(Model.)

H. & L. SUTRO.

Tubular Slide for Watch Guards.

No. 237,782. Patented Feb. 15, 1881.

Fig. 1.

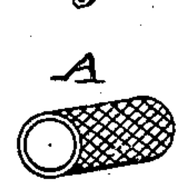


Fig. 2.

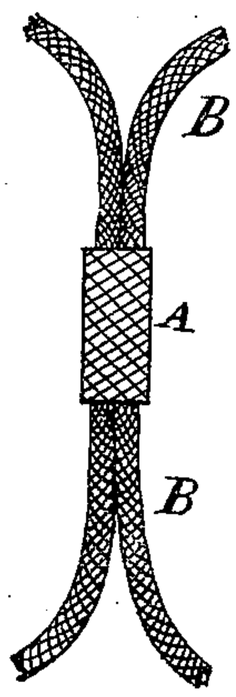


Fig. 3.

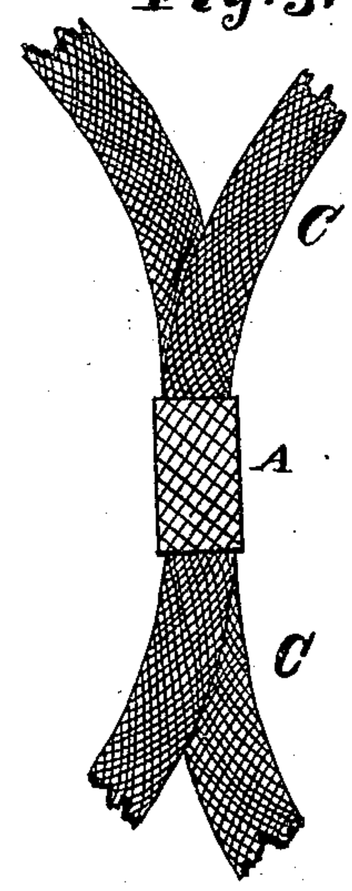


Fig. 4

Fig. 5

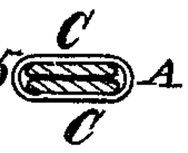


Fig. 6.

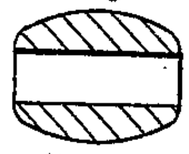
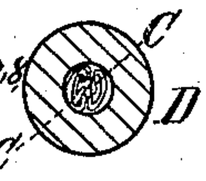


Fig. 7.

Fig. 8.



WITNESSES:

Thos H Wagstaff Jr

Allan M Stoddart

INVENTORS

Hugo Sutro

Ludwig Sutro

BY

Theo. Sutro

ATTORNEY

UNITED STATES PATENT OFFICE.

HUGO SUTRO AND LUDWIG SUTRO, OF NEW YORK, N. Y.

TUBULAR SLIDE FOR WATCH-GUARDS.

SPECIFICATION forming part of Letters Patent No. 237,782, dated February 15, 1881.

Application filed December 17, 1880. (Model.)

To all whom it may concern:

Be it known that we, HUGO SUTRO and LUDWIG SUTRO, of the city, county, and State of New York, have invented certain new and useful Improvements in Tubular Slides for Watch-Guards, Trimmings, and like purposes; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improved slide for watch-guards and other analogous articles, when made from cord, braid, or other similar flexible material.

The improvement consists in making the slides of paper or other pliable material of suitable dimensions, and then covering the same with a netting woven thereon, from thread or from other analogous material, and which we choose to call "quill-slides;" or else in cutting tubular-woven braid or cord into any desired length, so as to form flexible slides, the object being to provide an ornamental and cheaper slide than has been heretofore done, and also to make a slide which will adapt itself, on account of its flexibility, to the various styles or forms of braid.

Heretofore slides for the purposes mentioned have been made from wood molds, and the covering woven thereon, or else have been crocheted by hand without any molds. The holes through such wooden molds are two small for double cords or braids to slide or shift easily and smoothly through them. If the cord is round in form and forced through the hole double, it will become flattened and worn in appearance, and if flat braid is forced through the round hole it will become distorted, and in both cases the slides will not move easily on the braid or cord. If, on the other hand, the hole is made large enough for the cord or braid to pass through easily, so as to retain their forms, the slides must necessarily be too bulky and out of due proportion to the cord or braid to be ornamental in appearance, and therefore practically useless. The hole in the wood slide, which may be of any design externally, is always made round, as it would be too expensive to adapt the shape of the hole, in all cases, to the shape of the various kinds of braid or cord; besides, if the hole was shaped according to the form of the braid or cord, the wooden molds would also have to be shaped according to the shape of the hole, so that they may not be too thin in some places, which would be a very expensive process, or else they would have to be made of some much harder material than pine wood, which is now wholly used for that purpose on account of its cheapness. Moreover, the hole in the wooden molds, through which the cord or braid passes, is rough and injures the fiber. The slides crocheted by hand, on the other hand, are very expensive and very slowly made, and are clumsy and ungainly in appearance.

Now, to obviate the defects, as above described, in the wooden slides, we make them of paper and cover them in a suitable manner; and in place of the slides worked by hand we cut tubular braid into suitable lengths, and then tuck in the ends so that they will not unravel.

The advantages which the paper slide possesses over those made from wood are, first, the shells of the paper slides are always of uniform thickness, regardless of the shape or size of the hole through which the cord or braid passes; secondly, the inner part presents a uniform and smooth surface, which will not wear the cord and braid, as is done by the wooden slide; thirdly, on account of the flexibility of the material it will, though made in a cylindrical form, adapt itself to any form of cord or braid which may be passed through, or, in other words, the slide will conform to the style of cord or braid to be used, which it cannot do when made from wood; fourthly, it is neater in appearance when applied to the cord or braid than one made from wood; fifthly, on account of their pliability they cannot be broken, as they are made very strong by being spun over with silk, and, also, their circumference being much less than that of the wood slide, it will take less silk to cover them, in consequence of which, and the paper slide being much cheaper than the wooden mold, these quill-slides are less expensive as an article of manufacture than those made from wood.

The advantages of the flexible tubular slides

cut from tubular braid over the hand-made slides are that they are much cheaper, being machine-made, and neater in appearance.

Figure 1 is a view of the paper slide. Fig. 2 is a view of the paper slide with two cords passing through it. Fig. 3 is a view of the slide with two flat braids passing through it. Fig. 4 is a cross-section of Fig. 2, showing the two cords side by side. Fig. 5 is a cross-section of Fig. 3, showing the two flat braids lying one upon the other without folding over. Fig. 6 is a view of a wooden slide as now used. Fig. 7 is an end view, showing the distortion of two cords while passing through the hole. Fig. 8 is an end view, representing the appearance of two braids while passing through the slides.

Like letters of reference designate corresponding parts in all of the figures.

A in Fig. 1 represents a paper slide to be used upon cord or braid or other similar articles.

B B in Fig. 2 represents a double cord passing through the paper slide A.

C C in Fig. 3 represents a flat braid passing through the paper slide A.

In the cross-section, Fig. 4, the slide A is represented as conforming with or to the double cords B B, the cords retaining their shape, while the slide, on account of its flexibility, is made to conform thereto, and also a still greater conformation is shown in Fig. 5, where a double braid is shown in cross-section.

Fig. 6 represents the old style of wooden slide D.

Fig. 7 represents a cross-section of the same, with two cords, B B, passing through the round hole. These cords are necessarily distorted.

Fig. 8 is a cross-section of Fig. 6, representing the distortion or compressing of two braids, C C, when drawn through the wooden slide D.

What we claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, the herein-described slide, consisting of paper or other pliable material made into cylinders of suitable dimensions and spun or covered with silk or other similar material, for the purposes herein specified.

2. The herein-described flexible tubular slide made of woven tubular cord or braid.

HUGO SUTRO.
LUDWIG SUTRO.

Witnesses:
JNO. T. FAGAN,
THOS. C. LEAVENS.