

Dec. 12, 1944.

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2,364,983

LOOM TEMPLE ROLL

Filed March 6, 1943

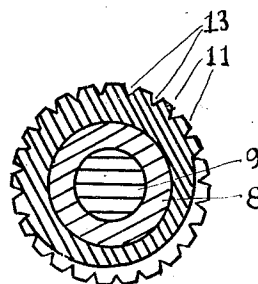
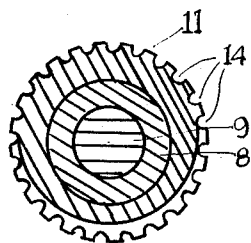
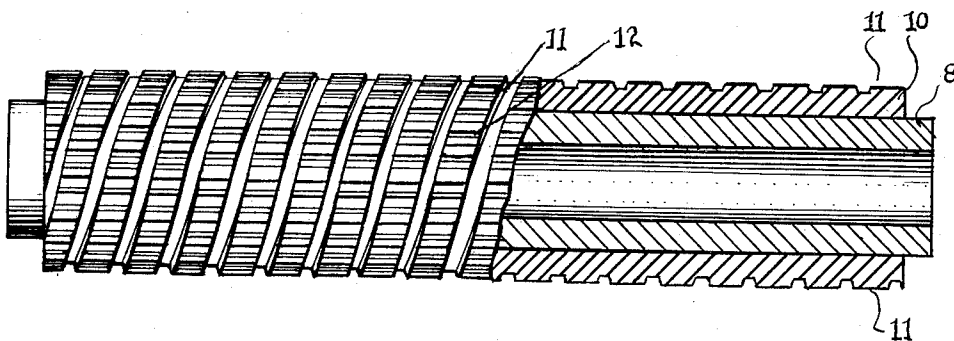
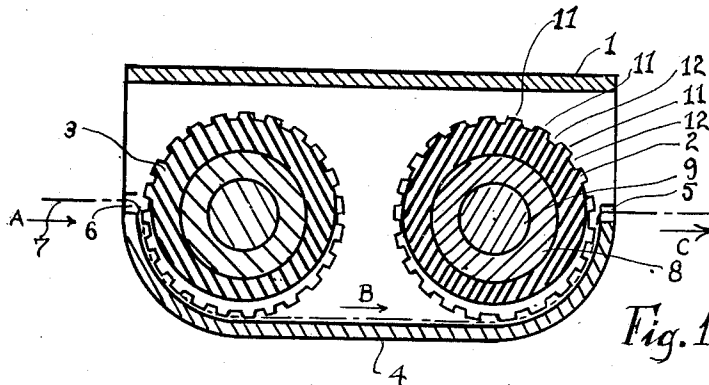


Fig. 4

Fig. 3

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UNITED STATES PATENT OFFICE

2,364,983

LOOM TEMPLE ROLL

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Application March 6, 1943, Serial No. 478,199

8 Claims. (Cl. 139—296)

The present invention relates to loom temple rolls which are used on looms at each side to engage and hold the fabric taut without tearing or injuring the fabric in any way. Such temple rolls may be used with various kinds of materials, as for instance silks and rayons, satin, wool, cotton and practically all types of woven fabrics.

The temple rolls are usually supported in a casing with a cover on the top over the rolls. The edge of the cloth passes between the rolls and the top cover and is continually held in a taut position while it passes over the rolls.

The present invention is an improvement on my prior Patent No. 1,798,847, issued March 31, 1931, and has particularly for its object the improvement in the temple roll in such a manner that the roll will provide a better grip on the cloth and yet fit without injuring the material.

In the present invention the construction of the roll is such that a more accurately operating roll is produced. Further the grip on the material is aided by the surface construction and the particular type of resiliency provided by the roll itself.

Further the improvements and advantages of the present invention will be more clearly understood from the specification set forth below when taken in connection with the drawing illustrating the embodiment of the invention, in which:

Figure 1 shows a section through a loom temple roll and holder in an enlarged form.

Figure 2 shows a side view of the temple roll with a portion in fragmentary section, and,

Figures 3 and 4 show sections of modifications taken through the roll.

Referring more particularly to Figure 1, 1 represents a casing in which the temple rolls 2 and 3 are journaled. The casing is provided with a cover 4 which is curved over the rolls 2 and 3 as indicated in the figure, leaving slots 5 and 6 lengthwise of the rolls through which the material 7 may be fed as indicated by the direction of the arrows A, B and C. As the material passes over the rolls 2 and 3, it is gripped between the cover 4 and the surface of the rolls and pulled on account of the spindle thread, outward laterally perpendicular to the direction of the feed of the cloth. The function therefore of the temple roll is to pull the material towards the holder at both edges of the material.

In the present construction the temple roll is provided with a central ferrule 8 which may be of wood or other suitable material and may be hollow if desired so that it can be slipped over a spindle 9 forming a shaft in the holder. This

ferrule 8 is covered by a cylindrical cover 10 which may be of rubber, rubber composition, plastic, soft or hard, and of any other suitable kind of material dependent upon the fabric with which it is to be used. A rubber, rubber composition or a synthetic rubber roll is commonly used with finer materials such as silks, rayons and the finer grades of cotton. With materials of this nature, difficulty has been found in obtaining the proper grip of the material by the roll, and this is due to the difficulty in providing rolls of proper effective diameters. This I have overcome in the present construction. The cover 10 may be manufactured as a tubing with helical threads having corrugations with a considerable top surface 11 as indicated in Figure 1. This surface 11 forms the peripheral surface of the roll and may be separated by recesses 12 having sloped sides and a flat bottom as indicated in Figure 1, or by a V shaped recess 13 as indicated in Figure 3 or by an arcuate recess 14 as indicated in Figure 4. The shape of the recess is not of substantial importance except insofar as it provides the gripping edge or notch into which the material may be held and a fair amount of resiliency for the surface itself. The notches 12, 13 and 14 permit a certain amount of give in the top surface 11 and in addition furnishes a grip on the material between the roll and the cover. The cover 10 may be stretched over the ferrule 8 thus increasing its diameter a small amount. The roll then may be accurately ground to bring the peripheral circumference and the outside roll diameter from the surface 11 on one side to the diametrically opposite surface on the other side, the exact dimension to provide the desired clearance between the cover and the surface of the roll. By providing surfaces having curvatures substantially the same as the rolls, that is surfaces in the shape of the circumferential arc, not only is there provided a proper surface for the grip of the material, but also the surface is accurately formed. In addition to this the teeth so formed between the recesses 12 or 13 or 14 depend upon which construction is used for considerable strength against bending and therefore provide gripping edges which hold their relative positions as the roll is turned. In addition to this, each tooth provides two gripping edges, a forward and a rear, and thereby exerts a strong even pull on the material. The teeth formed by the recesses on the helical threads form a considerable portion of the thread surface of the roll, substantially 50% or more of the thread surface of the cylindrical roll.

Having now described my invention, I claim:

1. A cylindrical loom temple roll of the type described having a helical groove forming a helical thread, said thread being recessed at intervals leaving teeth having surfaces which are part of the cylindrical surface of the temple roll.

2. A cylindrical loom temple roll of the type described having a core with a stretchable cover thereon, said cover having a helical groove forming a helical thread, said thread being recessed at intervals leaving teeth having surfaces which are part of the cylindrical surface of the temple roll, said surface being finished to the desired dimension.

3. A cylindrical loom temple roll of the type described having a core and an expansible yielding cover stretched over said core, said cover having a helical groove forming a helical thread, said thread being recessed at intervals leaving teeth having surfaces which are part of the cylindrical surface of the temple roll, said surfaces being finished to the desired roll dimension.

4. A cylindrical loom temple roll of the type described having a core and a yielding cover of rubber or rubber-like material, said cover having a helical groove forming a helical thread, said thread being recessed at intervals leaving substantially uniform teeth having outer surfaces forming a part of the cylindrical surface of the temple roll.

5. A cylindrical loom temple roll of the type described having a core and a yielding cover of rubber or rubber-like material, said cover having a helical groove forming a helical thread, said thread being recessed at intervals leaving substantially uniform teeth having outer surfaces forming a part of the cylindrical surface of the temple roll, said cylindrical surfaces being substantially 50% or more of the thread surface of the roll.

6. A cylindrical loom temple roll of the type described having a helical groove forming a helical thread, said thread being recessed with recesses of flat bottoms and sloping sides at intervals leaving substantially uniform teeth having surfaces which are part of the cylindrical surfaces of the temple roll.

7. A cylindrical temple roll of the type described, having helical grooves forming a helical thread, said thread being recessed with V shaped recesses at intervals leaving uniform teeth having surfaces which are part of the cylindrical surfaces of the temple roll.

8. A cylindrical loom temple roll of the type described having a helical groove forming a helical thread said thread being recessed in an arcuate shape forming uniform teeth having surfaces which are part of the cylindrical surface of the temple roll.

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