B. SHERWOOD.

TEXTILE MARKING MACHINE.

APPLICATION FILED MAR. 13, 1918.

1,278,041. Patented Sept. 3, 1918.

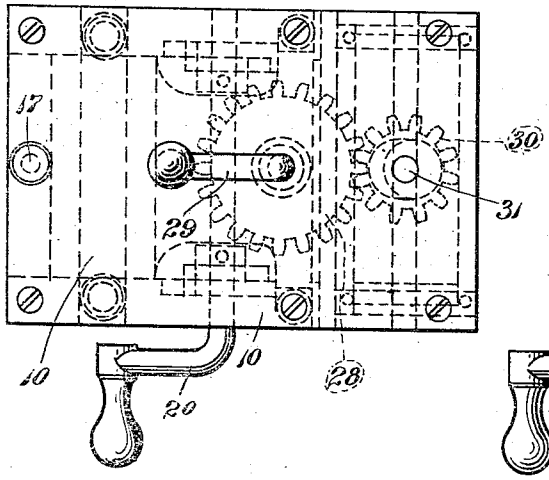


Fig. 1.

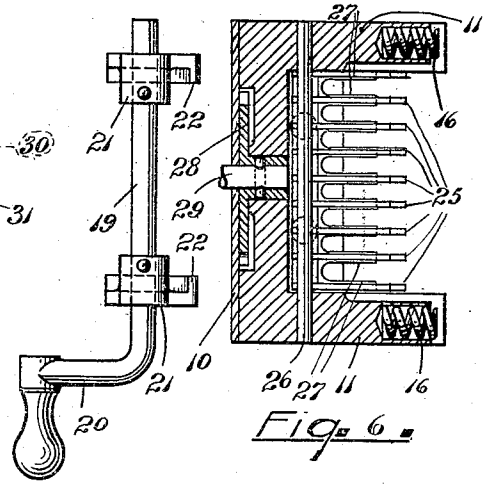


Fig. 6.

Fig. 5.

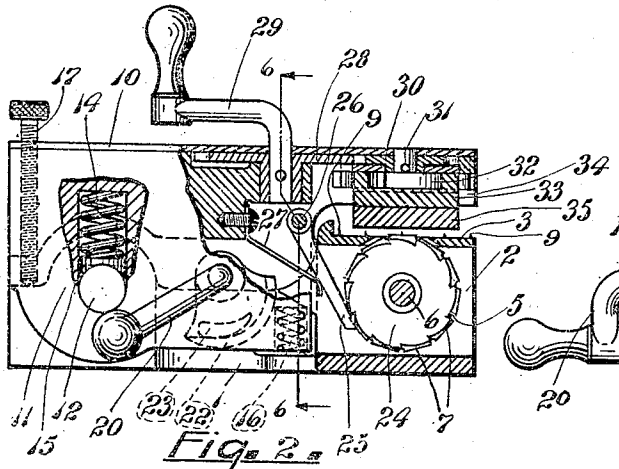


Fig. 2.

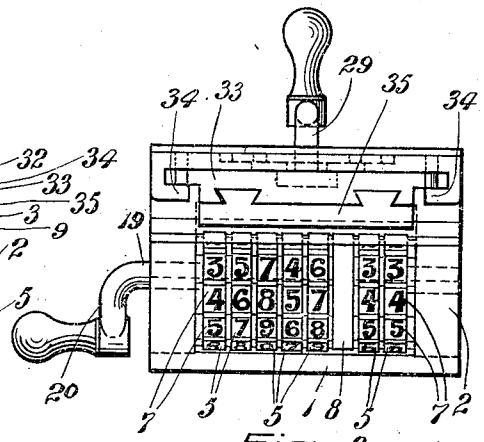


Fig. 3.

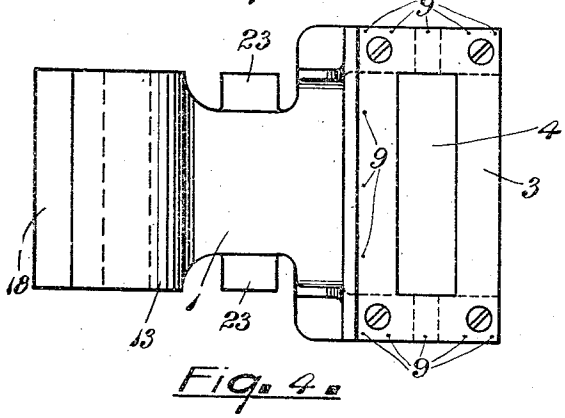


Fig. 4.

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Fig. 7.

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TEXTILE-MARKING MACHINE.

1,278,041. Specification of Letters Patent. Patented Sept. 3, 1918.

Application filed March 13, 1918. Serial No. 222,122.

To all whom it may concern:

Be it known that I, BURT SHERWOOD, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Textile-Marking Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a textile marking machine, being particularly adapted for the application of indicating marks to an edge of rolls of knitted textile fabrics, said marks being indicative of characteristics, quality, weight, width, or the like, of the fabric in the roll. It is a common practice in textile fabric knitting mills to attach indicating tags to the ends of rolls to convey such information, but in many instances the tags are insecurely attached and become displaced or engage with and cut holes in the roll thereby destroying considerable portions of the fabric, while in addition the cost of the tags and their application to the rolls is a matter of some expense. In my invention it is contemplated that the marks shall be indelibly applied to the end of the fabric of the roll in such manner that it is impossible to destroy or lose the indices relating to the roll of fabric, and one primary object and purpose of my invention is the attainment of this end. A further object and purpose of the invention is to produce a textile marking machine with which a great variety of textile indicating marks may be used, together with means for automatically changing the mark with each marking operation of the machine. A still further object of the invention is to produce a machine of this character in which the marking of the goods is accomplished by grinding a coloring matter into the fabric such that it is indelibly applied thereto. Various other objects and purposes, other than those particularly enumerated, will appear as understanding of the invention is had from the following description taken in conjunction with the accompanying drawing, in which,

Figure 1 is a plan view of the marking machine.

Fig. 2 is a side elevation thereof, various parts being broken away and shown in section.

Fig. 3 is a front end view of the machine.

Fig. 4 is a plan view of the bottom member of the machine.

Fig. 5 is a plan view of an element of the machine used in bringing the two main members of the machine together for the marking operation.

Fig. 6 is a vertical section substantially on the line 6—6 of Fig. 2, and

Fig. 7 is a view of a mark which may be applied to textile fabrics by the machine.

Like reference characters refer to like parts in the different views of the drawing.

In construction a bottom member 1 is provided from which, adjacent its front end, sides 2 extend upwardly being connected at their upper ends by a cross plate or table 3 in which a longitudinal slot 4 is cut. Through this slot the upper edges of marking disks 5 project, the same being mounted side by side on a shaft 6 and each having a consecutive series of raised indicating characters 7 placed, preferably, in consecutive order on the disks. A plurality of pins 9 project upwardly from the table 3, the same serving to hold the end of a textile fabric which may be laid upon the table, it being apparent that when thus laid, the fabric is brought into contact with a line of indicating characters 7 on the various disks 5 of the machine. Preferably, a pair of disks at one end of the machine are separated from the remainder by a stationary member 8 which has a raised hyphen or dash on its upper edge extending through the slot 4.

In connection with the lower member, an upper member 10 is used, having depending sides 11 which connect on each side of the lower member at the rear end thereof, and through which a shaft 12 extends, the same also passing through a raised portion 13 of the lower member. The sides 11 are slotted for a short distance to permit relative movement of the upper member with respect to the lower member, and said sides house springs 14 under compression which bear against blocks 15 resting upon the shaft 12, whereby the rear end of the upper member is normally raised a short distance by the springs. In addition springs 16 are interposed between the upper and lower members in front of the pivotal connection thereof, the effect of which is to normally elevate the upper overhanging portion of the upper member and move it and its attached parts

away from the table 3, the limit of elevation being controlled by an adjustable stop-screw 17 which threads through the rear end of the upper member and is adapted to bear at its lower end against a ledge 18 on the lower member 1. A shaft 19, terminating at one end in a crank 20, is rotatably mounted on and passes transversely through the sides 11, it having fixed thereon at spaced apart points two sleeves 21, integral with which are eccentric cam guides 22 adapted to engage with cam projections 23 located one at each side of the lower member 1, said projections coöperating with the guides 22 and serving, on rotation of the shaft 19, to draw the front part of the upper member toward the table 3 compressing the springs 16 during such operation. Accordingly, by alternately operating the shaft 19 in opposite directions, the front end of the upper member may be alternately moved toward and away from the table 3. On the side of each of the disks 5 a ratchet wheel 24 is secured engaging with each of which is a pawl 25, all of the pawls being loosely mounted on a shaft 26 and the same pressed into engagement with the ratchet wheels 24 by springs 27. It is obvious that on the downward movement of the front end of the upper member, the end of a pawl is moved from one notch in the ratchet wheel to another, and that on the return upward movement, the disks are moved one step. The pawls 25 and ratchet wheels 24 may be used with all of the disks 5 or omitted with respect to some of them. For instance, with the two disks at the right hand end of the machine (referring to Fig. 3), it is in many instances desirable that these shall remain normally stationary and be moved when desired by hand.

A gear wheel 28 is rotatably mounted on the upper member 10 and may be turned by a crank 29 attached thereto. This gear meshes with a pinion 30 fixed on a short stud shaft 31 in front of the gear 28, which shaft at its lower end is equipped with an eccentric 32 received in an elliptical slot in the upper side of a bar 33 which is loosely supported at the front end of the upper member on the inturned guides 34, it being evident that on rotation of the crank 29 by hand, an oscillatory movement is given to the bar 33. On the under side of the bar 33 a solid plate 35 of mineral coloring matter may be fixed in any desired manner, it moving and oscillating with the bar 33 as is obvious.

When a textile fabric is introduced over the table 3 and connected with the pins 9 the shaft 19 may be turned by grasping the handle 20 to bring the mineral coloring plate 35 closely in engagement therewith, after which the crank 29 may be rotated.

This moves the coloring plate 35 back and forth against the fabric and grinds the coloring matter into such portions of the fabric as are placed against the plate 35 by the raised indicating characters 7, directly on which the fabric rests. The oscillatory movement of the coloring plate causes the yarns or threads of the fabric to be turned over partially so that the same are completely impregnated with the mineral coloring matter. After the crank 29 has been rotated a few times, the fabric has received the indicating characters at the upper edges of the row of disks which project through the slot 4, and the upper member may then be released by turning the crank 29 in the opposite direction, the same automatically lifting to permit the end of the fabric to be freed. The character which is in this manner applied to the fabric is similar to that shown in Fig. 7, consisting of a series of figures separated from the two end figures by a hyphen or dash, said dash always extending through the slot 4 and being carried on the upper edge of the stationary member 8. With the elevation of the front end of the upper member the indicating characters on at least a portion of the disks are moved so that the next fabric passed receives a different character and, of course, at any time, any of the disks may be moved by hand for a desired character, it being designed that the front end of the upper member in its normal freed position shall be elevated sufficiently that the operator may see the indicating characters which extend through the slot 4 of the table 3.

From the foregoing it will be apparent that I have provided a relatively simple yet effective construction for indelibly applying indicating characters on the ends of fabric pieces, and one which is of particular utility for use on the ends of rolls of textile fabrics to indicate quality, characteristics, weights, widths, and the like, of the fabrics. While the indicating characters shown on the disks are numbers, various other types of indicating characters may be used and I do not wish to be limited to the one type shown. Various other modifications in detail of structure of the machine may be resorted to without departing from my invention and I accordingly, consider myself entitled to all modifications such as fall within the scope of the appended claims defining the invention.

I claim:

1. In a machine of the character described, a series of raised marking characters against which a textile fabric is adapted to be placed, a member containing coloring matter positioned over said characters, and means for moving said member back and forth over said characters and against the fabric placed against them to thereby fill portions of the fabric above the characters with coloring matter thereby

marking the fabric with facsimiles of the characters against which it is placed, substantially as described.

2. In a machine of the character described, two members mounted for relative movement toward or away from each other, a series of raised marking characters on one of said members, a third member containing coloring material mounted for oscillatory movement on the other of said members, and normally spaced a distance from the marking characters whereby a thickness of textile fabric may be introduced between said characters and third member, after which said third member may be brought against the fabric, and means to oscillate said third member when pressed against the fabric and with the fabric pressed against the marking characters, substantially as described.

3. In a machine of the character described, a series of marking characters and a member containing coloring matter between which a thickness of textile fabric may be introduced, means whereby said member may be brought against the fabric and the fabric against said marking characters, and means for moving said member back and forth over the fabric to grind the coloring matter therein at the places where it presses against said marking characters.

4. In a machine of the character described, a lower member, a table at one end thereof, a plurality of marking characters lengthwise of and projecting slightly above the table, means on the table for engaging with a textile fabric to position the same over the marking characters, a second member movably mounted on and above the first member, a third member carrying a plate containing coloring matter mounted on the second member above the table and adapted to be moved downwardly to bear against the fabric on the table, and means for moving said third member and attached plate over and against the fabric to impart coloring matter to the fabric at the points where it bears against the marking characters.

5. In a machine of the character described, a plurality of marking characters, means to hold a textile fabric against said characters, and means to grind coloring matter into the fabric at the points where it bears against said characters.

6. In a machine of the character described, upper and lower members pivotally connected together adjacent one end, means normally separating said members at the other end whereby a thickness of textile fabric may be introduced between them, marking characters on the lower member over which the fabric is placed, a third member carrying a plate of coloring material movably mounted on the upper member, means to force said plate tightly against the fabric, and means to move said plate back and forth over the fabric, substantially as described.

7. In a machine of the character described, upper and lower members pivotally connected together adjacent one end, means for normally separating said members at the other end a limited distance whereby a thickness of fabric may be introduced between them, a series of marking disks rotatively mounted on the lower member and provided with raised marking characters adapted to project above the surfaces of the disks, a third member carrying a plate of coloring material movably mounted on the upper member above the disks, means to force the upper member downwardly to bring said plate against fabric disposed between it and said disks, means to move the plate back and forth over and against the fabric, and means to automatically turn the disks one step on release of the upper member, substantially as described.

In testimony whereof I affix my signature.

BURT SHERWOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."