April 22, 1941. C. M. CROFT ET AL 2,238,992

TEXTILE DEVICE

Filed June 16, 1939

Fig. 1.

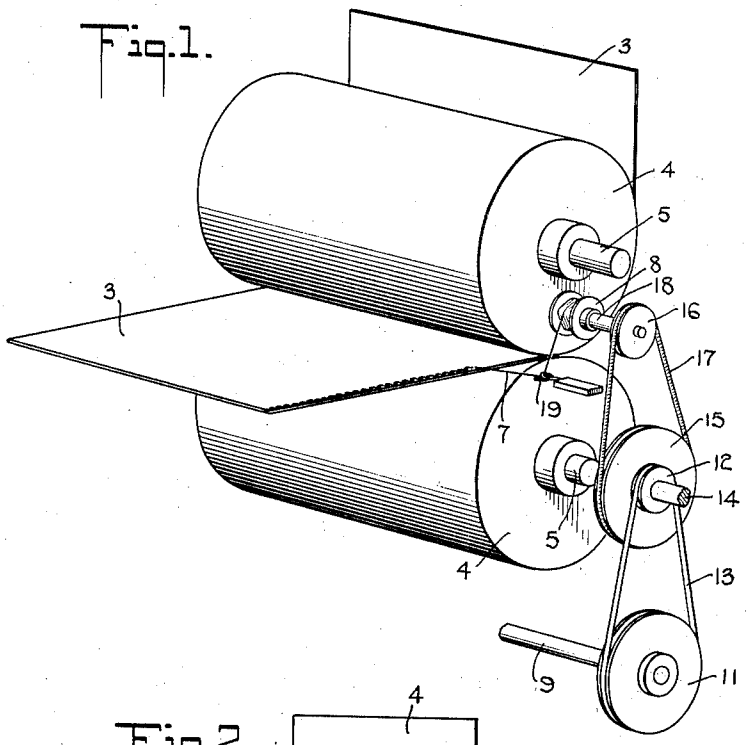
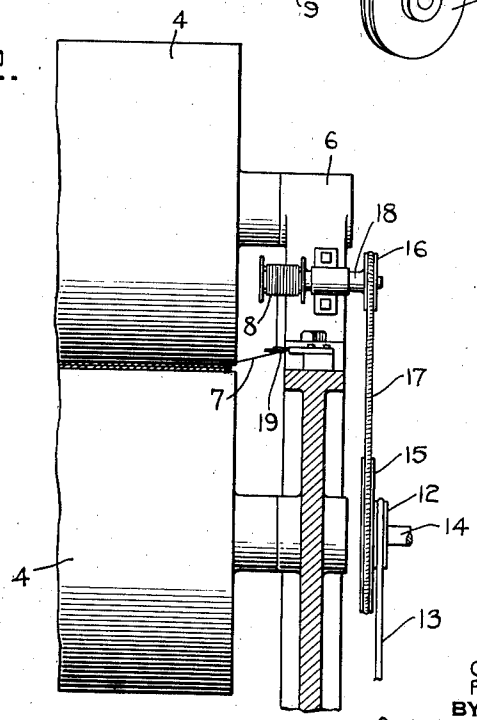


Fig. 2.



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TEXTILE DEVICE

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5 Claims. (Cl. 28—17)

This invention relates to improvements in textile devices, and relates more particularly to a device for removing sewing thread from fabric which has been processed in tubular form.

In the method of processing certain fabric, particularly warp knit fabrics, the usual practice is to double the piece edge to edge and sew the edges together with a chain stitch along the length of the piece so that a tube of fabric is formed. The piece is then dyed or otherwise processed in the normal manner of performing such functions and dried while still in tubular form. The sewing thread is then removed manually.

It is an important object of this invention to provide a novel, simple and inexpensive device for mechanically removing the sewing thread from the piece while said piece, in tubular form, is being passed through a drying machine or calender.

Other objects of this invention, together with certain details of construction and combinations of parts, will appear from the following detailed description and claims.

One form of apparatus according to our invention is shown on the accompanying sheet of drawings wherein

Figure 1 is a perspective view, somewhat diagrammatic, showing our invention as applied to the drying drums of a drying machine or the rolls of a calendering machine, and

Figure 2 is a front elevational view, on a slightly larger scale, of the same.

Like reference numerals indicate like parts throughout both views of the drawing.

Referring to the drawing, there is shown a piece of fabric 3 which has been processed, as for example in a dyehouse, passing between the cylinders 4 which may be the drying drums of a drying machine or the rolls of a calendering machine. These cylinders are mounted on shafts 5 which are journalled in a suitable frame such as 6, as is well understood in the art. The piece of fabric 3 is in the form of a tube made by folding the piece lengthwise upon itself and then sewing the edges together with a chain stitch by means of a thread 7. Heretofore, this thread 7 was removed manually by an operative after the piece has been dried.

In accordance with our invention, we have provided a novel arrangement for mechanically removing the thread 7 from the edge of the tubular piece of fabric. The thread removing device, comprising generally a reel 8 and means for rotating said reel at a predetermined speed, may be positioned adjacent or mounted on the drying machine or calender near the edge of the fabric from which the thread is to be removed. In Figure 1 of the drawing there is shown a belt and pulley arrangement for rotating reel 8. Thus, shaft 9 which may derive its motion from the drying machine, the calender or any other suitable source, rotates pulley 11 mounted thereon. Pulley 11 rotates a smaller pulley 12 through belt 13. Pulley 12 is mounted on the same shaft 14 as pulley 15 and thus imparts motion thereto. Pulley 15 in turn rotates a pulley 16 through a slip belt 17. Pulley 16 is fixed to shaft 18 on which reel 8 is also mounted and therefore supplies rotation to said reel 8. The use of slip belt 17 minimizes the danger of breaking the thread 7. A pot-eye 19 mounted on a piece of metal or other material is fixed to the frame 6 in such a position that it is conveniently situated with respect to fabric from which the thread is being removed, and the reel 8.

In operation, a length of thread 7 pulled or unravelled from the chain stitching and the doubled fabric end is passed between the cylinders 4. The unravelled thread is passed through pot-eye 19 and attached to the core of core-wire of reel 8. The drying machine or calender is then started as is the rotation of the reel 8. As will be appreciated the peripheral speed of the reel 8 is slightly in excess of that of the cylinders 4. The reel, thus revolving, rolls up the thread 7 thereon and mechanically removes it from the fabric, which fabric is then either rolled up or plaited.

It is to be understood that the foregoing description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of our invention.

Having described our invention what we desire to secure by Letters Patent is:

1. In a device of the character described, the combination with means for feeding a length of fabric having a thread-sewn edge, means for pulling the thread from said fabric comprising a rotatable reel and means operatively connected to the means for operating the feeding means for rotating said reel.

2. In a device of the character described, the combination with means for feeding a length of fabric having a thread-sewn edge, means for pulling the thread from said fabric comprising a rotatable reel and a plurality of pulleys operatively connected to the means for operating the

feeding means for rotating said reel, at least two of the pulleys being connected by a slip-belt.

3. In a device of the character described, the combination with rotatable cylinders for feeding a length of fabric having a thread-sewn edge, means for removing the thread from said fabric comprising a rotatable reel and means operatively connected to the means for operating the feeding means for rotating said reel with a peripheral speed greater than the peripheral speed of the cylinders.

4. In a device of the character described, the combination with means for feeding a length of fabric having a thread-sewn edge, means for removing the thread from said fabric comprising a reel adjacent to said thread-sewn edge, a shaft, operatively connected to the means for operating the feeding means, on which said reel is mounted, a pulley fixed to said shaft, a second pulley for rotating said first-mentioned pulley and a slip-belt connecting said pulley.

5. In a device of the character described, the combination with rotatable cylinders for feeding a length of fabric having a thread-sewn edge, means for removing the thread from said fabric comprising a reel adjacent to said thread-sewn edge and on which said thread is adapted to be wound, a shaft, operatively connected to the means for rotating the cylinders, on which said reel is mounted, a pulley fixed to said shaft, a second pulley for rotating said first-mentioned pulley and a slip-belt connecting said pulleys, the construction and arrangement being such that the peripheral speed of said reel is greater than the peripheral speed of the cylinders.

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