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H. W. FEHR

2,108,013

TEMPLE ROLLER

Filed July 8, 1936

Fig. 1.

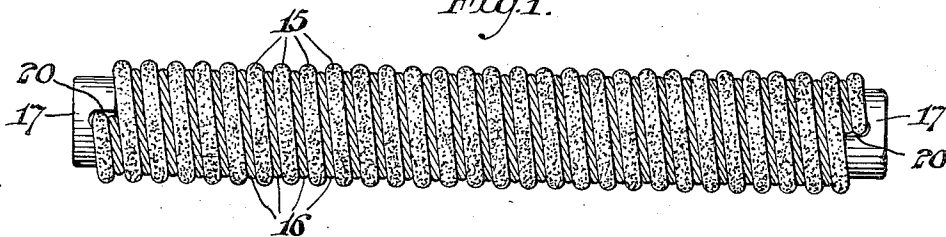


Fig. 2.

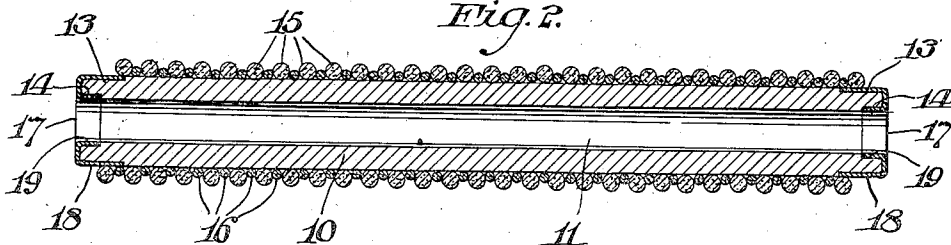


Fig. 4.

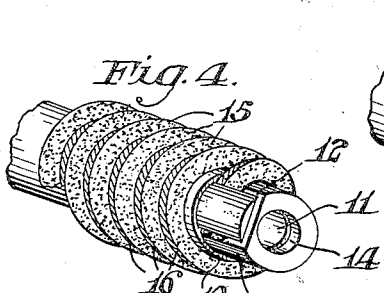


Fig. 3.

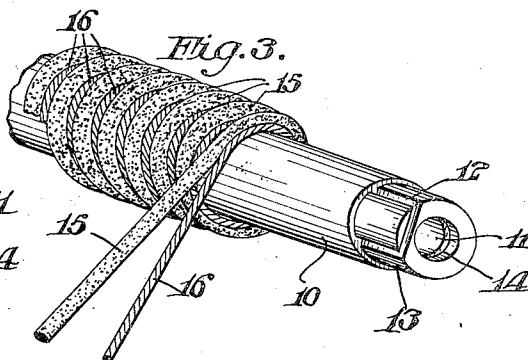


Fig. 5.

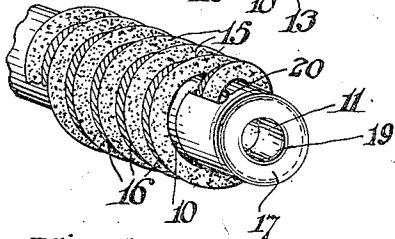
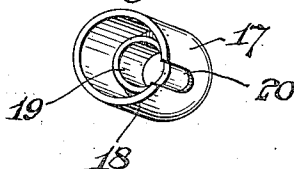


Fig. 6.



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UNITED STATES PATENT OFFICE

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TEMPLE ROLLER

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7 Claims. (Cl. 139—296)

This invention relates to temple rollers, that is to say, to the gripping rollers used in loom temples for spreading the cloth adjacent the fell thereof, thereby to eliminate the strain on the dents of the reed which would otherwise occur by reason of the contraction in the width of the cloth which occurs after the beat up.

The invention relates more particularly to an improved construction of the temple roller to provide a gripping surface of unique character so that said rollers may be used in connection with the finer fabrics such as silk, rayon and the like, in the weaving of which it is not permissible to use temple rollers having projecting pins or the like for engaging the cloth.

The principal object of the present invention is to provide an improved form of temple roller adaptable for gripping and holding the cloth spread without injury to the same.

A further object of the invention is to provide a temple roller the engaging surface of which is formed of a strand of cord, wire or other suitable material so wound on a core that a greater spreading action will be obtained than with temple rollers of this general type which have heretofore been used or suggested.

A further object of the invention is to provide a temple roller which may be inexpensively constructed and which has certain improved details of construction as will hereinafter appear.

The nature and characteristic features of the present invention will be more readily understood from the following description, taken in connection with the accompanying drawing forming part hereof, in which:

Figure 1 is an elevational view illustrating a temple roller embodying the main features of the present invention;

Fig. 2 is a longitudinal section thereof;

Fig. 3 is a perspective view illustrating a portion of one of the temple rollers of the present invention in an intermediate stage of its manufacture;

Fig. 4 is a similar view illustrating the same at a later stage in the manufacture thereof;

Fig. 5 is a similar view of a portion of a completed roller; and

Fig. 6 is a perspective view of a ferrule employed in the structure.

Referring to the drawing, in the particular embodiment of the invention therein shown, 10 is a hollow cylindrical core preferably made of wood or other fibrous material. The opening 11 which extends through the core from end to end permits the roller to be mounted on the spindle bolt

member of the temple in the usual manner. Each end of the core is provided with a kerf 12 extending chordally across the wall of the end portion of the core as illustrated in Figs. 3 and 4 of the drawing. Each end of the core 10 is also reduced in diameter as at 13 and is also provided with an internal counterbore as at 14, each for a purpose to be presently explained.

The gripping surface of the roller is provided by means of a cord, wire, or strip of suitable material 15, wound on the external surface of the core in helical convolutions. While heretofore temple rollers have been made with windings of various materials on the external surface of a core, it has, however, been customary to wind the same in close convolutions which did not afford a sufficient spreading action, by reason of the small pitch of the resulting convolutions, and also because the closeness of the tops of the successive coils more nearly approached a smooth surface particularly when slightly worn.

The present invention contemplates the use of at least two strands of different diameters so that the gripping surface is provided by the strand 15 of larger diameter, while the strand 16 of smaller diameter serves as an effective spacer, thereby to increase the pitch of the convolutions of the gripping strand, and also to separate the tops of successive coils to a greater extent.

It will be readily understood that the strands 15 and 16 may be made of any of the various materials such as have heretofore been suggested in the art, such, for example, as braided linen cord, wire, either plain or braided, rubber, leather or any other suitable material, and of any preferred cross-section.

In the weaving of rayon and similar materials derived from cellulose, it has been found that when the rollers are wound with cords made of natural cellulosic materials such as linens, a deleterious action occurs, resulting in the quick destruction of the surface of the roller, but by employing a winding in which the strand 15 of larger diameter is made of a cord composed of twisted strips of cellophane, this difficulty is largely overcome, with a resulting longer life for the temple roller.

The ends of the strands are preferably gripped in the kerfs 12 provided in the walls of the core at each end thereof, and also, if desired, the surface of the core may be coated with a suitable adhesive to cause the strands to be permanently cemented to the surface of the core.

Ferrules 17, preferably as shown in Fig. 6 of the drawing, are provided for each end of the

roller. Each of these ferrules is provided with an external cylindrical portion 18 and an internal cylindrical portion 19. The external cylindrical portion 18 of the ferrule is complementary to the reduced portion 13 of the core of the roller, while the internal cylindrical portion 19 of the ferrule is complementary to the counterbore 14 at each end of the core.

The ferrules are so dimensioned as to make a relatively tight fit, and when the same are forced on the end of the core, they will serve to contract the kerfed portion at each end of the core, and thus cause the ends of the strands to be more tightly gripped.

It will be noted that the convolutions of the gripping strands extend beyond the shoulder provided by the reduced portion at each end of the core, and the outer cylindrical portion of the ferrule will, when the ferrule is forced into place on the end of the core, slide beneath the convolutions of the windings at this point, thereby serving to tighten the same at each end. The outer cylindrical wall 18 of the ferrule is provided with a cut-out 20 to permit the same to pass those portions of the windings where the same enter the kerfs 12 at the ends of the core.

It should, of course, be understood that the windings may be either right hand or left hand as may be required to obtain the proper spreading action.

I claim:

1. A temple roller comprising a core having wound thereon a surface layer composed of a plurality of strands of different diameters, a strand of larger diameter providing gripping helices, and a spacing strand of smaller diameter serving to increase the pitch and the amount of separation of the gripping portions of successive coils of the larger strand.

2. A temple roller comprising a core having wound thereon a surface layer composed of a plurality of strands of different diameters, a strand of larger diameter providing gripping helices, and a spacing strand of smaller diameter serving to increase the pitch and the amount of separation of the gripping portions of successive coils of the larger strand, the core having kerfs in each end thereof in which the ends of the strands are secured.

3. A temple roller comprising a core having wound thereon a surface layer composed of a plurality of strands of different diameters, a strand of larger diameter providing gripping helices, and a spacing strand of smaller diameter serving to increase the pitch and the amount of separation of the gripping portions of successive coils of the larger strand, the core having kerfs in each end thereof in which the ends of the strands are secured, and ferrules mounted on the ends of the core serving to contract the kerfs to hold the ends of the strands therein.

4. A temple roller comprising a core having wound thereon a surface layer composed of a plurality of strands of different diameters, a strand of larger diameter providing gripping helices, and a spacing strand of smaller diameter serving to increase the pitch and the amount of separation of the gripping portions of successive coils of the larger strand, the core having kerfs in each end thereof in which the ends of the strands are secured, and ferrules mounted on the ends of the core each having a portion extending under the terminal coils at the respective ends of the winding.

5. A temple roller comprising a core having a surface layer including a helical strand wound thereon, and ferrules mounted on the ends of the core each having a portion extending under and in engagement with the terminal coils at the respective ends of the winding.

6. A temple roller comprising a core having a surface layer including a helical strand wound thereon, the core having kerfs in each end thereof in which the ends of the strand are secured, and ferrules mounted on the ends of the core serving to contract the kerfs to hold the ends of the strand therein.

7. A temple roller comprising a core having a surface layer including a helical strand wound thereon, the core having kerfs in each end thereof in which the ends of the strand are secured, and ferrules mounted on the ends of the core each having a portion extending under and in engagement with the terminal coils at the respective ends of the winding.

HARRY W. FEHR.