F. CASS.

THREAD GUIDE.

APPLICATION FILED FEB. 14, 1919.

1,373,487. **Patented Apr. 5, 1921.**

Fig. 1.

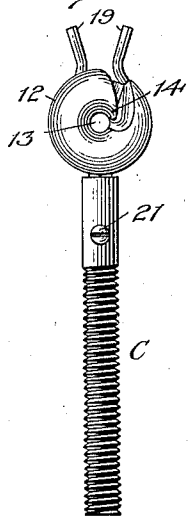


Fig. 2.

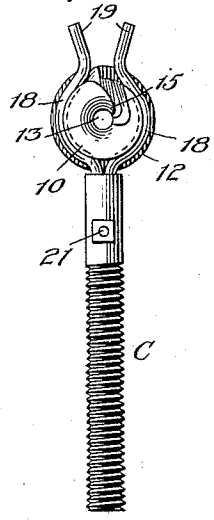


Fig. 3.

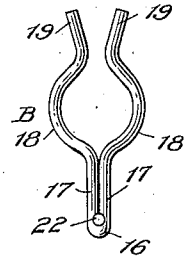


Fig. 4.

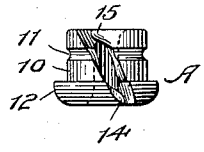


Fig. 5.

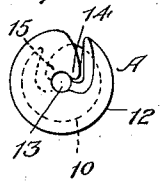


Fig. 6.

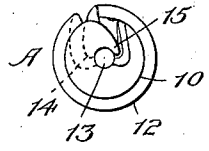


Fig. 7.

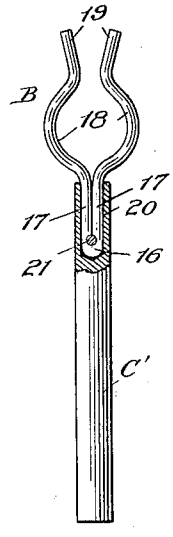
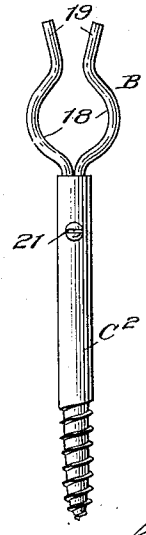


Fig. 8.



Witness

Edwin L. Bradford

Inventor

Freeman Cass

By Foster Freeman Watson & Coit

Attorneys

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.

THREAD-GUIDE.

1,373,487. Specification of Letters Patent. Patented Apr. 5, 1921.

Application filed February 14, 1919. Serial No. 276,993.

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 Thread-Guides, of which the following is a specification.

This invention comprises a vitreous thread guide and a holder for the same for use in spinning and twisting machines. The object of the invention is to provide a device of this kind which is simple and practical and which provides for ready removal and replacement of the vitreous guide, which is usually porcelain, and liable to accidental breakage.

The invention will be described in connection with the accompanying drawing, in which:

Figure 1 is a top plan view of a guide and holder;

Fig. 2 is a bottom plan view of the same;

Fig. 3 is a view of a clip which receives the porcelain guide detached from the supporting shank;

Fig. 4 is a side view of the porcelain guide;

Fig. 5 is a plan view of the same showing the upper hook in full lines and the lower hook in dotted lines;

Fig. 6 is a bottom plan view of the same;

Fig. 7 is a plan view of the guide holder and shank, the latter being shown partly in section to illustrate the manner of securing the holder in the shank; and

Fig. 8 is a plan view of a holder fitted into a different form of shank.

Referring to the drawings, A indicates a porcelain thread guide, B a holder therefor, and C a shank or support for attaching the guide and holder to a winding or spinning machine. In Figs. 1 and 2, the shank C has a machine-screw thread for attaching the device to the machine. In Fig. 7 the shank C' is plane and in Fig. 8 the shank C^2 is provided with a wood-screw thread for attachment to a wooden rail.

The porcelain guide A has a cylindrical body 10 with an annular groove 11 near its middle part and a head or enlargement 12 at one end. The guide has a central circular opening 13 and a slot inclined to the axis of the guide connects the central opening with its outer surface whereby a thread can be passed into the central opening through the slot. The inclined slot provides a hook 14 at one side and a reversely turned hook 15 at the other side, that is, at opposite ends of the central opening 13. These hooks overlap considerably, as indicated in Fig. 5, and serve to prevent the thread from escaping from the central guiding opening.

The porcelain guide is mounted in the yoke shaped holder B which is preferably of spring wire doubled at 16, the two branches of the wire being parallel and forming a stem 17. Beyond the stem the wire is bent into substantially semicircular portions 18 and the free ends of the wire beyond this portion are bent outwardly as at 19. The semicircular portions are adapted to fit the groove 11 in the thread guide and grip the guide securely. The wire is sufficiently flexible to permit the two branches of the yoke to be separated to admit the porcelain guide.

The several stems or shanks C', C^2 are bored out as at 20, Fig. 7, to receive the stem 17 of the holder B and the stem is secured in the shank C by means of a pin or screw 21 which passes through the shank and through a hole 22 in the stem, preferably at the end 16.

It will be observed that the porcelain may be readily placed in the holder when the holder is free from the shank C, as shown in Fig. 3. When the holder is in the shank, however, its branches are prevented from spreading and the guide is thus securely locked against removal or loss. The two branches of the holder are normally separated sufficiently to pass a thread in between them and through the inclined groove into the axial opening in the guide.

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

1. In a thread guide for textile machines, the combination with a cylindrical vitreous body having an axial thread opening and a slot extending from said opening to the periphery, of a holder comprising a wire or strip of substantially uniform cross section doubled on itself midway of its length into substantial parallelism to form a stem of predetermined length, and having the portions beyond said stem toward the free ends symmetrically and oppositely bent in semicircular form with the projecting ends beyond said semi-circular parts bent out-

wardly from each other to form means for engaging and holding said body, and a shank having an open end socket to receive and fit laterally around said stem to support it and prevent spreading.

2. In a thread guide, the combination with a vitreous body having an opening for the thread and a slot connecting said opening with its periphery, of a holder comprising a substantially uniform wire or strip doubled upon itself to form a stem and curved above said stem to form arms to embrace said body, the doubled portion forming a stem, and a shank having a bore to receive said stem, the holder being adapted to be sprung over the body when it is removed from the shank and being locked on the body by the shank.

3. In a thread guide for textile machines, the combination with a cylindrical vitreous body having a circumferential groove and a thread guiding opening, of a holder for said body comprising a strip doubled upon itself to form a stem with two arms beyond said stem so formed as to embrace said body and lie in said groove, and a shank having an opening to receive and longitudinally fit around the stem of the holder, and in which said stem fits closely and means for securing the holder in said shank.

4. A holder and support for thread guides in textile machines comprising a holder consisting of a resilient wire doubled upon itself midway of its length bringing the parts into substantial parallelism from that point toward the ends for a fixed distance to form a stem and the parts forming the stem having facing semicircular bends beyond the stem, the return bend being of less length than the outward bend, and the ends of the wire parts beyond said semicircular portions being bent outwardly from each other at an angle, and a shank somewhat larger in section than said stem having entering its end an opening forming an elongated chamber therein receiving and laterally fitting said stem.

5. A holder and support for thread guides in textile machines comprising a holder consisting of a resilient wire doubled upon itself midway of its length bringing the parts into substantial parallelism from that point toward the ends for a fixed distance to form a stem, a transverse opening being formed in the facing surfaces of the parallel parts above the doubling bend, and the parts forming the stem having facing semicircular bends beyond the stem, the return bend being of less strength than the outer bend, and the ends of the wire parts beyond said semicircular portions being bent outwardly from each other at an angle, and a shank somewhat larger in section than said stem having entering its end an opening forming an elongated chamber therein receiving and laterally fitting said stem and having a transverse opening near its lower end alined with the transverse opening in the stem and a locking pin extending through said alined openings.

In testimony whereof I affix my signature.

FREEMAN CASS.