F. C. LUETHY.

SPOOL HOLDER FOR SEWING MACHINES.

APPLICATION FILED JUNE 19, 1908.

923,867. **Patented June 8, 1909.**

Fig. 1.

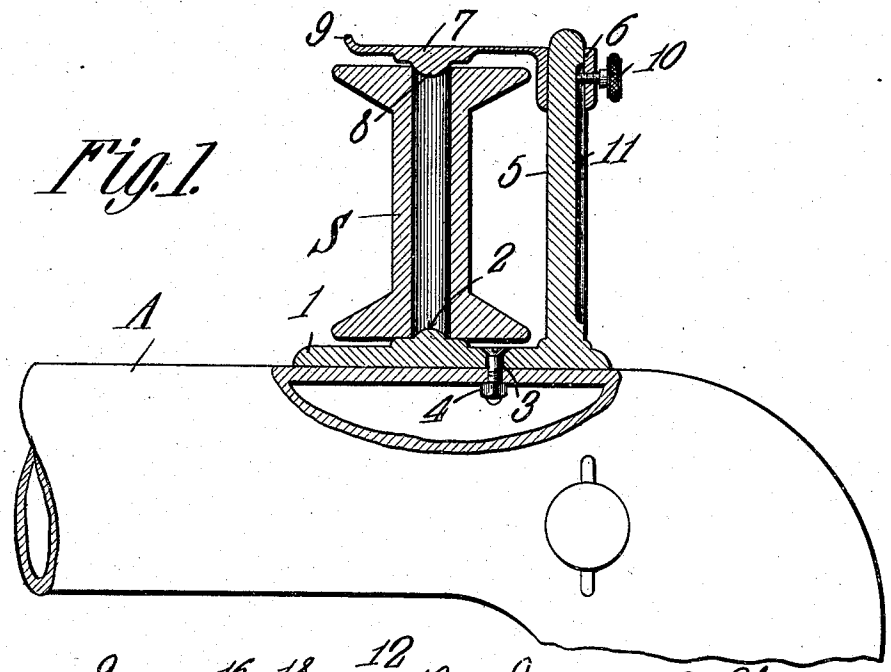


Fig. 2.

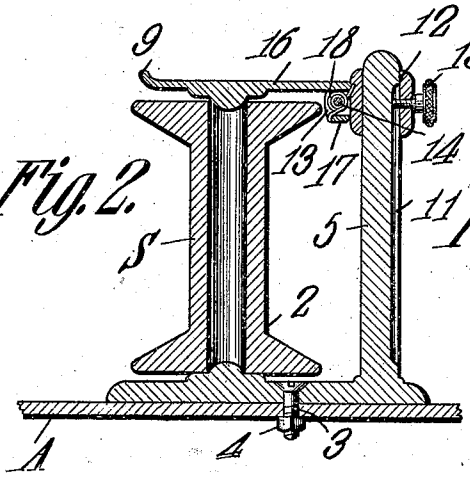


Fig. 4.

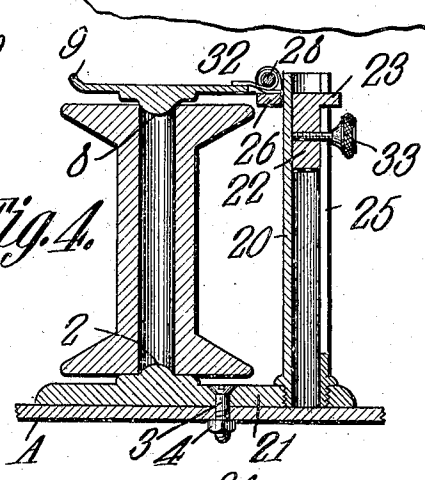


Fig. 3.



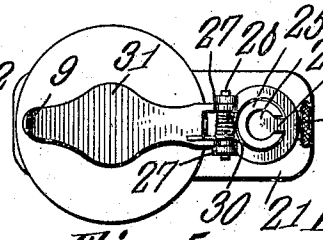


Fig. 6.

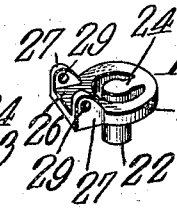


Fig. 5.

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SPOOL-HOLDER FOR SEWING-MACHINES.

No. 923,867. Specification of Letters Patent. Patented June 8, 1909.

Application filed June 19, 1908. Serial No. 439,413.

To all whom it may concern:

Be it known that I, FREDERICK C. LUETHY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Spool-Holder for Sewing-Machines, of which the following is a specification.

This invention relates to spool holders for sewing machines.

The object of the invention is to provide an article of this character which may readily be attached to a sewing machine without requiring any change in the structural arrangement of the latter, and which shall, in operation, be thoroughly effective in retaining a spool of cotton in position and also of exerting such tension thereon as, while not interfering with the feed of the thread, to prevent the same from unwinding too rapidly, or the spool from turning from the vibrations imparted to the machine arm due to the running of the machine.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in a spool holder for sewing machines, comprising a base provided with a spool center, and being designed to be attached to the upper side of the arm of the sewing machine.

Carried by the base is a standard or upright, which may be of any preferred height, and with which is assembled a member that is adapted to slide lengthwise of the standard and to be locked at any point thereon against both longitudinal and rotary movements. The member has assembled with it, in any preferred manner, a spool clamp that is provided with a spool center, the clamp being adapted to exert sufficient resilient pressure upon the spool to hold the same against turning from the vibrations of the machine, and also to check any tendency of too free feeding of the thread.

The invention consists further in the various novel details of construction of a spool holder for sewing machines, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts,—Figure 1 is a view in side elevation, partly in section, of a portion of a sewing machine arm showing the spool holder assembled therewith, the latter element as well as the spool being in section. Fig. 2 is a vertical longitudinal sectional view through a modified form of spool holder. Fig. 3 is a perspective detail view of a portion of the holder shown in Fig. 2. Fig. 4 is a similar view of a still further modified form of spool holder. Fig. 5 is a top plan view of the spool holder shown in Fig. 3. Fig. 6 is a perspective detail view of a portion of the spool holder shown in Fig. 3.

Referring to the drawings and to Fig. 1 thereof, A designates a portion of the arm of a sewing machine of any character, and to the upper side of which and at the appropriate point of its length, is secured the spool holding attachment constituting the subject-matter of this invention.

The spool holder comprises a base 1 provided with an upstanding boss 2 that constitutes a spool center and is designed to engage with one end of the spindle opening of the spool S. The base may be of any appropriate shape, and is provided with an orifice through which passes a screw-threaded bolt 3 that is engaged by a nut 4 which serves to clamp the screw in position and thereby hold the base rigid with the machine arm.

Projecting upward at right angles to the base is a standard 5 which may be integral with the base or secured thereto, and which is of a height somewhat greater than the largest spool of thread placed on the market. This standard, which is preferably though not of necessity, circular in cross section, is engaged by a collar 6 with which is combined the spool clamp 4, the latter being provided with a downward-extending boss 8 that constitutes a spool center and engages the end of the spindle opening of the spool opposite that engaged by the boss 2. The spool clamp may be of the general contour shown in Fig. 5 and that portion carried by or forming an integral portion of the collar 6 is relatively thin in order to permit of the clamp being sprung away from the spool when it is desired to remove the latter from the machine. To facilitate this latter operation, the outer or free end of the clamp is upturned to form a finger-hold 9 as clearly shown in Figs. 1, 2, 4 and 5.

In order to hold the collar or spool clamp carrying member at any desired adjustment upon the standard 5, and also to prevent it from having any rotary movement relatively

thereto, the collar is provided with a set screw 10 that engages a longitudinal groove or channel 11 in the outer side of the standard.

In the form of the invention shown in Figs. 2 and 3, the spool clamp carrying member 12 is provided with a pair of orificed ears 13. Projecting through the ears is a shaft or rod 14 that passes through an orificed ear 15 carried by the inner end of the spool clamp 16 and provided with a lateral arm 17, the connection between the parts being such as to permit the spool clamp to be swung from the position shown in Fig. 2 to one at right angles thereto. In order to cause the spool center 8 of the spool clamp 16 to engage with the upper end of the spindle opening of the spool, there is a coiled spring 18 provided, one terminal of which bears against the member 12 and the other against the front edge of the arm 17. It will be seen from this arrangement, that the tendency of the spring will always be to cause the member 16 to occupy a horizontal or substantially horizontal plane, and furthermore to cause the said member to exert a sufficient yielding pressure upon the spool to prevent it from turning from the vibration of the machine, and also to obviate the too free feeding of the thread. The member 12 carries a set screw 19 that engages a longitudinal groove 11 in the standard 5 in the same manner as that described in connection with Fig. 1.

In the form of the invention shown in Figs. 4, 5 and 6, the standard 20 has a threaded connection with the base 21, whereas in the other two forms described, the standard and base are preferably integral. The standard 21 is also tubular and houses a spool clamp carrying member comprising a core or plug 22 to engage the bore of the standard, and a collar or annulus 23 to surround the same, the plug 22 being connected with the annulus 23 by a neck 24 that works in a longitudinal slot 25 formed in the outer wall of the standard. Projecting from one side of the annulus 23 is an approximately rectangular extension 26 that carries two spaced ears 27 disposed at right angles to the extension. These ears are engaged by a pin or rod 28 that passes through orifices 29 provided for the purpose, and the pin also engages a pair of ears 30 carried by the spool clamp 31.

In order to cause the spool clamp to engage the spool with a yielding pressure there is a coiled spring 32 provided which engages the pin 28 and has one of its terminals disposed upon the upper face of the extension 26, as shown in Fig. 4, and its other extension bearing upon the upper face of the spool clamp 31.

In order to hold the spool clamp carrying member at any desired adjustment relatively to the standard, a set screw 33 is provided which engages a threaded transverse orifice in the member 22, and operates when tightened to secure the objects sought.

It will be seen from the foregoing description that in each of the forms shown, means is provided whereby the spool clamp may yield thus to permit of the spool being removed when desired for the purpose of changing the color of the thread or otherwise, and also that the spool will be held from accidental turning. Furthermore, each of the forms shown provides novel and positively operating means whereby the spool clamp may be held at any desired adjustment upon the standard, and further be held against rotary movement relatively thereto, thereby always to insure the proper alinement of the spool centers 2 and 8.

What is claimed is:—

1. A spool-holder comprising a base for attachment to a sewing machine and provided with a spool center, a standard projecting vertically from one end of the base and having a longitudinal groove formed therein, a vertically adjustable collar slidably mounted on the standard and provided with an over-hanging spring pressed spool clamp having a depending spool center disposed in vertical alinement with the spool center on the base, and a clamping screw extending through the collar and having its inner end seated in said groove for locking the collar in adjusted position.

2. A spool holder including a base for attachment to a sewing machine and provided with a vertically disposed boss having a convex face constituting a spool center, a standard projecting vertically from one end of the base and having a longitudinal groove formed therein, a collar slidably mounted on the standard and adjustable vertically of the latter, an over-hanging spring pressed clamping arm formed integral with the collar and having its free end bent upwardly to form a terminal finger piece and its intermediate portion provided with a depending boss having a convex face constituting a spool center, the spool center of the clamping arm and the spool center of the base being disposed in vertical alinement, and a clamping screw piercing the collar and engaging the groove in the standard for locking the collar in adjusted position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FREDERICK C. LUETHY.

Witnesses:

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G. I. HUMMER.