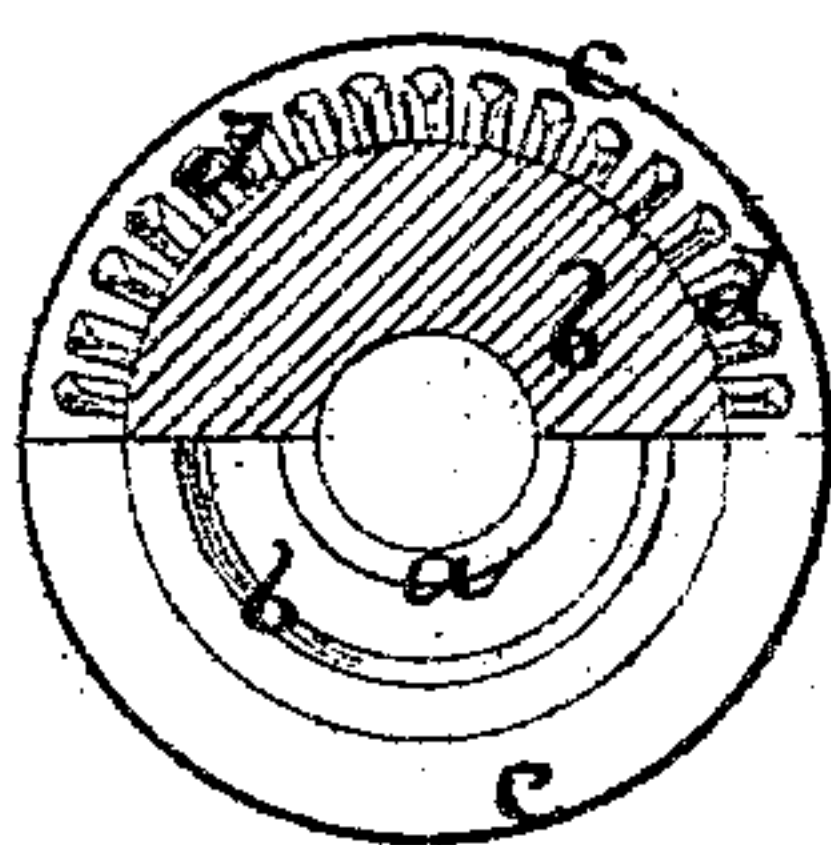


JOSEPH McCARTHY.

Improvement in Tension Rollers for Sewing Machines.

No. 115,756.

Patented June 6, 1871.



Witnesses. { Mr. W. Frothingham.  
J. B. Kiddle.

J. McCarthy.  
By his Atty.  
Crosby & Gould

## UNITED STATES PATENT OFFICE.

JOSEPH McCARTHY, OF WOBURN, MASSACHUSETTS.

## IMPROVEMENT IN TENSION-ROLLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 115,756, dated June 6, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH McCARTHY, of Woburn, in the county of Middlesex and State of Massachusetts, have invented an Improved Sewing-Machine Tension; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention relates to a new construction of a tension device for sewing-machines, and to that class of such devices in which the thread is led through a tortuous passage to create sufficient friction upon it.

In leading the thread through friction-plates, or around a rod or other device, metal is generally used for the surface upon which the thread runs, and the contact of the thread with such surface discolors the thread. Moreover, these metal surfaces oxidize and become gummed and oily, and are not easily cleansed. In my invention I not only use glass instead of metal, but I also form the tension device in the shape of a wheel or disk with a deep peripheral groove, through which the thread runs, the two flanges having internal radial projections, through which the thread easily renders, but which create sufficient friction upon the thread to properly govern, its passage and delivery to the needle.

It is in a glass tension-wheel thus made that my invention consists, and the drawing represents a device embodying my improvement.

*a* denotes the hub; *b*, the web or body; *c c*, the peripheral flanges, the space between which constitutes the narrow groove *e*, through which the thread runs, this groove being bounded on opposite sides by the radial projections *d*. The wheel or disk so shaped is cast or molded in a suitable glass-mold, so that it is formed complete at one operation, needing, therefore, no fitting together of parts and no finishing of surfaces.

It will be obvious that tensions thus made are very cheap and enduring, and they require no manipulative adjustment, and always afford smooth and unabraded surfaces through which the thread can run.

I claim—

As an improved tension device, the glass ring or wheel, formed with the peripheral groove *e*, having radial projections *d*, the whole being molded in a single piece and at one operation, substantially as shown and described.

JOSEPH McCARTHY.

Witnesses:

FRANCIS GOULD,  
M. W. FROTHINGHAM.