A. L. CURRIER.

BUTTON CARD AND LOCK LOOP STITCH FOR FASTENING BUTTONS.

APPLICATION FILED MAR. 16, 1914.

1,260,517.

Patented Mar. 26, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

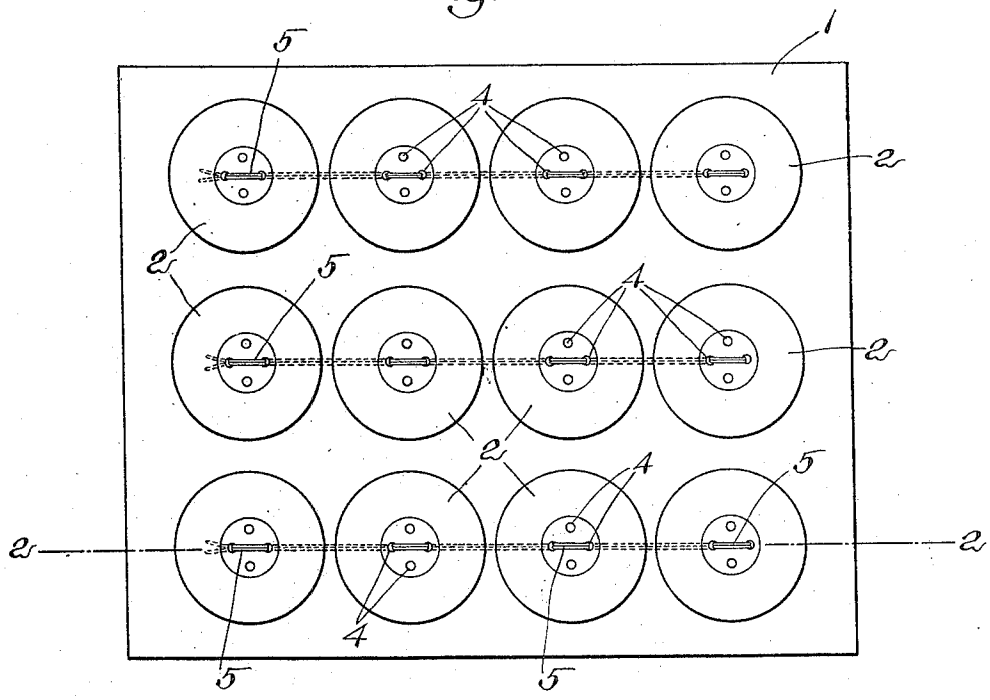


Fig. 2.

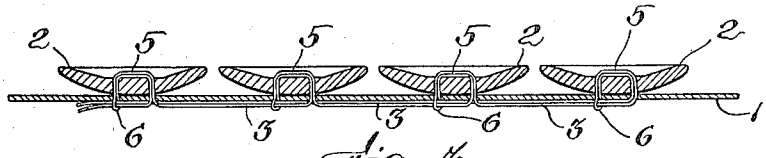
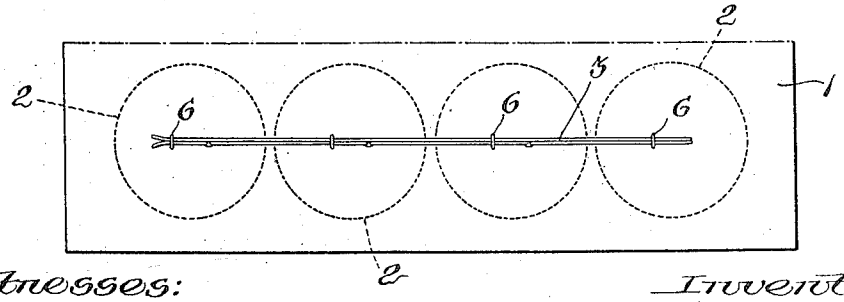


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

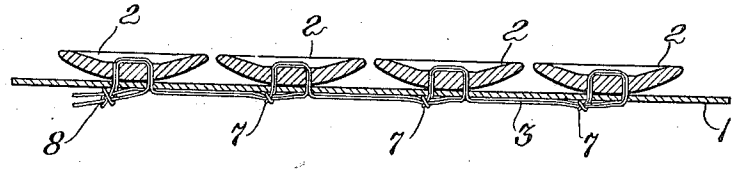


Fig. 5.

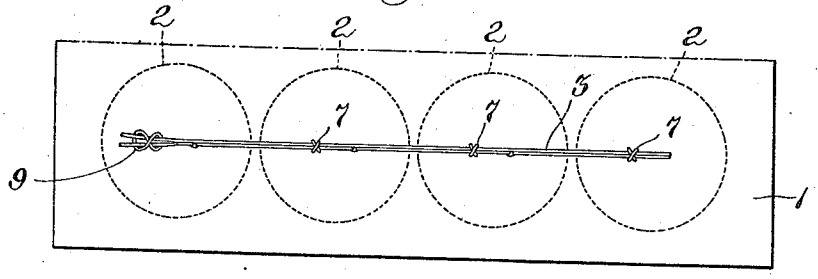


Fig. 6.

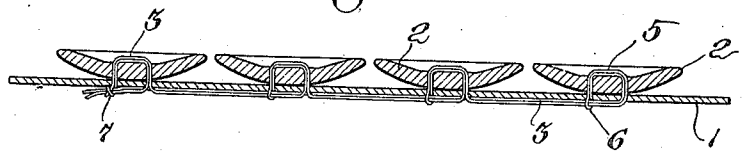
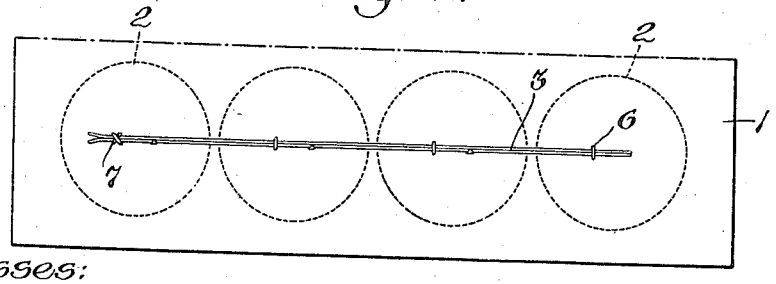


Fig. 7.



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UNITED STATES PATENT OFFICE.

ARTHUR L. CURRIER, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE J. W. MOORE MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

BUTTON-CARD AND LOCK LOOP-STITCH FOR FASTENING BUTTONS.

1,260,517. Specification of Letters Patent. Patented Mar. 26, 1918.

Application filed March 16, 1914. Serial No. 824,907.

To all whom it may concern:

Be it known that I, ARTHUR L. CURRIER, a citizen of the United States, and resident of Newton, county of Middlesex, State of Massachusetts, have invented an Improvement in Button-Cards and Lock Loop-Stitches for Fastening Buttons, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention is a novel form of lock loop-stitch, especially valuable and useful in sewing buttons, either on clothing or cards.

I have herein illustrated the novel form of lock loop-stitch, comprising my invention in connection with the carding of buttons, such carding having heretofore been done either by hand when thread was employed; or by wire where a machine was utilized, such, for example, as shown by my prior Patent 1,055,523, dated March 11, 1913. In fastening buttons by wire, especially on cards from which the buttons were intended to be removed subsequently, the wire carding is unsuited for certain uses, as the buttons had to be removed individually from the card to which they were secured when wanted for use. As such cards usually contain a dozen buttons, it has been usual for tailors and other users of such buttons, to cut off an entire row, or the entire division of buttons with a single sweep of a knife, but this was not feasible where wire was used to fasten them, and hence some delay was involved in removing such buttons when fastened by wire staples or the like. Therefore, securing such buttons especially to sale cards by means of thread is desirable. The objection to carding by thread has been that such carding was necessarily done by hand, and also that the entire series of rows of buttons on a card (usually four rows of three buttons each) were secured by a single thread so that if it was desired to use only one row of buttons, and these were cut off from the card, all the others would fall off. Furthermore, such hand work involved putting in a knot at both start and finish, which knot at the end could not be made snugly to the card and tightly drawn and consequently all the buttons on card were somewhat loosely held. The expense and time required for such hand carding was, of course, very great, and only a single thread was used to hold the buttons to the card which was apt to break, pull through, and not hold the buttons securely.

I have devised a machine capable of carding buttons with thread, said machine being described and claimed in my copending application Serial No. 72,054 filed January 14, 1916, which machine is capable of carding buttons by the novel form of lock loop-stitch herein shown and claimed. My lock loop-stitch enables each button to be firmly secured by a double thread, to be individually fastened to the card, and to permit either the entire set of buttons on a card to be cut off by the single sweep of the knife, or one row to be cut off while all the others are firmly retained on the card, or a single button to be removed without the other buttons falling off or their fastenings being loosened. Furthermore, my present invention eliminates the necessity for knotting either end of a thread when carding or sewing buttons, but locks each button, as well as each end of a thread uniting a row of buttons, as the stitch is formed. A further advantage of my novel form of loop stitch is that I may employ the same to sew a single button on to clothing, locking each stitch until an entire predetermined length of thread is used up, and should one stitch break, the remaining stitches are individually locked and held firmly in place. A still further advantage of my present novel form of lock loop-stitch is that, although each stitch will be locked, yet a positive knot may be formed at the end of the thread for the last button or stitch, and also a positive knot may be formed at the completion of each stitch by withholding the feeding movement of the card and buttons, and permitting the shuttle mechanism to complete the looping action, as more fully explained in my said copending application, illustrating and describing a machine for making the loop-stitch and knot herein shown.

Referring to the drawings,

Figure 1 illustrates a button card with a dozen buttons thereon, this being a usual type of sale card;

Fig. 2 is a view in cross section along the line 2—2 of Fig. 1;

Fig. 3 is a view on the reverse side of one row of buttons shown in Fig. 1;

Figs. 4 and 5 illustrate respectively in

cross section and reverse side a button card with one row having a knot put in the thread at each stitch; and

Figs. 6 and 7 illustrate in cross section and reverse side respectively the combination of loop-stitch with a knot at the end of the thread on one row.

The button card 1 is usually of thin cardboard or heavy paper through which a sewing needle may readily pass, either by machine or by hand, to which the buttons 2 are secured in rows. My novel form of loop-stitch may be put in either by hand or by machine, preferably the latter, as illustrated in my copending application above mentioned, such thread 3 being a double thread in sufficient length when doubled to secure to the card the series of buttons in a row. As herein illustrated, I show the buttons secured in rows of four each, the buttons 2 being a usual form of clothing button, with slightly cup shaped or depressed centers, pierced with a plurality of holes 4. The thread 3 is passed through two opposite holes 4 of each button, forming a loop 5. Starting with the first button, at the right viewing Figs. 1, 2, and 3, the doubled end of the thread 3 is passed upwardly through the card 1, and the opposite holes 4 in the button 2, to make the loop 5, and both ends of the entire remaining length of thread are passed through the ends 6 of the loop 5, and pulled tight. The loop end 6 thus encircles both the threads 3, which thereby jam the same against the card 1 and constitute a lock loop-stitch, as will be clearly understood on reference to Fig. 2. The thread 3 is then led through an adjacent point in the card 1, preferably the card 1 being fed a distance slightly greater than the diameter of the buttons being carded, when a second loop 5 is passed upwardly through the card 1, and holes 4 in a second button 2 and downwardly again through the card 1, both ends of the thread 3 being caught in the second doubled portion 6 of the loop 5, and drawn taut, thus again locking the next stitch and holding the second button firmly to the card, locking the thread stitched, securing the same independently of the first button loop. The loop-stitch last described is again repeated on successive buttons until the entire series of the row and the length of thread employed therefor has been used up. My novel form of loop-stitch thus secures and locks each button holding stitch independently of the adjacent button, and one or more buttons may be cut off without the remaining buttons falling from the card, or an entire row or the whole set may be cut from the card by a single sweep of a knife. Each button is held firmly, securely, and by a double thread, and it is unnecessary to form a knot in the end of the thread, although this may be done if desired, as will be hereinafter explained. I am thus enabled to secure the buttons, by means of thread, permitting all the advantages of severing the same from the card quickly when desired for use, as well as equally obtaining the advantages of carding by wire staples, securing individually each button to the card and permitting one or more buttons to be removed without the remaining buttons falling from the card.

In Figs. 4, 5, 6, and 7 I have illustrated a slightly modified form, wherein the same loop-stitch is employed, but showing how a positive knot may be formed in the thread 3, either after each button has been stitched, or after the entire series or rows of buttons have been stitched. Such a knot is desirable in special cases of work, heavy buttons and the like. As illustrated in Figs. 4 and 5, the buttons 2 are first secured by the loop-stitch already described, then the thread is given a second turn by the rotary shuttle, as explained in my said machine application, thus forming a positive knot 7, said knot comprising a double loop, as more clearly illustrated at 8 and 9, where the double loop is shown before the ends of the thread are pulled tight. In this modified form a slightly longer length of doubled thread 3 may be necessary to allow for the plurality of knots being formed at each loop-stitch.

In Figs. 6 and 7, I illustrate the combination of the loop-stitches as shown in Figs. 1, 2, and 3 for each of the first three buttons 2 in the series, and a knot 7 at the end of the thread on the last button. This form is the preferred fastening because of the added security of the knot preventing any slipping of the thread and consequently loosening of the loop-stitches, during handling, packing, shipping, etc., of the carded buttons.

While I have herein illustrated my novel form of loop-stitch as of special value for the carding of buttons by thread, and as the machine of my said copending application is designed primarily for carding buttons by making the lock loop-stitch and knot, herein described, and it will be readily understood that it may be desirable for other machines to form such a lock loop-stitch in sewing buttons to clothing, I believe that the lock loop-stitch herein disclosed, utilizing a double thread and securing a firm locking stitch each time such stitch is made, is a distinct novelty in the art, and I wish to claim the same broadly. Also carding buttons by thread which will secure said buttons independently to the card, enabling one button or a row of buttons to be cut off without loosening the remainder is also a distinct novelty in the button carding art, and I therefore wish to claim the same broadly. I have used the term lock loop-stitch herein as a coined phrase to describe my novel form of stitch made with a double thread, where-

in both ends of the thread are caught, engaged and held in a locked manner as each stitch is made, which locking effect is sufficient so that one stitch can be cut without loosening the adjacent stitch or stitches.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A seam for sewed articles, comprising a plurality of articles to be stitched toegther, a doubled thread of predetermined length constituting the thread utilized in the seam, each stitch of said seam being formed with a loop on one side, and with both ends of each stitch locked on the loop side of said articles.

2. As an article of manufacture, a button card provided with a complement of buttons, a seam uniting said buttons to the card, consisting in a predetermined length of doubled thread, each stitch including a thread loop passing through both card and button with the ends of the thread of each stitch locked on the underside of the card.

3. As an article of manufacture, a button card provided with a complement of buttons, each button having a plurality of perforations therethrough, a seam uniting said buttons to the card, consisting in a predetermined length of doubled thread, a loop in said thread passing through at least two of the perforations in each button, and said seam locking both the ends of the thread in each button-holding stitch under a loop in said seam.

4. As an article of manufacture, a button card provided with a complement of buttons, each button having a plurality of perforations therethrough, a seam uniting said buttons to the card, consisting in a predetermined length of doubled thread, a loop in said thread passing through at least two of the perforations in each button, and said seam locking both the ends of the thread in each button-holding stitch under a loop in said seam, one of said threads completely encircling the parts of both button and card united by each stitch and being locked by the loop of said stitch.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ARTHUR L. CURRIER.

Witnesses:
JAMES R. HODDER,
R. J. HERSEY.

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