F. CASS.

PORCELAIN THREAD GUIDE.

APPLICATION FILED DEC. 17, 1918

1,296,479.

Patented Mar. 4, 1919.

Fig. 1.

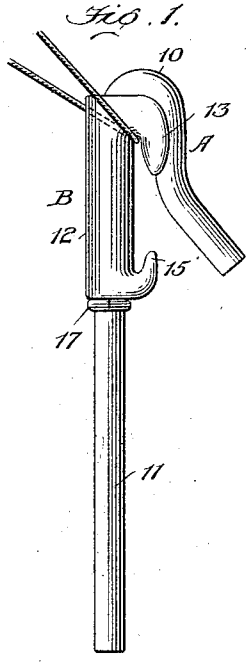


Fig. 2.

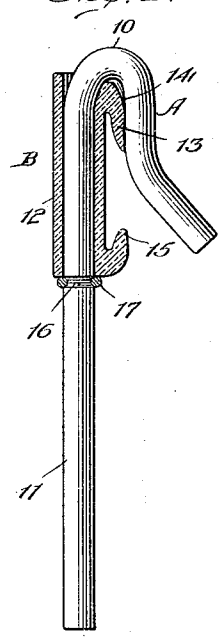
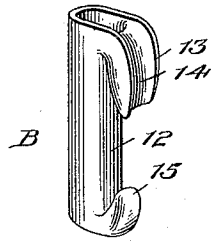


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREEMAN CASS, OF BROOKLYN, NEW YORK, ASSIGNOR TO MITCHELL-BISSELL CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

PORCELAIN THREAD-GUIDE.

1,296,479. Specification of Letters Patent. Patented Mar. 4, 1919.

Application filed December 17, 1918. Serial No. 267,149.

To all whom it may concern:

Be it known that I, FREEMAN CASS, a citizen of the United States, and residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Porcelain Thread-Guides, of which the following is a specification.

In certain types of winding machines it has been customary to direct the thread around or under metal hooks for guiding and tensioning purposes and it has been found that the thread or cord rapidly cuts away the metal forming a groove or grooves which, in turn, tend to abrade the thread or cord and cause breakage. The object of the invention is to provide a procelain or other vitreous protecting body for such hooks adapted to fit the hooks now in use and to prevent abrasion of the same. The hooked sleeve or body which I have devised may be used upon the metal hooks or guides of new machines and it may also be used upon hooks that have become partially cut or severed by wear and which would otherwise have to be discarded.

The invention is illustrated in the accompanying drawings in which:—

Figure 1 is a side view of a metal hook provided with a porcelain guide;

Fig. 2 is a similar view, the porcelain guide and its retaining ring being shown in section; and

Fig. 3 is a perspective view of the porcelain guide.

Referring to the drawing, A indicates the metal hook or thread guide of the type now commonly used and B a porcelain sleeve adapted to the same and provided with hooked extensions. The part A has a return bend 10 under which the thread has ordinarily been conducted and a shank 11 for attachment to a winding or other textile machine. The porcelain or vitreous sleeve B has a tubular portion 12 adapted to fit closely over the shank 11, and a hook 13 conforming generally to the inner line of the hook 10. The outer face of the hook 13 has a concaved surface 14 which fits the rounded inner surface of the hook 10, thus preventing the sleeve B from turning and holding the porcelain hook 13 in proper position to receive the thread which, heretofore, ran directly upon the metal hook. The hook 13 is preferably concavo-convex in cross section, thus presenting a rounded surface to the thread or cord. The sleeve B is also preferably provided with an upwardly extending hook 15 at its lower end in the same plane as the hook 13 and adapted to engage the thread or cord if it becomes slack and drops out of the hook 13.

The porcelain hook is removably secured to the metal hook so that it may be replaced if broken or cracked. This is cheaply and effectively accomplished by cutting an annular groove 16 in the shank of the metal hook immediately below the position occupied by the porcelain hook B and placing therein a ring 17 which may be of soft or malleable metal or of spring metal. If of soft metal it may be readily removed with a suitable tool and another one pinched into place, and if of spring metal the ring may be pried out of the groove and slipped off of the shank and then replaced after another porcelain sleeve has been placed on the shank of the metal hook. By the use of the vitreous protecting hooks the life of the metal hooks is indefinitely prolonged, even after they are partially cut through by abrasion. The porcelain hooks will last indefinitely unless broken or damaged otherwise than by abrasion of the thread or cord.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:—

1. A thread guide comprising a metal hook having a shank for attachment to a textile machine, in combination with a vitreous body comprising a sleeve adapted to fit the shank of the metal hook, and a hooked portion fitting the return bend of the metal hook.

2. A thread guide comprising a metal hook having a shank for attachment to a textile machine, in combination with a vitreous body comprising a sleeve adapted to fit the shank of the metal hook, and a hooked portion which is concavo-convex in cross section, the concaved side fitting around the return portion of the metal hook, for the purpose set forth.

3. A thread guide comprising a metal hook having a shank for attachment to a textile machine, in combination with a vitreous body comprising a sleeve adapted to fit the shank of the metal hook, a hooked portion at one end of the sleeve fitting the re-

turn bend of the metal hook, and a hook at the opposite end of said sleeve in the same plane with the aforesaid hook and turned reversely thereto.

4. A thread guide comprising a metal hook having a shank for attachment to a textile machine, in combination with a vitreous body comprising a sleeve adapted to fit the shank of the metal hook, and means for removably securing the vitreous body in operative position on the shank, said vitreous body having a hook portion conforming to the metal hook.

5. A thread guide for textile machines, comprising a hollow cylindrical sleeve of vitreous material having at each end an integral hook, said hooks facing toward each other and being in the same plane, and one of the hooks being concavo-convex in cross section, for the purpose set forth.

In testimony whereof I affix my signature.

FREEMAN CASS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."