

No. 843,190.

PATENTED FEB. 5, 1907.

S. B. WILSON.
THREAD GUARD.

APPLICATION FILED MAY 14, 1906.

Fig. 1.

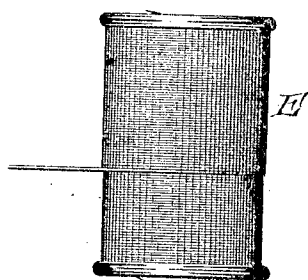


Fig. 3.

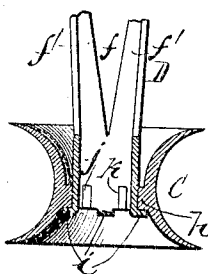


Fig. 2.

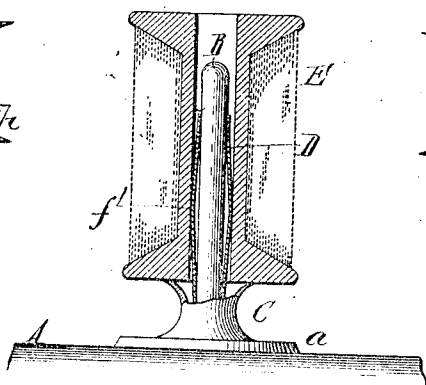


Fig. 4.

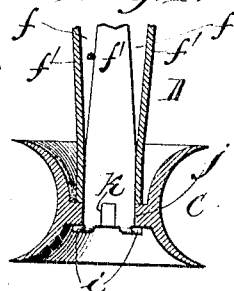


Fig. 5.



Fig. 6.

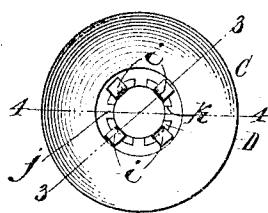
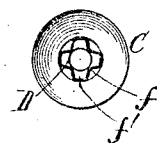


Fig. 7.



Witnesses
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THREAD-GUARD.

No. 843,190.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed May 14, 1906. Serial No. 316,622.

To all whom it may concern:

Be it known that I, SARA B. WILSON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Thread-Guards, of which the following is a specification.

This invention relates to the guards or protectors employed in connection with the spools of sewing-machines for preventing the thread from winding around the spool-holder of the machine and binding or interfering with its tension.

The object of my invention is to provide an efficient guard of this character which can be cheaply produced.

In the accompanying drawings, Figure 1 is a side elevation of the guard with a spool of thread mounted thereon. Fig. 2 is a sectional elevation thereof. Fig. 3 is a fragmentary vertical section of the guard, on an enlarged scale, in line 3 3, Fig. 6. Fig. 4 is a similar section in line 4 4, Fig. 6. Fig. 5 is a side elevation of the guard with the spool omitted. Fig. 6 is an enlarged bottom plan view thereof. Fig. 7 is a horizontal section in line 7 7, Fig. 5.

Similar letters of reference indicate corresponding parts throughout the several views.

A indicates the arm of the sewing-machine, having the usual flat boss *a*, and B is the spool-holder or post rising from said boss.

The improved guard comprises a base C, resting upon the boss *a*, and a hollow or tubular post D, extending upwardly from the base and secured centrally thereto, the base and the post loosely surrounding the spool-holder so as to be free to rotate thereon. The spool of thread E is placed upon the post and rests upon the base C, the post being provided with means for compelling it to turn with the spool as the thread is unwound therefrom. In the preferred construction shown in the drawings the post is constructed of steel and provided with a number of longitudinal slots *f*, forming intervening elastic webs or tongues *f'*, which are bulged midway between their ends and bear against the wall of the opening in the spool with sufficient pressure to cause the post, the base, and the spool to turn together. The slots *f* are preferably tapered toward their ends, so that the spring-tongues are narrowest at their middle. In order to obtain the necessary frictional contact between the spool and the post and also adapt the latter to spools with

different-sized openings, the diameter of the bulged portion of the post is somewhat greater than the bore of the spool-opening, so that the spring-tongues *f'* are compressed more or less in passing the spool over the post and pressing it down upon the base C. These tongues while clamping the spool to the post permit the spool to be readily applied to and removed from the post.

The slots *f* terminate short of the upper and lower ends of the post, so that only the bulged central portion of the latter is free to contract upon pressing a spool over it. This construction tends to prevent the spring-tongues *f'* from bearing against the spool-holder and causing binding of the spool, the ends of the tongues by their connection with the solid unslotted end portions of the post stiffening the bulged portions of the tongues and resisting their inward deflection.

The base C preferably has a concave face or groove extending from its upper to its lower edge, giving it the appearance of a grooved pulley or sheave. The upper and lower edges of the base are comparatively sharp, so that no shoulders or abrupt edges are formed between the same and the bottom of the spool and the flat surface of the boss *a*. By this construction in case the thread drops below the spool it cannot enter between the spool and the base or between the base and the boss *a* and wind around the spool-holder, but is kept away from the latter by the concave base. Should the thread coil around the base, it will not become bound, but will simply unwind from it as it does from the spool, and owing to the concave form of the base the thread will naturally seek the deepest part of the groove, thus counteracting any tendency of the thread to work between the base and the spool or between the lower edge of the base and the boss *a*.

The hollow post may be secured to the base by any suitable means. In the preferred construction shown in the drawings the sheave-like base is provided with a hub *h*, in which the lower end of the post is snugly fitted and in which it is confined against upward displacement by outwardly-turned lips *i*, formed at the lower end of the post and overlapping the lower side of said hub, as shown in Fig. 3. The post is held against downward displacement on the base by lugs *j*, projecting inwardly from the hub into notches *k*, formed in the lower end of the post, as shown in Figs. 4 and 6. These in-

terlocking lugs and notches also prevent the post from turning on the base.

I claim as my invention—

1. A thread-guard comprising a base constructed to fit over a spool-holder, and a hollow post rising from the base and having longitudinal spring-tongues bulged between their ends to engage the bore of a spool and joined to the post at their upper and lower ends but terminating short of the ends of the post, whereby the tongues are held against inward and outward displacement at their ends and only their bulged middle portions are permitted to contract and expand, substantially as set forth.

2. A thread-guard, comprising a base constructed to fit over a spool-holder, and a hollow post rising from the base and provided with longitudinal slots terminating short of its upper and lower ends, forming spring-tongues which are joined to the post at both ends, the central portions of the tongues being bulged and adapted to engage the bore of a spool, substantially as set forth.

3. A thread-guard, comprising a base con-

structed to fit over a spool-holder, and a hollow post rising from the base and provided with longitudinal slots terminating short of its upper and lower ends, forming spring-tongues which are joined to the post at both ends, the tongues being tapered from their ends toward their middle and their narrow middle portions being bulged, substantially as set forth.

4. A thread-guard, comprising a circular base constructed to turn upon a spool-holder and adapted to support a spool, said base having a concave annular face extending from its top to its bottom, forming unshouldered edges at the upper and lower edges thereof, a hollow spool-post secured to the base, and means for compelling the spool to turn with said post and base, substantially as set forth.

Witness my hand this 10th day of May, 1906.

SARA B. WILSON.

Witnesses:

C. F. GEYER,

E. M. GRAHAM.