

J. H. MOONEY.

Tension Wheel for Sewing Machines.

No. 103,643.

Patented May 31, 1870.

Fig. 1.

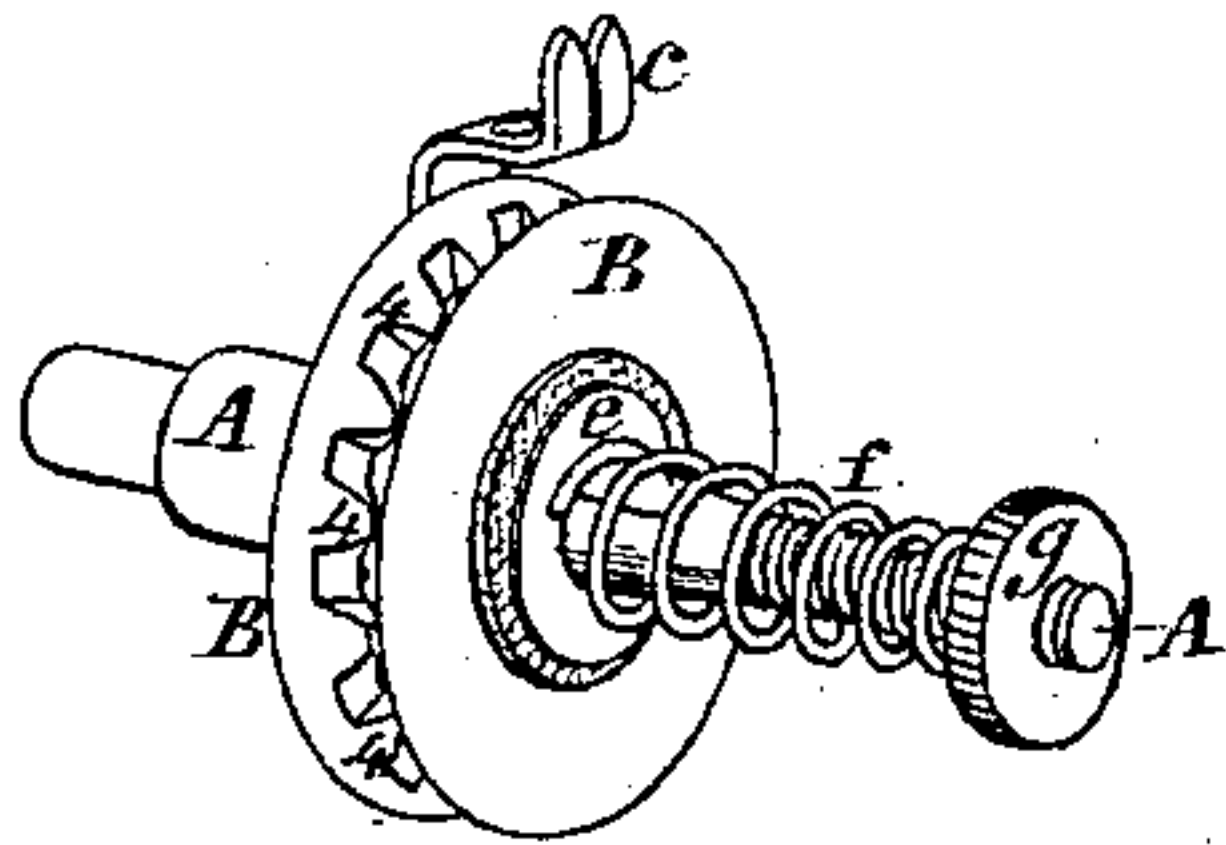


Fig. 2.

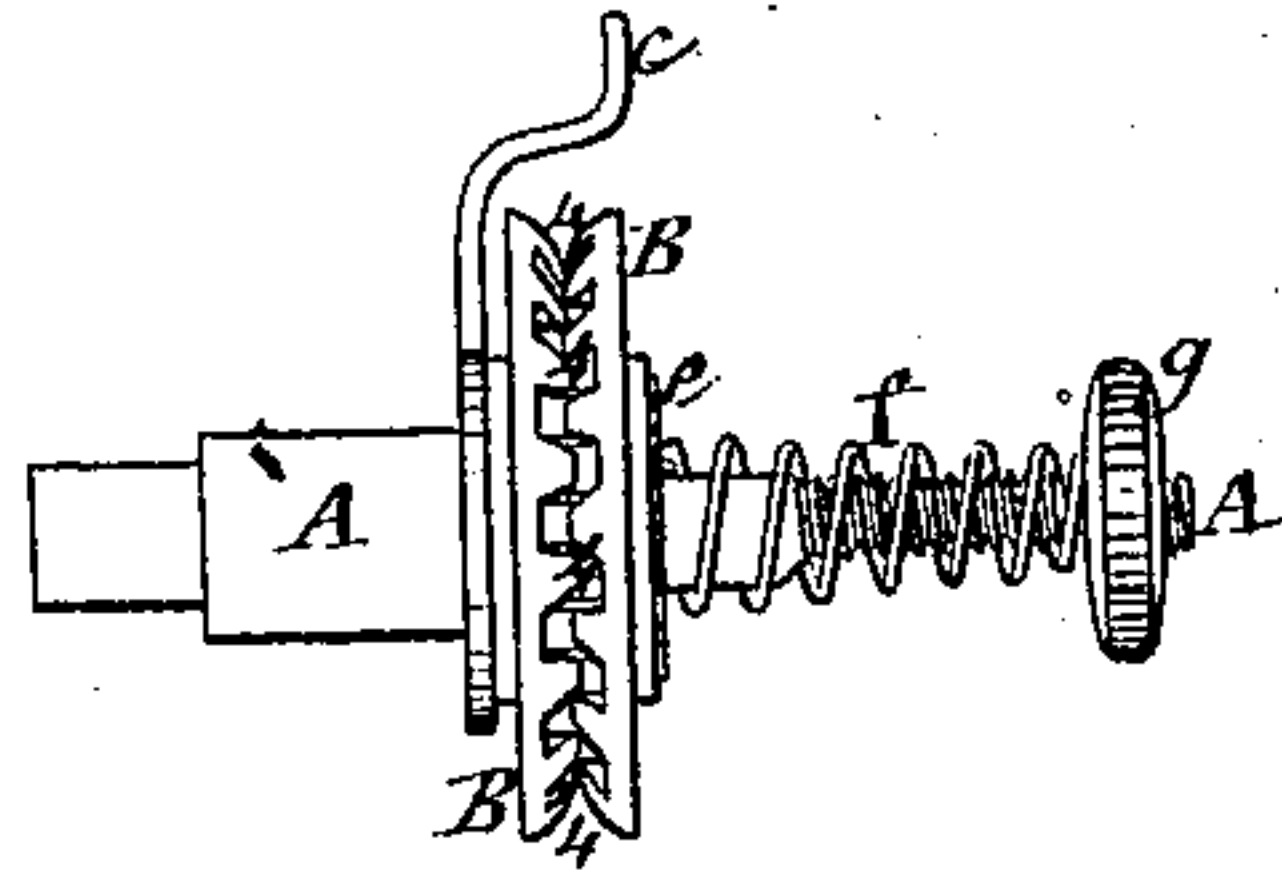


Fig. 3.

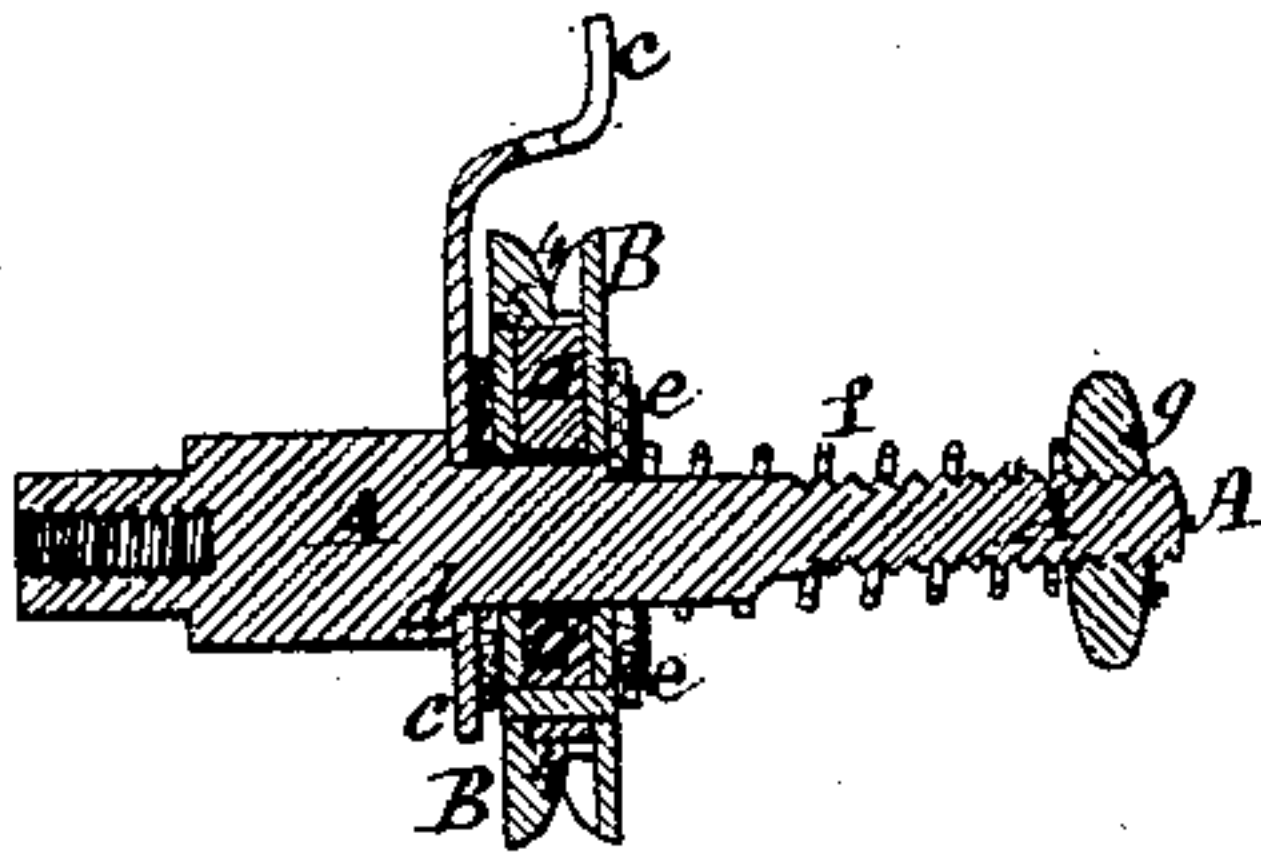


Fig. 4.

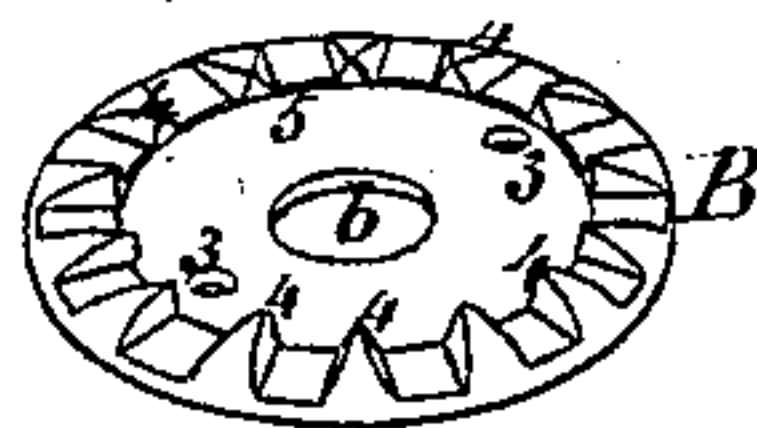


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN H. MOONEY, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO SAMUEL HILL, OF SAME PLACE.

IMPROVEMENT IN TENSION-WHEELS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 103,643, dated May 31, 1870.

To all whom it may concern:

Be it known that I, JOHN H. MOONEY, of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in a Tension-Wheel for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents the tension device in perspective. Fig. 2 represents a side view of the same. Fig. 3 represents a longitudinal section. Fig. 4 represents one of the toothed plates, and Fig. 5 represents the hub or center piece detached.

Similar letters of reference, where they occur in the several separate figures, denote like parts in all of the drawings.

Thread-tension devices for sewing-machines have heretofore been made with corrugated, indented, or zigzag teeth, or frictional bearing-surfaces for holding the thread from slipping, either when sewing or when the thread may have been cut. I lay no claim in this application to such frictional or bearing surfaces.

My invention consists in the manner of constructing the tension-wheel—viz., by means of a hub having projections or depressions on its perimeter, and cheek-plates fastened to it, which have beveled teeth or spurs upon them, that overlap each other and interlock with the projections or depressions on the hub, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The hub or central portion of the thread-tension wheel, as seen more particularly at *a*, Fig. 5, has upon its perimeter teeth or projections 1 1 1, which leave depressions, as it were, between them. The hub is further furnished with a central opening, *b*, for receiving the shaft or spindle *A*, upon which it is to work, and with holes 2 2 for receiving a rivet or rivets for holding the cheeks *B B* to it, said cheeks, as shown in Fig. 4, being also furnished with a central opening for the shaft, like that *b* in the hub, and rivet-holes 3 3.

The cheek-pieces *B* are furnished with spurs

or teeth 4, made on a beveled rim thereon, and of such length or projection as that, when placed on each side of the hub, said teeth at their points will interlock with each other and at the same time they will pass in between the teeth 1 1 on the perimeter of the hub. The cheek-pieces are countersunk, as at 5, so as to receive the hub therein, and when the hub and cheek-pieces are laid together, and the rivets, screws, or pins passed through the notched holes 2 2 and 3 3 and fastened, the wheel becomes one firm piece, with a broken or zigzag surface or line for the thread passing around it in its groove to bear against.

A thread-guide, *c*, is first placed on the shaft *A*, and bears against the shoulder *d* thereon. Then a felt or other flexible or elastic pad is slipped on. Then the tension-wheel, as a whole, is slipped onto said shaft, then another elastic or felt pad, then a washer, *e*, a spiral spring, *f*, and a regulating-nut, *g*, which completes the device, and makes it ready to be applied to a sewing-machine.

The ribs or projections 1 on the hub or wheel *a* prevent the thread from getting under the interlocking spurs or projections 4 4 of the side pieces, so that, while a zigzag line is given to the thread that passes around or only partly around the tension-wheel, there is no danger of the thread either getting fast, and thus breaking, or of wearing the surfaces against which it runs, so as to let it slip without any holding.

The spurs or teeth 4 may be changed in form, but should always stand with a stud, tooth, or spur on one side, placed opposite a space on the opposite side of the groove.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A thread-tension wheel for sewing-machines, composed of a toothed central hub and cheek-pieces with beveled spurs, said teeth and spurs interlocking with each other, and the whole secured by rivets or other well-known devices, substantially as and for the purpose described.

JOHN H. MOONEY.

Witnesses:

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