

Sept. 6, 1955

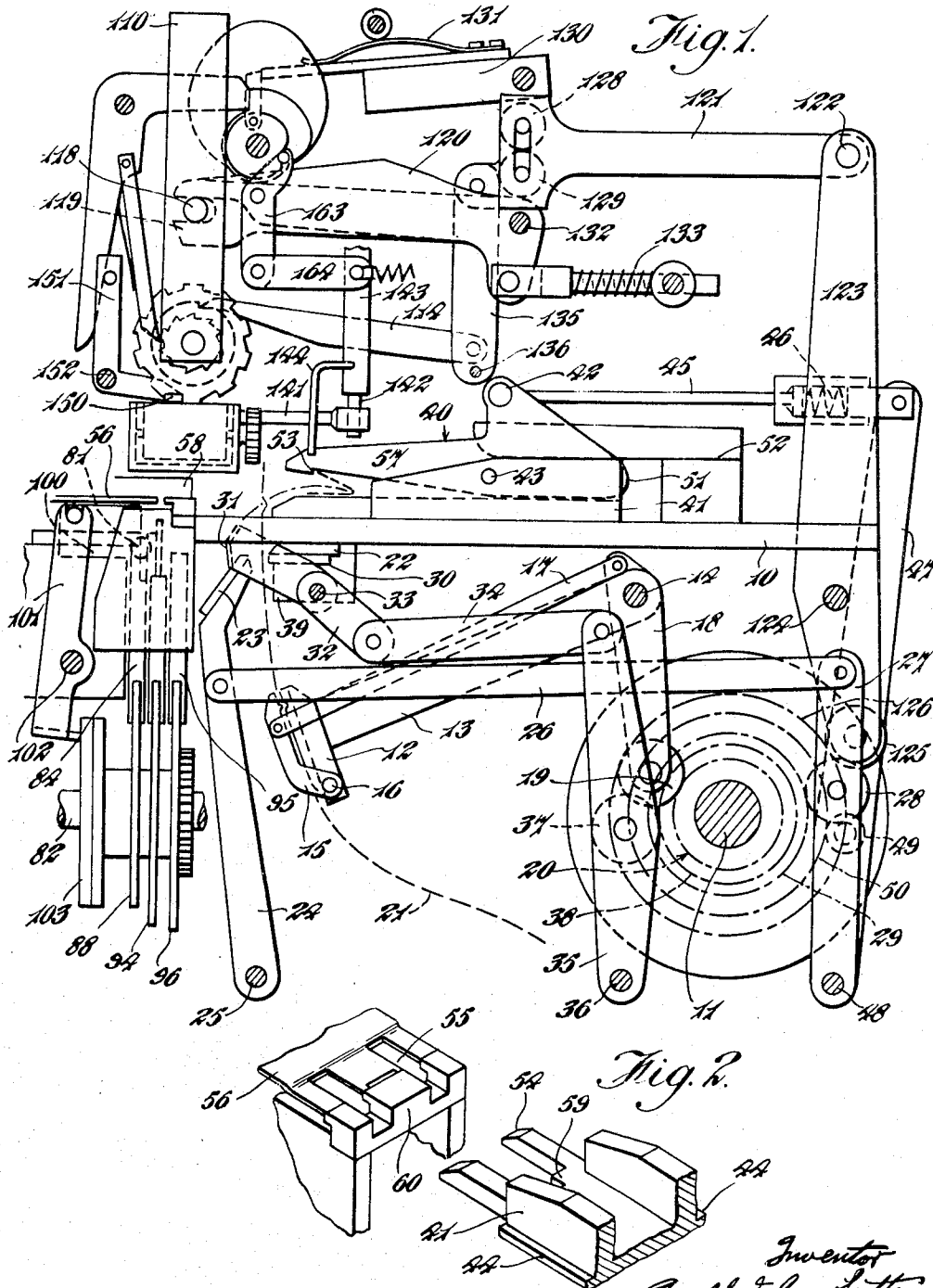
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2,716,748

TAB FORMING, STAPLING AND PRINTING DEVICE

Filed Aug. 23, 1951

3 Sheets-Sheet 1



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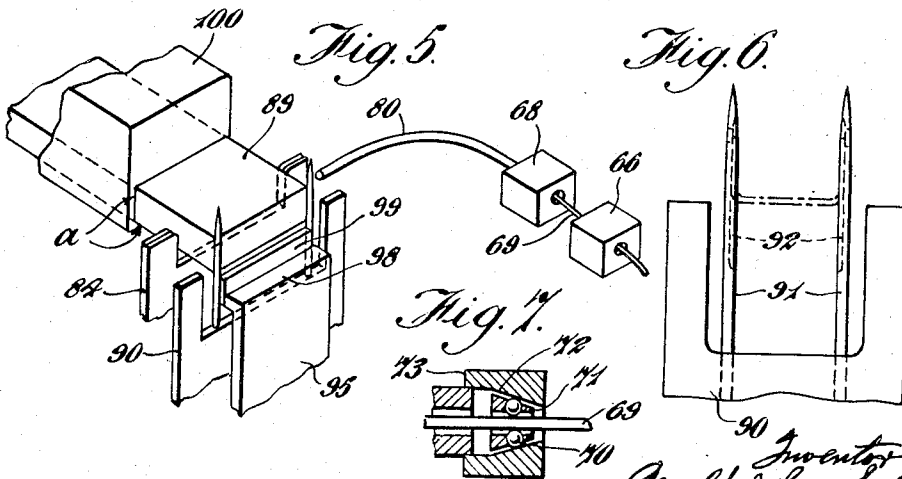
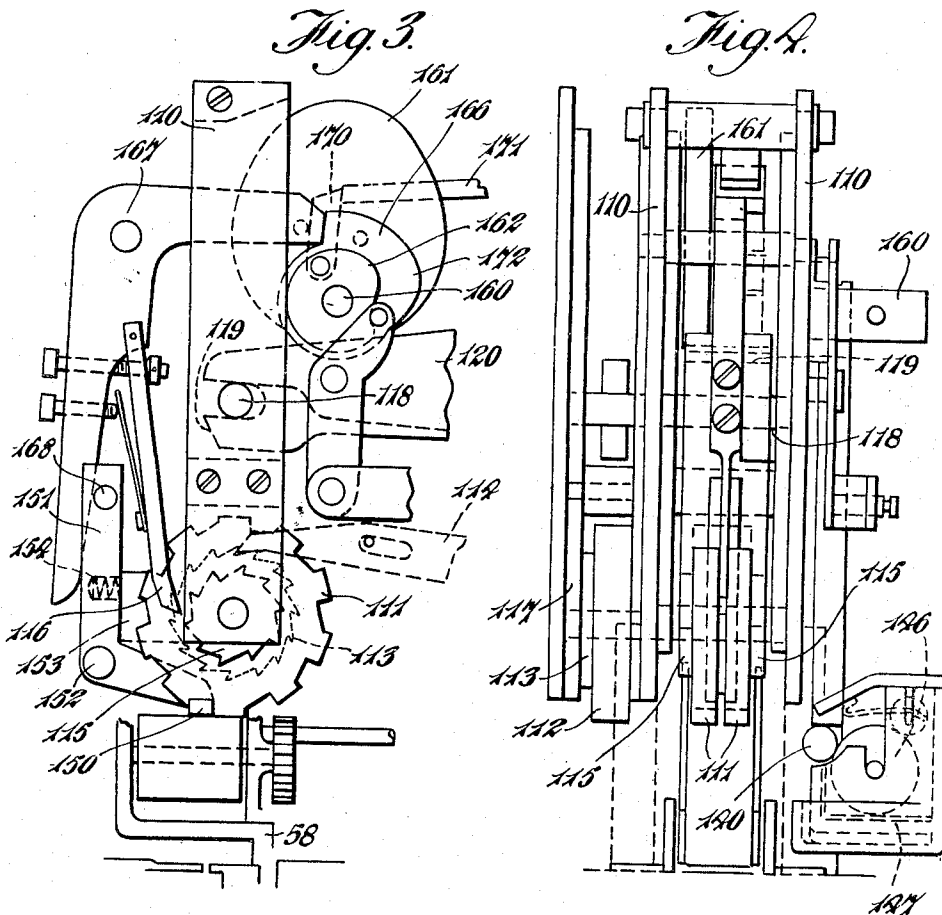
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2,716,748

TAB FORMING, STAPLING AND PRINTING DEVICE

Filed Aug. 23, 1951

3 Sheets-Sheet 2



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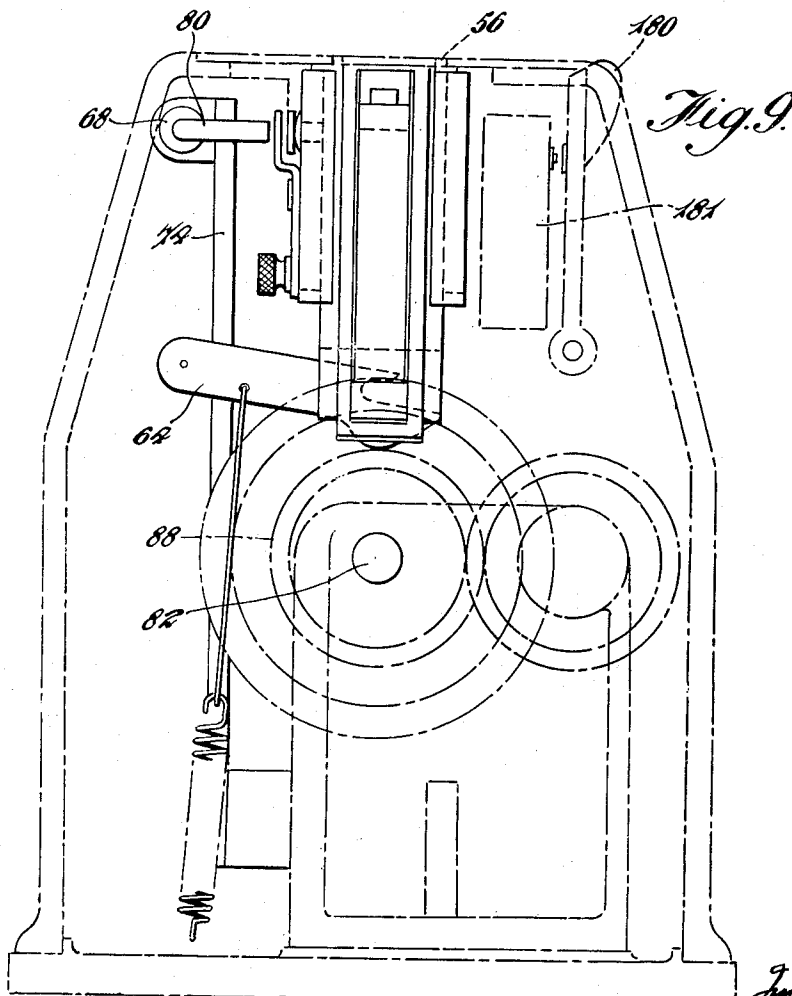
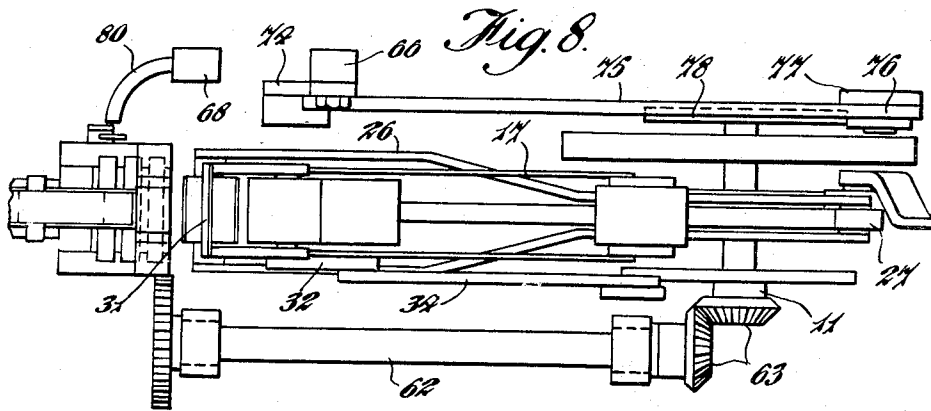
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TAB FORMING, STAPLING AND PRINTING DEVICE

Filed Aug. 23, 1951

3 Sheets-Sheet 3



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2,716,748

TAB FORMING, STAPLING AND PRINTING DEVICE

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Application August 23, 1951, Serial No. 243,321

10 Claims. (Cl. 1—2)

This invention relates to means for applying identifying tabs, labels, or the like to a fabric or garment or other article and is particularly applicable, although not exclusively so, for use in connection with laundry, dry cleaning, dyeing and like systems. The invention relates especially to means to be attached to the various articles to identify them by a number or mark during the various steps of a laundry or other process.

Various methods and means have hitherto been adopted for identifying articles treated in laundries or the like, such as for example hand or machine marking with marking ink of tags applied by stapling to the article or the like. It has also been proposed to apply small metal clips to the fabric, garment or like article by means of staples which pass through apertures or recesses adjacent the edges of the clip so as to hold two limbs of the clip in contact with the article.

Stapling as normally practised has the disadvantage that the relatively crudely pointed staple ends tend to rupture the threads or yarns of the fabric thereby leaving a more or less permanent small perforation in the fabric.

One object of this invention is to provide an improved means for securing a tab, label or the like to a fabric or similar article and for applying identification or other marking to the label.

A further object of the invention is to provide a machine which will form and attach the tab without damaging the fabric or fabric article to which the tab is attached, will print a number or the like on each tab and will when desired record the number of garments or other articles to which tabs bearing certain predetermined markings have been attached.

According to one feature of the invention, a machine for applying a tab, label or the like to a fabric or fabric article by means of a staple includes that improvement which consists in piercing the fabric or the like and the tab by means of spaced needle points and subsequently passing the limbs of the staple through the needle holes so formed.

Preferably the identification label comprises a folded tab made of "wet-strength" paper, that is paper impregnated with a suitable plastic resin.

The invention will be hereinafter more fully described with reference to the accompanying drawings showing by way of example the application of the invention to a system for identifying articles to be treated in a laundry or the like. It is to be understood, however, that as far as concerns the application of a tab or label by a stapling operation to a fabric the invention is applicable to many other uses.

In the drawings:

Fig. 1 shows diagrammatically the lay-out of the operating members in side elevation.

Fig. 2 is a perspective view of the tab-applying slide and the table.

Fig. 3 shows in side elevation on an enlarged scale the staple-closing, tab-printing and tab-counting unit.

Fig. 4 shows in front elevation the unit shown in Fig. 3.

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Fig. 5 is an exploded perspective view of the slides of the staple forming and inserting unit.

Fig. 6 shows in front elevation a slide supporting the needles with the formed staple carried by the latter.

Fig. 7 is a sectional view of a detail of the wire feeding device for the staple.

Fig. 8 shows in plan view that part of the machine disposed below the upper base element.

Fig. 9 shows in front elevation the machine parts disposed below the table of the machine.

The machine comprises in general a frame structure supporting the various operating members which consist of three units, (a) a paper-cutting, folding and tab-applying unit; (b) a staple-forming and inserting unit; and (c) a staple-closing, tab-printing and tab-counting unit. For the sake of clarity the frame structure has been omitted from the drawings since this structure forms no part of the present invention and can be varied as desired as will be evident to those skilled in the art.

Referring to the drawings, the paper-cutting, folding and tab-applying unit is disposed below an upper base element 10 supported in any suitable manner as by pillars (not shown) from the main base (not shown) of the machine. The operating members of this unit are actuated from a cam shaft 11 which is coupled by a clutch to a low speed driving shaft (not shown).

The paper-feeding device comprises a jaw member 12 mounted on a lever 13 freely pivotal about a fixed pivot 14. Co-operating with the jaw 12 is a further jaw 15 pivotally mounted at its lower end at 16 on the jaw 12 and connected by a link 17 with a lever 18 pivotally mounted on the pivot 14. At its lower end lever 18 carries a roller 19 which bears against the face of a cam mounted on the cam shaft 11 and indicated generally by 20.

A strip of paper, for example $2\frac{1}{32}$ " wide, is led from a coil at the rear of the machine between the feed jaws 12 and 15 and is fed thereby between a fixed shear blade 22 and a movable shear blade 23 carried on an arm 24 pivoted at 25 and connected by a link 26 to a pivoted arm 27 carrying a roller 28 engaging with a cam 29 mounted on the cam shaft 11. Disposed below the fixed shear blade 22 is a rubber block 30, the function of which will be described hereinafter.

A folder blade 31 bridged between two similar arms 32 pivoted at 33 is provided to fold the paper strip when cut and feed the same between the jaws of a tab-applying device denoted generally by 40. Arm 32 is actuated through a link 34 by an arm 35 rockable about a pivot 36 and carrying a roller 37 contacting a cam 38.

The operation of the tab-forming unit above-described is as follows. The paper strip 21 is gripped between the jaws 12, 15 which when the lever 18 is moved to the left by its cam 20 causes the link 17 to close the jaw 15 against the paper and continued movement of the lever 18 lifts the two jaws 12 and 15 as a whole to feed the paper between the shear blades 22, 23. The jaw 12 contacts the lower face of the support 39 of the fixed shear blade 22 and slight continued movement of lever 18 thereafter tends to close the jaws 12, 15 more tightly so as to form an indentation in the paper strip at the desired point of folding.

With the feeding jaws in this position the cam 29 moves the lever 27 and thus the pivoted arm 24 to the right to cause the shear blade 23 to co-operate with the fixed blade 22 to cut the paper strip. The face of the lever 24 immediately below the blade 23 presses the paper against the rubber block 30 which retains the uncut length below the shear blades against any possible drag of the feed jaws 12, 15 when they return to take up a new feeding position. When blade 23 moves to the left to release the paper strip the rubber block 30 acts

as a stripper and pushes the end of the paper clear of the fixed shear blade 22 ready for the next feed.

At the time of shearing the paper strip the folder blade 31 rocks forward to engage the indentation in the paper presented to it and folds the cut-off end of the strip in the form of a substantially V-shaped tab into the jaws of the tab-applying device 40 as indicated in dotted lines in Fig. 1.

The tab-applying device consists of a slide having a base portion 41 and an upper portion 42 which are hinged together at 43. The base portion is formed with laterally projecting flanges 44 which slide in suitably formed slideways on the member 10. The upper portion 42 of the device is connected by means of a rod 45 and a cushioning spring 46 to an arm 47 pivoted at 48. Arm 47 carries a roller 49 bearing against a cam 50 mounted on the cam shaft 11.

The upper slide 42 carries a roller 51 bearing against a guide surface 52 so that initial movement to the left of the member 42 through its actuating members 45, 47, 50 tends to rock the upper member 42 on the hinge 43 but this movement is prevented by contact of the roller 51 against the guide surface 52.

Continued movement to the left causes forwardly projecting portions 54 of the lower slide 41 to enter corresponding recesses 55 in a table 56 adapted to receive the garment or the like to which the tab is to be applied. This garment is located by fence elements 58 disposed laterally of the table element 56, and the tab shown in dotted lines in Fig. 1 is placed astride the edge of the garment located on table 56. Movement of the lower slide 41 is stopped by off-set portions 59 contacting the face 60 of the table element 56. At this point the roller 51 of the upper member 42 is clear of the guide surface 52 and continued movement to the left of the rod 45 causes the upper member 42 to rock about its pivot 43 and thus to close the jaws of the members 41, 42 to close the tab carried thereby around the edge of the garment. As will be noted, the jaw member 57 of the upper member 42 is provided with an off-set portion 53 which holds the folded paper tab in position within the jaws. The purpose of the spring 46 is to enable the tab-applying member to accommodate a garment of any thickness up to a predetermined value.

The staple-forming and inserting unit

This unit shown to the left below the table 56 in Fig. 1 comprises a wire feeding device shown in Fig. 5 consisting of a reciprocating feed grip 66 and a non-return grip 68 of the form shown generally in Fig. 7. As will be noted, the wire 69 is gripped between a plurality of balls 70 held in a conical cage 71 coacting with a conical face 72 of an outer casing 73. Movement of casing 73 to the left in Fig. 7 causes the balls 70 to grip the wire 69 and carry the same along while movement to the right of the casing 73 allows disengagement of the grip between balls 70 and the wire 69. The feed grip 66 is carried by a rocking arm 74 connected by a link 75 with a further rocking arm 76, the link carrying a roller 77 which contacts cam 78 mounted on the cam shaft 11. Non-return grip 68 is of the same general construction as the feed grip 66 and holds the wire from backward movement during the return of the feed grip 66. The wire fed by the feed grip 66 is guided by a guide tube 80 into a position denoted by the circle 81 in Fig. 1.

Below the table 56 (Fig. 1) is disposed a second cam shaft 82 which is connected through a shaft 62 and bevel gearing 63 with the cam shaft 11 disposed at the rear of the machine so that the two cam shafts rotate simultaneously and at the same speeds. Disposed below the point of entry of the wire is a vertically reciprocable slide 84 which is urged downwardly by a spring-controlled lever 64 to bear against a cam 88 mounted on the cam shaft 82. In its lowest position slide 84 which has a groove in its upper edge to receive the wire, is disposed below a

forming bar 89 which extends towards a second slide 90, shown more particularly in Fig. 6, in which are mounted two needles 91 having grooves 92 facing one another. As will be clear from Figure 6, the grooves 92 in the needles are so formed that the staple limbs lie wholly within the grooves and moreover that said grooves terminate at a distance below the points of the needles. Slide 90 is also vertically reciprocable through the intermediary of a cam 94 mounted on the cam shaft 82. Immediately adjacent slide 90 is a further slide 95 also vertically reciprocable and controlled as to its movement by a cam 96 mounted on the cam shaft 82. Slide 95 is provided with an off-set portion 98 carrying a support 99 having its upper edge or face grooved as shown more clearly in Fig. 5. The slide 90 is cut-away at its upper portion to receive the support 99 which is located between the needles 91.

Located to the left of the forming bar 89 is a slide member 100 which is of the form shown in Fig. 5 and is slidable horizontally through the intermediary of a lever 101 pivoting about a pin 102 and controlled by a face cam 103 mounted on the cam shaft 82. Rotation of the cam 103 reciprocates the slide 100 in a horizontal direction so that the leading edge and sides of the slide pass between the recess in the slide 84 and the forming bar 89. In other words, the walls of the slide 100 designated *a* are of a thickness substantially equal to that of the wire 69.

In operation the device above described, which is actuated simultaneously with the formation and application of the tab, feeds wire from a coil (not shown) at the rear of the machine by the reciprocating feed grip 66 and non-return grip 68 through the tube 80 across the top of the staple-forming slide 84 where it is received in the groove at the upper edge thereof. The wire passes through an apertured plate acting as a wire straightener and located adjacent the rear edge of the slide 84 and the latter when rising cuts off a length of wire at a point adjacent said plate and forms a substantially U-shaped staple around the forming bar 89.

Slide 100 is then moved to the right towards the needles 91 and carries the staple with it along the forming bar. The needles are capable of slight transverse springing movement and the staple is forced by the slide 100 into the grooves 92 of the needles facing one another, the needles being slightly outwardly displaced on the passage of the staple and springing back to engage the upright limbs of the staple. It is to be understood that the space shown in Fig. 5 between the slides 84 and 90 is normally filled by a suitable filler block to prevent the staple moving downwardly between the slides.

The support member 99 is now moved upwardly with the slide 95 to support the base of the staple. In this position, the needles 91 carrying the staple are disposed immediately below the staple-inserting point of the machine, as shown more particularly in Fig. 1. At the required moment the cams 94 and 96 move the slides 90 and 95 respectively to cause the needles 91 to pierce the garment and the applied tab and to carry the prongs of the staple along with it through said articles. During this movement the staple is supported by the pusher slide 95 and support 99 and the slide 95 dwells while the needle slide is withdrawn, thus holding the staple in its inserted position.

Staple-closing, tab-printing and tab-counting unit

Arranged above the table 56 is the staple-closing tab-printing and tab-counting unit. This comprises slides 110 which are vertically reciprocable in suitable guide members. Each slide 110 carries at its lower end a number drum 111 disposed immediately above the staple-inserting point. The number drums 111 are in the form of notched wheels each carrying the members 0 to 9 in spaced relation around their periphery, one drum 111 forming a units wheel and the other drum a ten's wheel. These wheels are geared as is customary in counting wheels so that one complete rotation of the units wheel produces a one-step movement of the ten's wheel.

Located adjacent the two number drums 111 is a counting disc 112 carried by a separate slide 117 and bearing around its periphery a suitable set of numbers, for example, 1 to 24, in spaced relation. Counting disc 112 is provided with a ratchet wheel 113 adapted to be moved step by step by means of a pawl 114 as hereinafter described. In the same manner each number drum 111 is provided with a ratchet wheel 115 adapted to be engaged for the stepping forward of the number drums by pawls 116 as hereinafter described.

Slides 110 are provided with a pin 118 which is engaged by the forked end 119 of a lever 120. Lever 120 is depressed for moving the slides 110 downwardly by means of a bar 121 having one end pivotally connected as at 122 to a rocking lever 123 pivoted at 124 and having a roller 125 bearing against a cam 126 mounted on the cam shaft 11. Bar 121 carries rollers 128, 129, the former of which bears against the underface of a bar 130 biased by means of a spring 131 in a downward direction while the other roller 129 bears against the upper face of lever 120, which lever pivots about a pin 132. Return movement of the lever 120 on withdrawal of the roller 129 to the right is produced by means of a spring 133 acting on the lower end of lever 120.

Forward movement, that is to the left in Fig. 1, of bar 121 moves a lever 135 pivoting about a pivot 136 to the left thereby moving the pawl 114 which actuates the ratchet wheel 113 of the counting drum. Immediately prior to the downward movement of the slide 110 carrying the number drums 111 the operative face of said drums is inked by means of a roller 140 carried by a stem 141 mounted to rotate with a spindle 142 carried by a rod 143. Rod 143 is provided with an arm 144 which is disposed in the path of movement of the tab-applying slide 40. Forward movement of the slide 40 causes pivoting of the arm 141 thereby moving the inking roller 140 normally in contact with a continuously rotating roller 146 having its lower face immersed in a well of ink 147, across the lower face of the number drums 111 thereby applying ink to the numbers on the lowest located projections.

The number drums 111 are engaged and held in set positions by an anvil member 150 carried by the lower arm of a cranked lever 151 pivoted at 152 in a member 153 carried by the slide 110. The anvil is normally urged into the recess of the number drum 111 by means of a spring 154 acting on the opposite arm of the lever 151. Thus on the downward movement of the slide carrying the number drums 111 the anvil 150 closes the upstanding limbs of the staple which has already passed through the fabric and the tab disposed astride the edge of the latter in such manner that the staple limbs lie against the surface of the tab with a bend of minimum radius.

Further, at each downward movement of the slide 110 to provide a number on the tab the lever 135 is actuated to cause the pawl 114 to step forward the counting disc 112 one figure. This counting disc does not print the tabs on the downward movement but is intended to be applied as and when required. For example, when the operator has completed the application of the tabs of one bundle of articles each having the same marking or identification on the tabs, a card, paper, book or the like is placed on the table and a handle mounted on the shaft 160 (Fig. 4) is rotated through one revolution. This causes rotation of a cam 161 mounted on shaft 160 and also causes rotation of a cam 162 mounted on the same shaft. Rotation of cam 162 through a lever 163 and link 164 causes rotation of the rod 143 thereby causing actuation of the inking roller 140 which swings by movement of the rod 143 across the lowest face of the number drums 111 and counting disc 112.

Rotation of the cam 161 moves down the slides 110 and the slide 117 of the counting disc 112 to print the record on the card or book.

During continued rotation of the cam 161 a further

cam 166 also mounted on shaft 160 moves a lever 167 into the path of pin 168 mounted on the upper arm of the cranked lever 151. Lever 167 carries the double pawl 116 adapted to actuate the ratchet wheels 115 of the number drums 111, said pawl 116 being adapted to engage ratchet wheel 115 attached to the units number drum 111 to step the same forward one number. It will be understood that these number drums are operated in the usual manner of counting mechanism in that a deep tooth space on the units ratchet wheel allows the second element of pawl 116 to operate the ratchet wheel of the ten's number drum as required.

Thus on the upward movement of the number drums the pin 168 on the lever 151 contacts the lever 167 to move the anvil 150 out of engagement with the number drums and continued upward movement of the number drums causes the pawl 116 to engage the ratchet wheel 115 to set the next identification number on the drums. Simultaneously an extension on pin 168 moves the normal holding pawl (not shown) from the ratchet wheel of the counting disc and this is reset to zero by a zeroising spring ready for the next count.

To prevent the operator rotating the handle on shaft 160 more than one revolution a pawl 170 is provided which comes in contact with an extension 171 of bar 130 and forms a stop. Pawl 170 is removed in readiness for the next recording operation when bar 121 advances to lower the slide 110 in that the extension 171 is raised and allows the pawl to spring forward. Backward rotation of the shaft 160 is prevented by contact of a pawl 172 with the lever 167.

Operation

In operation the machine is so constructed and arranged that a tab will have been formed and be located in the tab-applying device 40 whereas a staple will have been formed and be located in the needles 91 when a tabbed garment is removed. The slides 110 carrying the numbering and printing devices are in their upper-most position. Under these conditions the operator takes the article to be marked and stretches an edge thereof across the table 56, the position of the edge being located against the fence 58. The action or pull of placing the garment on the table 56 depresses a switch arm 180 which closes a circuit through a solenoid 181 which throws in the clutch to couple the cam shaft 11 to the low speed driving shaft. Cam shaft 11 makes one revolution and then stops until the next garment is applied to the table 56. Equally cam shaft 82 of the stapling unit also makes one revolution due to its connection to the cam shaft 11 through the transmission and bevel gearing.

Thus the V-shaped tab held in the tab-applying jaws of the member 40 is moved forward into its position such that the tab lies astride the edge of the article. During the latter part of the movement of the device 40 the jaws close as previously described to close the tab to engage the material and at this moment the needle slide 90 and the pusher slide 95 move upwardly so that the needle points pierce the tab and the material carrying with them the limbs of the staple, the base of the staple being supported by the member 99 mounted on the pusher slide 95. The needle slide 90 is then retracted withdrawing the needles 91 but the staple is held in its stapling position by the member 99.

At this moment the slides 110 are moved downwardly due to the movement of the bar 121 and lever 120 and the staple-closing anvil 150 and the number drums 111 are moved downwardly so that the ends of the staple are closed over and the numerals or the like forming the identification mark are applied so as to print the same on the upper face of the tab. It is to be understood that, as previously described, the number drums are inked immediately prior to their printing movement.

The various elements then withdraw to the positions above-mentioned, the counting disc being rotated one step

forward. While the staple is being closed and the identification marks printed, the paper-feeding and tab-forming mechanism and the wire-feeding and staple-forming mechanism have been operative to form a further tab and staple respectively and to place them in position ready for application.

Thus, at each operation of laying a garment on the table of a machine a tab is applied, stapled in position and marked and the number of tabs to which the same identification is applied is counted on the counting disc. When the articles belonging to one customer, or otherwise desired to carry the same identification, have been marked in the above-mentioned manner, the operator records the number so marked and the actual identification mark by rotation of the handle mounted on the shaft 160 as previously described.

It will be understood that a tabbing machine as described above will provide one hundred different code numbers from 00 to 99 and in connection with a laundry system in order to increase the number of code numbers or other identification marks to accommodate the normal number of bundles in a "lot," which usually varies from 150 to 250 bundles, the reel of strip paper after application of the number 99 or other mark is replaced by a reel of a different coloured paper.

What I claim is:

1. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a longitudinal groove therein, means to feed a U-shaped staple to said needles so that the limbs of said staple are located within the grooves of said needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

2. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a longitudinal groove therein, means to form a U-shaped staple, means to feed a U-shaped staple to said needles so that the limbs of said staple are located within the grooves of said needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

3. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a longitudinal groove therein, said needles being mounted so as to be resilient in a lateral direction in a plane containing both said needles, means to feed a U-shaped staple to said needles so that the limbs of said staples are located within the grooves of said needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship

with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

4. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a tapering point portion and a longitudinal groove therein, said needles being mounted so as to be resilient in a lateral direction in a plane containing both said needles, said grooves being disposed facing one another and having their full depth terminating short of the tapering point portions of said needles, means to feed a U-shaped staple to said needles so that the limbs of said staple are located within the grooves of said needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

5. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a longitudinal groove therein, means to form a U-shaped staple from a continuous length of wire comprising a reciprocable slide acting to cut off a predetermined length of wire in one direction of its movement and a staple forming bar around three sides of which the cut-off wire length is bent by the continued movement of said slide, means to feed a U-shaped staple formed by said means to said needles so that the limbs of said staple are located within the grooves of said needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

6. A machine for attaching a tab, label or the like applied to a fabric or article which includes a pair of spaced needles each having a longitudinal groove therein, means to form a U-shaped staple from a continuous length of wire comprising a reciprocable slide acting to cut off a predetermined length of wire in one direction of its movement and a staple forming bar around three sides of which the cut-off wire length is bent on the continued movement of said slide, a feeding slide movable in a direction at right angles to the movement of said staple forming slide so as to transfer the formed staple into the grooves of said pair of spaced needles, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

7. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a longitudinal groove there-

in, means to form a U-shaped staple from a continuous length of wire comprising a reciprocable slide acting to cut off a predetermined length of wire in one direction of its movement and a staple forming bar around three sides of which the cut-off wire length is bent on the continued movement of said slide, a feeding slide movable in a direction at right angles to the movement of said staple forming slide so as to transfer the formed staple into the grooves of said pair of spaced needles, a reciprocable slide moving in the same direction as said staple forming slide and supporting said needles in such manner that said needles are resilient in a lateral direction to allow the passage of the staple limbs into said needle grooves, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable towards said fabric simultaneously with the movement of said needles towards said fabric, whereby to cause said staple and said needles to move together without relative movement therebetween through said fabric and said tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

8. A machine for attaching a tab, label or the like to a fabric or fabric article by means of a staple which includes a pair of spaced needles each having a tapering point portion, means for reciprocating said needles through the fabric and the applied tab to perforate the same, said needles having longitudinal grooves therein of which the full depth terminates short of said tapering point portions of said needles to carry the limbs of a U-shaped staple through and within the boundary of the perforations in the fabric and the tab made by the tapering point portions of said needles.

9. A machine as claimed in claim 1 in which the grooves of the needles are dimensioned so that at least the tips of the staple limbs lie wholly within said grooves.

10. A machine for attaching a tab, label or the like applied to a fabric or fabric article which includes a pair of spaced needles each having a sharply pointed penetrating end and a longitudinal groove terminating short of the penetrating end, means to fit a U-shaped staple to said needles so that the limbs of said staple are located within said grooves and with the free ends of said limbs substantially masked by the penetrating end portions of the needles extending beyond the free ends of the staple, means to move said needles reciprocatingly through said fabric and applied tab, a reciprocable support for said staple movable toward said fabric together with the movement of said needles toward said fabric, whereby said staple and said needles are caused to move together without relative movement therebetween through said fabric and said tab, said needles substantially masking the free ends of said staple as the latter is carried through the fabric and the tab, said reciprocable support holding the staple in engaged relationship with said fabric and said tab on the reverse movement of said needles and positively actuated means to close the limbs of said staple while said staple is held in said engaged relationship.

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