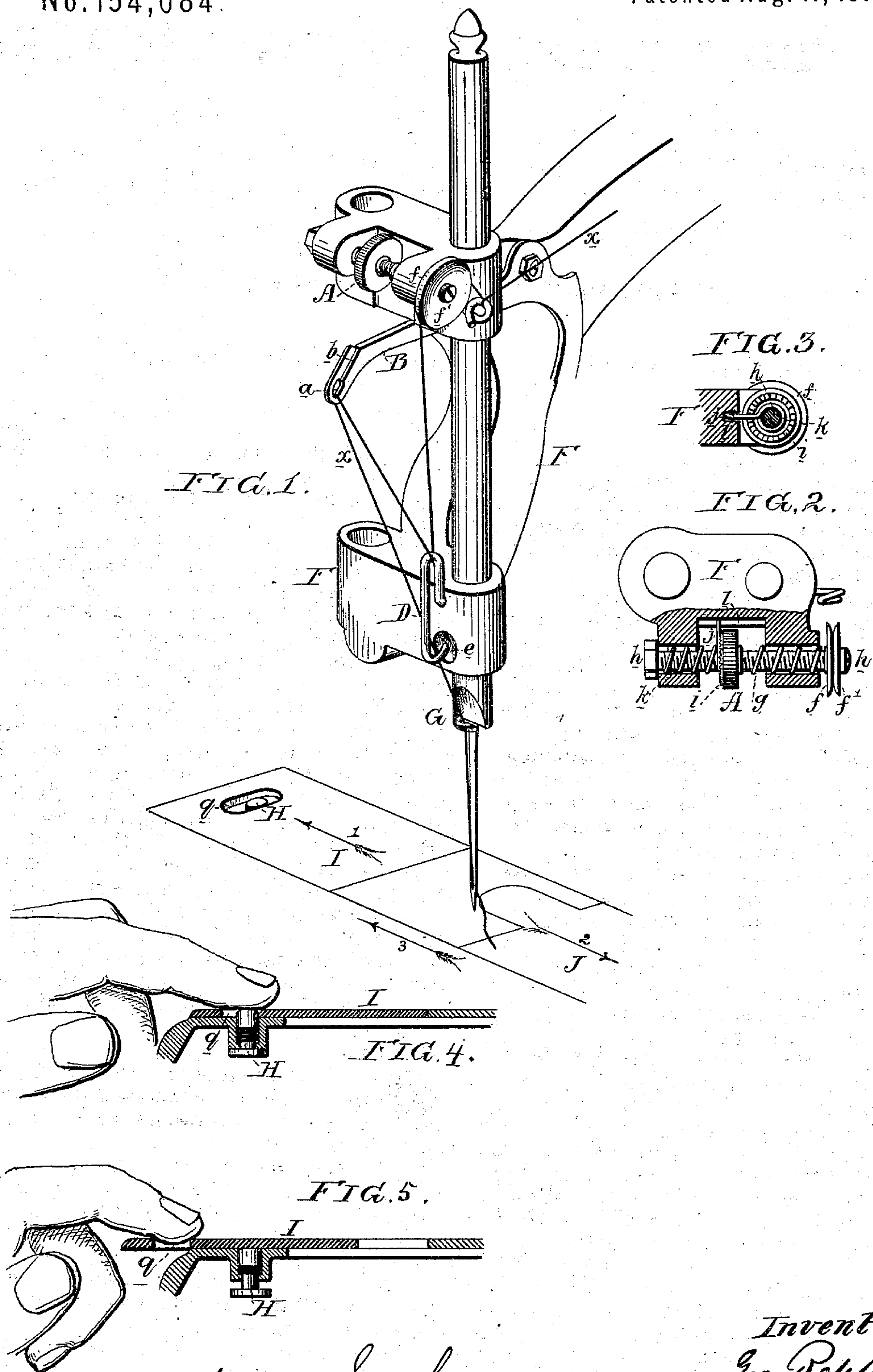


G. REHFUSS.
Sewing-Machines.

No. 154,084.

Patented Aug. 11, 1874.



Witnesses, *Harry Smith*
Thomas McIlvaine

Inventor:
Geo. Rehfuess
by his Atty
Horvath and Son

UNITED STATES PATENT OFFICE.

GEORGE REHFUSS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
AMERICAN BUTTON-HOLE OVERSEAMING AND SEWING-MACHINE
COMPANY, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **154,084**, dated August 11, 1874; application filed
December 2, 1873.

To all whom it may concern:

Be it known that I, GEORGE REHFUSS, of the city and county of Philadelphia and State of Pennsylvania, have invented Improvements in Sewing-Machines, of which the following is a specification:

The objects of my invention are to prevent accidental alteration of the tension on the needle-thread of a sewing-machine, and to prevent accidental movement of the work-plate without interfering with its ready withdrawal. I attain these objects by combining a pawl and ratchet with the adjusting-nut A of the tension device, and by combining a spring-retaining pin, H, with the slotted and sliding work-plate I, all as shown in the perspective view, Figure 1, and sectional views, 2 to 5, of the accompanying drawing.

The tension device consists of two disks, *f* and *f'*, the disk *f* being forced against the disk *f'* by a spring, *g*, the pressure of which is regulated by a nut, A, on the screw-rod *h*, and the latter carries the said spring and disks. (See sectional plan view, Fig. 2.) In tension devices of this class where jam-nuts are employed, the nut is apt to become accidentally turned in working the machine, and to thus alter the tension—a defect which I overcome by simply forming ratchet-teeth *i* on one face of the nut, and by adapting a pawl, *j*, to these teeth, as shown in the detached sections, Figs. 2 and 3. This pawl is secured to or forms part of a spiral spring, by which it is constantly held against the ratchet-teeth, the outer end of the said pawl being fitted to and sliding in a groove, *l*, in the fixed arm F, by which it is guided and maintained in proper position in respect to the teeth. In order to permit access to the shuttle, there are on the base-plate of the machine two sliding work-plates, I and J, the former of which is withdrawn by a movement in the direction of the

arrow 1, and the latter by a movement in the direction of the arrow 2, Fig. 1.

As the work is fed in the direction of the arrow 3, it can have no tendency to disturb the plate J, but frequently pushes back the plate I—an objection which I overcome by recessing the base-plate to receive a spring-pin, H, which, when the plate is in its place, projects into the usual end opening or slot *q*, made to afford a bearing for the finger in withdrawing the plate, as shown in the sectional views, Figs. 4 and 5. The pin, without interfering with the operation of the machine, and without requiring any alteration of the plate, serves as an effectual retainer to prevent the accidental movement of the work-plate, and yet requires no special manipulation when the latter has to be drawn out, for the simple insertion of the finger into the slot *q* in the act of withdrawing the said plate depresses the pin, as shown in Figs. 4 and 5, and on restoring the plate to its original position the pin will recoil and take its place in the slot, as seen, but will not project above the face of the plate to interfere with the fabric operated on by the machine.

I claim—

1. The combination of the nut A, adapted to the screw-rod *h*, its ratchet, and the pawl *j*, arranged to move with the nut, all as and for the purpose set forth.
2. The combination of the sliding plate I, having the usual slot *q*, and the spring-pin H, arranged in a recess of the bed-plate, and extending into the slot *q* when the plate is in position, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

GEO. REHFUSS.

WM. A. STEEL,

J. SHERBORNE SINGER.