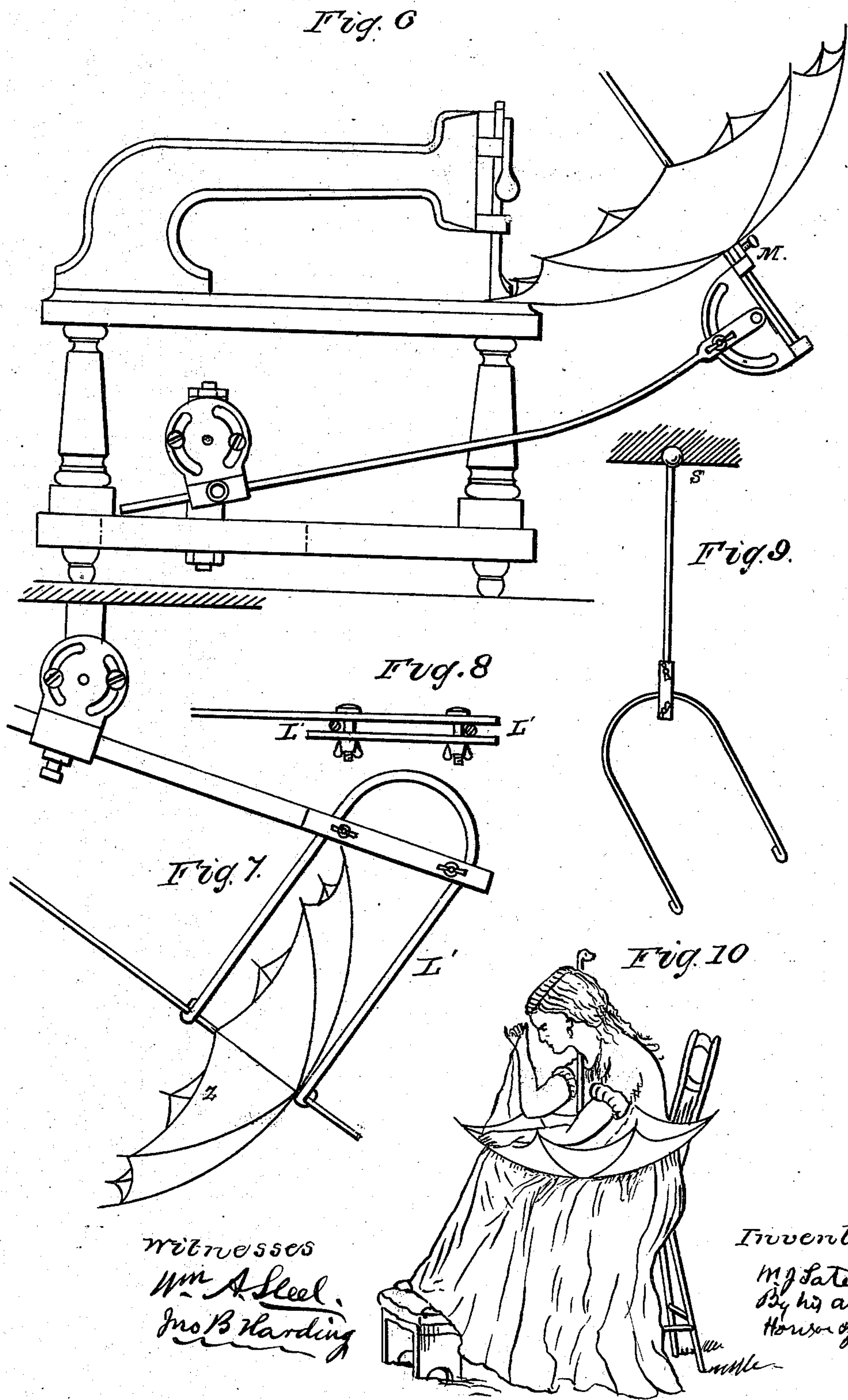




W. J. TATE.  
Sewing Machine.

No. 105,862.

Patented July 26, 1870.



witnesses  
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# United States Patent Office.

WILLIAM JOHN TATE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR  
TO WILLIAM A. DROWN & CO., OF SAME PLACE.

Letters Patent No. 105,862, dated July 26, 1870.

## IMPROVEMENT IN MECHANISM FOR RETAINING, ADJUSTING, AND SEWING PARASOLS.

The Schedule referred to in these Letters Patent and making part of the same

I, WILLIAM JOHN TATE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented Mechanism for Retaining, Adjusting, and Sewing Umbrellas and Parasols, of which the following is a specification.

### *Nature and Object of the Invention.*

My invention consists of an adjustable and movable holder for umbrellas and parasols, arranged for attachment to any suitable fixed object, and adapted for the retention of the said umbrella or parasol when the curved edges of the same, between the ribs, are being sewed, or while the cover and lining are being stitched together; and

My invention consists, secondly, in the combination of such holder with a sewing-machine; and

Thirdly, in a certain arrangement of presser-feet, especially adapted for holding and guiding the work when the sewing is to be brought close up to and over the ribs of the umbrella, all of which will be fully described hereafter.

### *Description of the Accompanying Drawing.*

Figure 1, sheet 1, is a side view of a sewing-machine, with my adjustable holder for umbrellas, &c., attached to the same;

Figures 2 and 3, detached views of parts of the adjustable holder;

Figure 4, a front view of the sewing-machine, showing my improvements in the presser-feet;

Figure 5, an enlarged sectional plan view of the presser-feet;

Figure 6, sheet 2, a view showing another plan of attaching the holder to a sewing-machine;

Figure 7, a view of a modified form of holder attached to the ceiling of a room, or to any fixed object, independent of a sewing-machine;

Figure 8, a detached view of part of fig. 7;

Figure 9, a view of another modification; and

Figure 10, a view illustrating the ordinary method of sewing the curved edges of umbrellas and parasols by hand.

### *General Description.*

The sewing of the curved edges, *x*, of an umbrella, between the tips of the ribs, or the stitching together of the edges of the cover and lining of a parasol, has heretofore been performed entirely by hand. This is a slow and laborious operation, as the umbrella or parasol must be fully extended when sewed, in order to prevent the edges from puckering, the usual method being to rest the umbrella upon the lap, as shown in fig. 10, and then to bend over the same, and work upon the outer edge.

My invention, which has been designed to super-

sede this slow and awkward method of working, consists of an adjustable and movable holder, for retaining the umbrella or parasol in a position most convenient for the operator; also, in the combination of such adjustable holder with a sewing-machine; and, finally, of an improvement in the presser-feet of the sewing-machine, which will enable the stitching to be brought close up to and over the ribs of the umbrella or parasol.

On reference to sheet 1 of the drawing—

A represents any suitable frame for the support of a sewing-machine;

B, the bed-plate of the machine; and

C, the fixed arm.

The other portions of the machine, with the exception of the presser-feet D D', which form one of the features of my invention, may be similar to those in common use, and are not illustrated in the drawing.

The holder for the support of the umbrella or parasol to be operated upon by the machine is, in the present instance, connected directly to the machine, and consists of a longitudinally-slotted plate, F, secured to the arm C; of a bolt, H, rendered adjustable in this slotted plate; of a disk, I, having a tubular projection, *a*, arranged to turn upon the said bolt; of a disk, I', attached to and arranged to turn upon the disk I, and having curved slots, *b b*, for the passage of set-screws, *c*, by means of which the said disk I' can be secured after adjustment; and of a long rod, J, rendered adjustable in a tubular projection, *d*, of the disk I', and held therein by a set-screw, *e*.

The holder proper consists of a segmental plate, L, hung to and arranged to turn upon the outer end of the rod J, and having a curved slot, *f*, through which passes a bolt, *f*<sup>1</sup>, of the said rod, this bolt being provided with a thumb-nut, *f*<sup>2</sup>, which can be tightened against the segmental holder, in order to secure the latter after adjustment.

The handle *y* of the umbrella or parasol rests in jaws, *h* and *h'*, of the segmental plate L, and is retained in a proper position therein (that is, in such a position that the edge of the extended umbrella shall be in contact with the bed-plate of the sewing-machine beneath the needle) by means of an adjustable block, M, furnished with a set-screw, which is fitted to the handle of the umbrella or parasol, and arranged to rest upon the top of the upper jaw *h*, and thus sustain the weight of the umbrella.

One or both of the jaws *h* and *h'* may, if desired, be provided with pins or catches, *i*, to prevent the accidental displacement of the handle.

The universally-jointed holder above described enables the umbrella or parasol to be adjusted to such a position that its edge may be brought directly beneath the sewing-machine needle, and also to such a posi-



tion that the curve of the said edge shall coincide with a curve described from the center of the bolt H, (see fig. 5.)

When the parts are thus adjusted, the whole of each of the curved edges  $x$  of the umbrella or parasol can be sewed by the machine, the operator guiding the work and holder, as the latter is turned upon the bolt H as a center, by the feeding devices.

One of the principal difficulties which I had to contend with in thus using a sewing-machine for stitching the edges of umbrellas was in working close up to and over the ribs, the ordinary presser-feet being ineffectual, and permitting the work to slip, so that needles were frequently broken by being brought in contact with the ribs. This difficulty I have overcome by using two presser-feet, one on each side of the needle, and arranged to be raised and lowered independently of each other, so that one can be raised, and allowed to pass over the rib, while the other still holds and prevents the slipping of the work. The said presser-feet are also inclined on one edge, so that they may adapt themselves to the inclined position of the rib, and thus permit the needle to work close up to and over the latter without risk of striking the same. This is shown in figs. 4 and 5, where D and D' represent the presser-feet arranged to slide in the fixed arm C of the machine, each foot being acted on by a spring,  $j$ , which has a tendency to depress it, and by a lever,  $k$ , by which it can be raised from the work.

On reference to fig. 5, it will be seen that the curved edge  $x$  (which is in a position coinciding with a curve described from the center of the bolt H) has been sewed by the needle  $z$ , which occupies a position midway between the presser-feet D D'. The sewing on this edge  $x$  has been brought close up to the rib  $w$ , the foot D' having been raised to permit the passage of the latter, and the inclined edge  $v$  of the foot D, being in contact with the side of the rib, thus preventing any further feeding of the work in the direction of the arrow, and consequent danger of striking the rib by the needle Z.

When the sewing has been thus far accomplished, and it becomes necessary to cross the rib, in order to operate upon the edge  $x'$  of the umbrella, the foot D is also raised, in order to permit the work to be turned upon the needle  $z$  as a center (the holder turning on the bolt H) from the position shown in full lines to that indicated by dotted lines in fig. 5, the inclined edge  $v$  of the foot D', which is depressed during the movement, determining the extent of the latter, as it serves as a guide for the edge of the rib.

The operation now goes on as before, and, when the rib has been passed, both of the presser-feet, or one only, can be held down, as desired.

It is not absolutely necessary that the holder, when used in connection with a sewing-machine, should be attached to the top of the latter, as above described, as it might be secured to the bottom of the frame, as shown in fig. 6, or to the ceiling, or to any other fixed object separate from the machine, as illustrated in fig. 7. Nor is it necessary that the holder should be constructed precisely as above described, as it can be modified considerably without departing from my invention. In fig. 7, for instance, an adjustable hooked yoke, L', is substituted for the segmental plate, L, and the umbrella is held by the handle and tip, instead of by the handle only, as before described, and in fig. 9 the bolt H, disks I I', &c., are dispensed with, and a ball-and-socket joint,  $s$ , substituted for the same.

It should also be understood that I do not confine myself to the holder when combined with a sewing-machine, as it will be found useful for holding umbrellas and parasols in a convenient position to be sewed by hand.

I therefore claim—

1. A holder for umbrellas and parasols; consisting of an adjustable and movable bar, or its equivalent, constructed so that the handle of the umbrella or parasol may be secured to the same, substantially as described.

2. The combination, substantially as herein described, of the said holder with a sewing-machine.

3. The combination and arrangement, substantially as herein described, of the bolt H, disk I, with its tubular projection, and slotted disk I', with its tubular projection, for the purpose set forth.

4. The adjustable segmental plate L, or its equivalent, attached to the bar J, and forming the holder proper, for the retention of the umbrella or parasol.

5. The combination of the said holder, the handle of an umbrella or parasol, and a detachable block,  $m$ , adjustable on the handle, and bearing on the holder, as specified.

6. The presser-feet D D', constructed and operating in connection with each other, the needle, and the ribs of the umbrella or parasol, substantially as herein set forth.

7. The presser-feet, having edges  $v v$ , inclined, as specified.

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

WILLIAM JOHN TATE.

Witnesses:

WM. A. STEEL,  
F. B. RICHARDS.