April 24, 1934. E. F. BARTLING 1,956,338

THREAD GUIDE FOR SEWING MACHINES

Filed Dec. 4, 1931

FIG. 1.

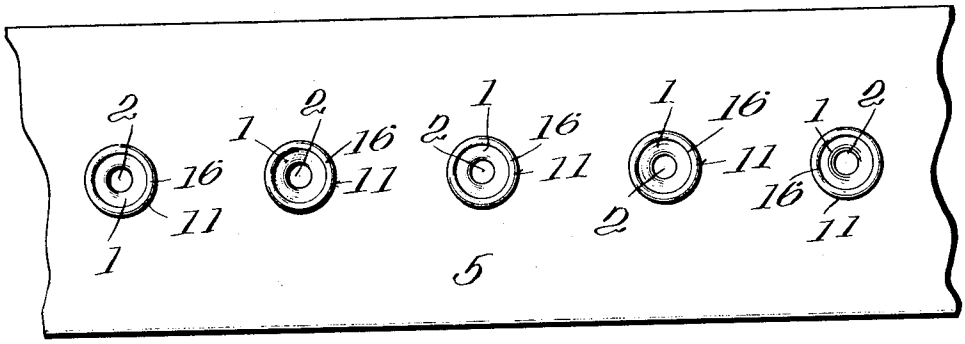


FIG. 2.

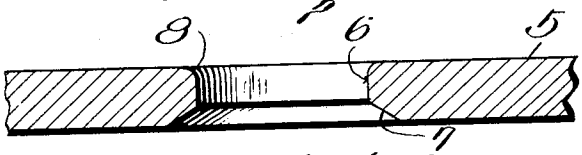


FIG. 3.

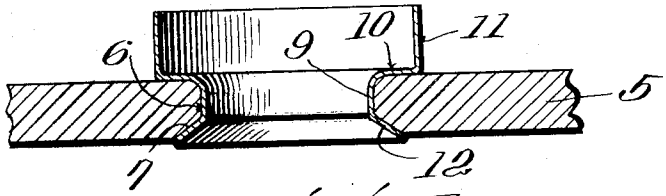
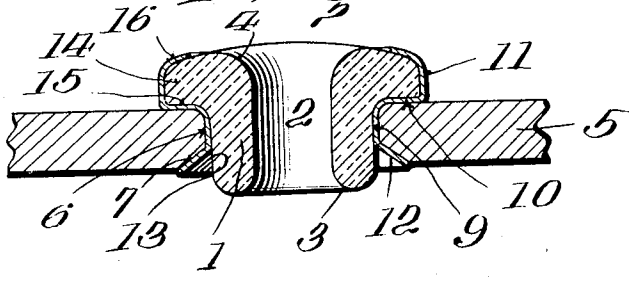


FIG. 4.



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THREAD GUIDE FOR SEWING MACHINES

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2 Claims. (Cl. 112—218)

The invention relates to new and useful improvements in a thread guide for sewing machines.

An object of the invention is to provide a thread guiding member having a smooth, non-abradable surface with which the thread makes contact, with a supporting means retaining the member in a fixed position relative to the support therefor by a metal part placed in firm gripping contact with said member.

A further object of the invention is to provide a thread guiding member in the form of an eyelet, having a smooth, non-abradable surface with which the thread makes contact, with a supporting sleeve therefor shaped so as to firmly grip the eyelet and hold the same in a fixed position in the sleeve.

In the drawing—

Figure 1 is a plan view of a support having a plurality of thread guiding members attached thereto embodying the invention;

Fig. 2 is a sectional view through the support before the retaining sleeve for the eyelet is applied thereto;

Fig. 3 is a similar view showing the sleeve applied and sectioned preparatory to receiving the eyelet, and

Fig. 4 is a view similar to Fig. 3, but showing the sleeve shaped so as to firmly grip the eyelet and hold it in a fixed position on the supporting member.

The invention is directed to a thread guiding means for sewing machines. The thread passing from the supply to the stitching implements is necessarily guided at various points in order to properly direct the thread and also through moving parts operating on the thread to take care of the slack incident to the stitch formation and in the setting of the stitches. In the forming of tight stitches, the thread is usually a hard twisted thread and is placed under considerable strain. The thread often reeves back and forth through the thread guide. The present invention is directed particularly to a thread guiding member preferably in the form of an eyelet which is provided with a smooth, non-abradable surface so as to resist the wear of the thread as it moves across said surface and so as to prevent the surface of the thread eyelet contacting with the thread becoming rough and chafing the thread. The eyelet is pre-formed and the surface produced is smooth and non-abradable and it is then attached to the supporting member therefor. This is accomplished by providing a supporting sleeve which is attached to the main support for the thread guiding eyelet, and this sleeve is so shaped as to receive the eyelet, housing a portion thereof so that when the sleeve is bent or folded into gripping contact with the eyelet, it will be held in a fixed position relative to the eyelet supporting member.

The invention will possibly be better understood by reference to the illustrated embodiment thereof. The thread guiding eyelet is indicated at 1. Said thread guiding eyelet is provided with an opening 2 therethrough which is of cylindrical form with the ends of the opening flared outwardly at 3 and 4, respectively, so as to provide a surface which is free from sharp shoulders over which the thread is guided. This eyelet may be made of any suitable material which will provide a smooth non-abradable surface with which the thread makes contact. It is preferably made of a ceramic material having the thread contacting surface thereof glazed, and commonly referred to as "porcelain". It may be made of a vitreous material, such as glass. The thread guiding eyelet is pre-formed and is then attached to a supporting member. The supporting member is indicated at 5 in the drawing. Said supporting member may carry a plurality of eyelets or a single eyelet. It is provided with an opening 6 which tapers outwardly forming an inclined chamfered surface 7 at the lower side thereof. The upper edge of the opening is rounded as indicated at 8. The eyelet is secured to the supporting member by a retaining metallic sleeve. This sleeve is formed with a cylindrical portion 9 adapted to fit within the opening 6. The sleeve is turned outwardly so as to form a seating flange 10 at the outer edge of which is a cylindrical portion 11. When the sleeve is placed in the support 5, the lower end thereof is flared outwardly at 12 so as to engage the inclined surface 7 and thus firmly secure the sleeve to the supporting member. The eyelet 1 has a cylindrical portion 13 which fits within the cylindrical portion 9 of the sleeve, and also a radially projecting portion 14 which fits within the cylindrical portion 11 of the sleeve. The eyelet has a shoulder 15 which rests on the seating flange 10. After the eyelet is positioned in this sleeve, the upper edge portion 16 of the sleeve is spun or bent inwardly so as to contact with a portion of the outer face of the eyelet and firmly grip the eyelet by these folded metal parts, thus holding the eyelet in a fixed position relative to the support 5.

When the eyelet is made of a material such as referred to above, a surface is provided which is smooth and non-abradable by the thread moving

back and forth on the surface. Furthermore, the surface does not wear and become rough so as to chafe the thread. The eyelet is held by a firm clamping of the same in the metal sleeve housing therefor, so that it will be retained in a fixed position, and through a clamping action which is not liable to in any way fracture the eyelet.

It will be obvious that other shapes of thread guiding members may be used provided the thread contacting surface thereof is smooth and non-abradable, and it is also obvious that other forms of supporting means may be provided, the essential feature being that the eyelet may be preformed and held in a fixed position by the gripping of the same by metal parts.

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

1. A thread guide for sewing machines comprising a non-metallic thread guiding eyelet having a smooth, glazed non-abradable surface with which the thread makes contact, said eyelet having a cylindrical portion and a radially projecting portion forming a supporting shoulder, a support having an opening therethrough, and a metallic sleeve in said opening having a cylindrical portion fitting the opening, and also a radially extending flange contacting with one face of said support and forming a seat for the shoulder of the eyelet, said sleeve having a cylindrical portion at the outer edge of said flange adapted to receive the radially projecting portion of the eyelet, the outer edge portion of said sleeve being bent into firm contact with the eyelet for fixedly attaching the eyelet to the sleeve, said sleeve being fixed to the support.

2. A thread guide for sewing machines comprising a non-metallic thread guiding eyelet having a smooth, glazed, non-abrading surface with which the thread makes contact, a support having an opening therethrough, a metallic sleeve located in said opening and extending radially outward and contacting with said support at each side thereof for rigidly securing said sleeve thereto, said eyelet having a cylindrical portion extending through the opening in the sleeve and a portion at one side of said support projecting radially beyond said opening and adapted to seat against the support, said sleeve being shaped so as to engage said radially projecting portion of the eyelet and so as to engage said support for rigidly holding said eyelet seated on the support.

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