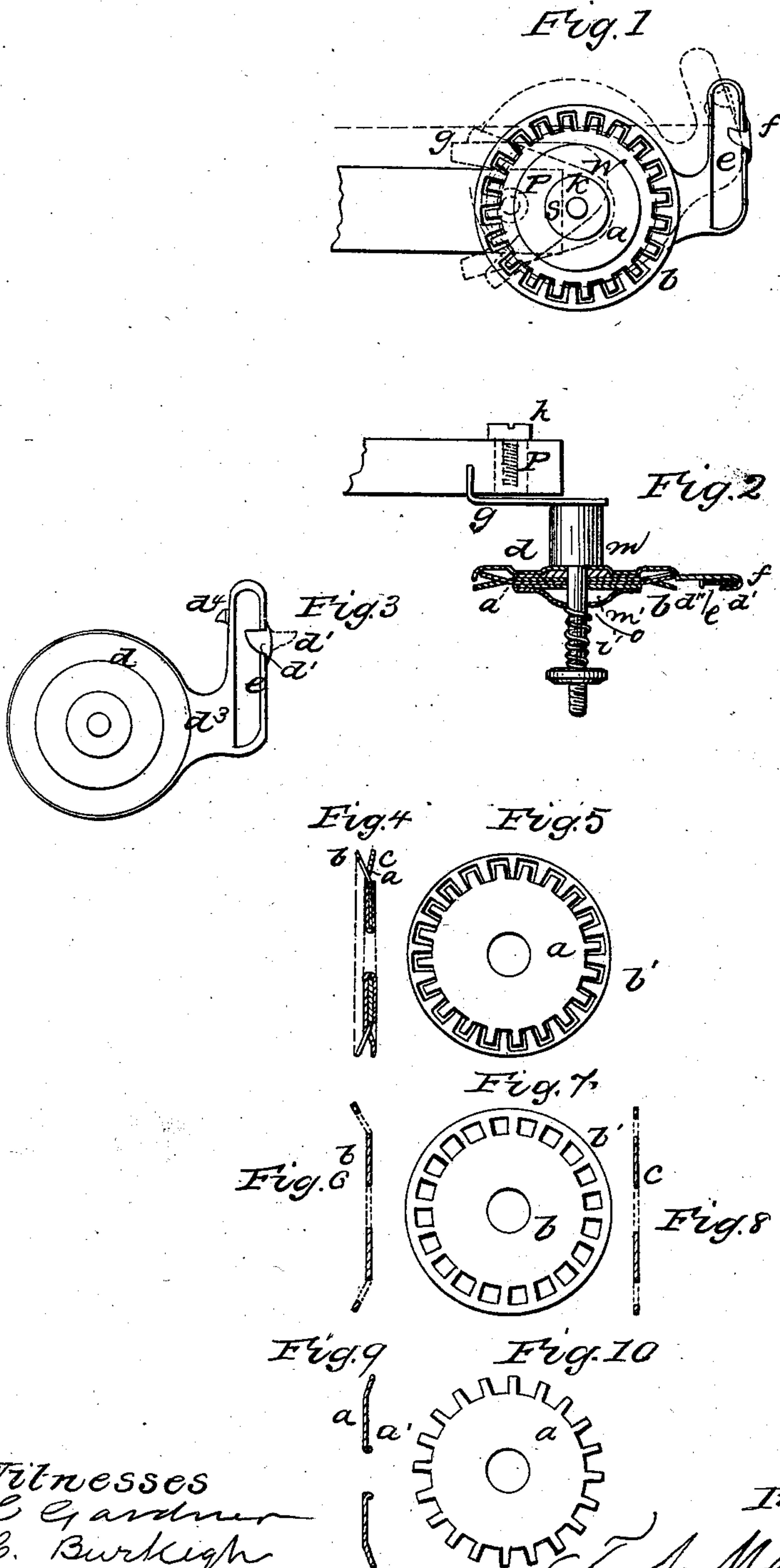


T. A. MACAULAY.

Tension Device for Sewing Machines.

No. 93,459.

Patented Aug. 10, 1869.



Witnesses
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T. A. MACAULAY, OF NORTHAMPTON, MASSACHUSETTS.

Letters Patent No. 93,459, dated August 10, 1869.

IMPROVEMENT IN TENSION-DEVICE FOR SEWING-MACHINE.

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

To all whom it may concern:

Be it known that I, T. A. MACAULAY, of the town of Northampton, and State of Massachusetts, have invented a new and improved "Tension for Sewing-Machines;" and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same; reference being had to the accompanying drawings, forming part of this specification.

The nature of my invention relates to an improved tension-device, constructed as will be hereinafter described, and consists in providing the disks usually employed for producing tension on the thread, and which are pronged, with rims, for the purpose of preventing the thread from catching on the prongs. These rims are formed, the one by punching the plate *b*, fig. 7, at a sufficient distance from the edge to leave the rim *h*, then bending the same, as shown by fig. 6, and the other rim or covering-plate is the bent edge of the plate *d*, or an additional disk, *c*, having the rim, but not bent.

The two parts, *a* and *b*, of the tension-wheel are secured together by riveting the hub *a*¹, formed on the plate *a*, after the disk has been passed over the hub, as shown by figs. 4 and 9.

And my invention further consists in providing the spring, usually employed with the tension disks, with a guard, to limit its motion, and prevent its being broken off or damaged, and this is accomplished by bending the wing *d*², shown in dotted lines, fig. 3, over the spring *e*, until it assumes the position *d*¹, at a sufficient distance from the spring to allow the thickest thread to pass between the spring and the plate *d*³, to which it is attached.

Figure 1 is an elevation, showing the tension-wheel *W*, check-spring *e*, and guard *d*¹.

Figure 2 is a horizontal view, showing a section of the plate *d*, check-spring *e*, elastic cushions *m m*, the plates *a* and *b* forming the tension-wheel, the washers *o*, spring *o*¹, nut *k*, screw *s*, guard *d*¹, and guide *d*⁴.

Figure 3 shows the plate *d*, with its extension *d*², the guide *d*⁴, and guard *d*¹. *e* is the check-spring, and *d*¹ is the guard, bent over the check-spring.

Figures 4 and 5 show views of the tension-wheel, with an additional disk, of the kind shown by Figure 7, placed over the prongs of the piece, Figure 10, so as to keep the thread from catching on the prongs of the outer plate, and which is secured to the hub in the same way as the second plate.

Figure 8 shows the form of the additional disk-plate, and it is put on in such manner that the rim shall cover the outer plate.

Having thus fully described my invention,

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

1. The combination with the disk *a*, of the disk *b*, having the covering rim, with the plate *d*, as and for the purpose set forth.

2. The combination with a tension-mechanism, constructed substantially as described, of the spring *e*, and guard *d*¹, substantially as and for the purpose set forth.

T. A. MACAULAY.

Witnesses:

E. C. GARDNER,
C. C. BURLEIGH.