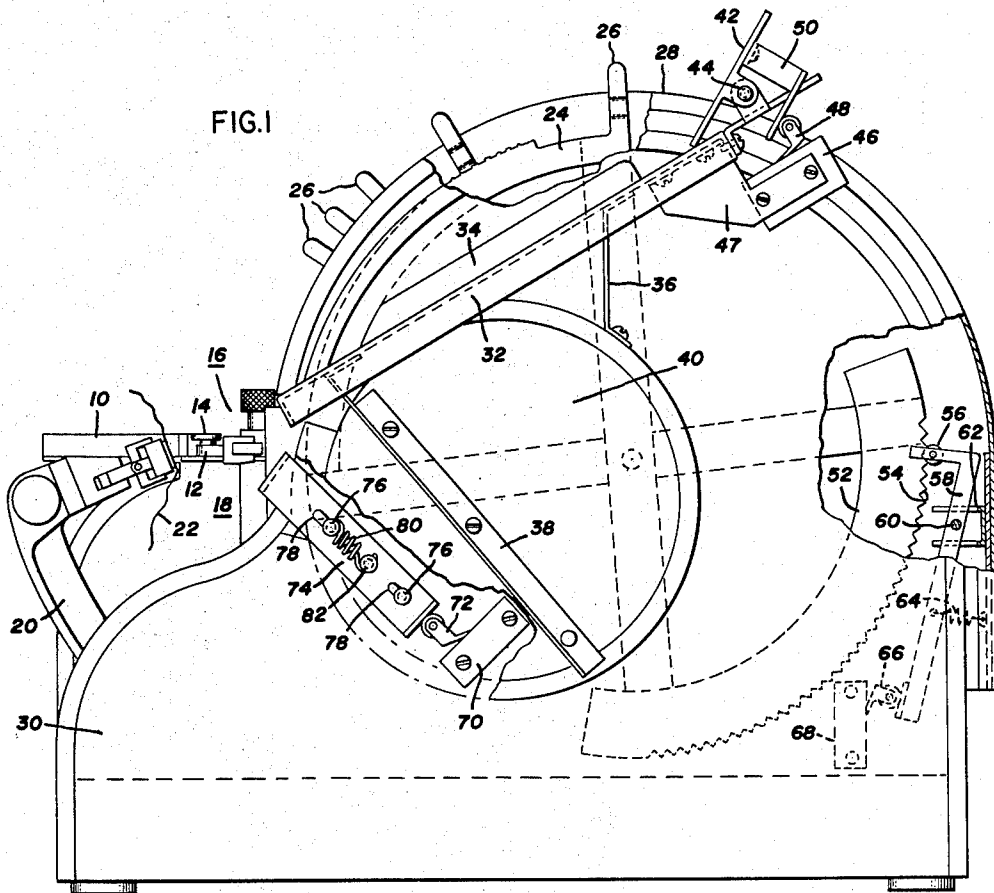
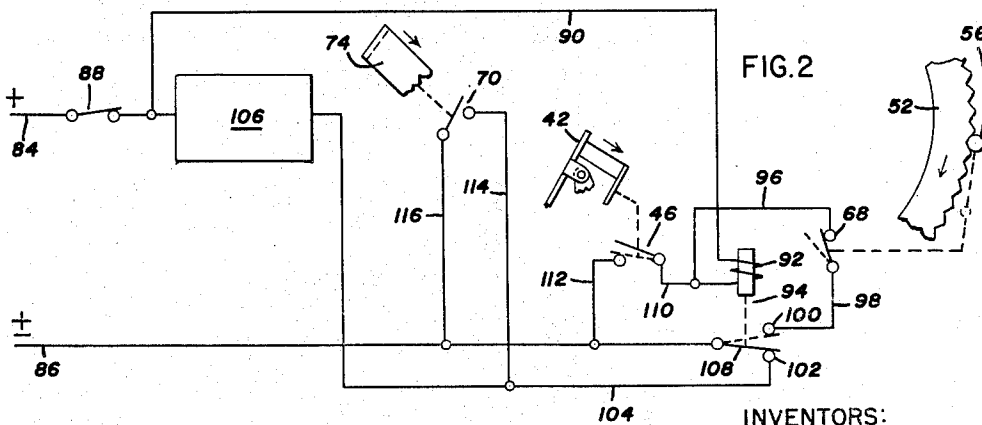


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P. N. BRAUN ETAL
GARMENT MARKING MACHINE

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GARMENT MARKING MACHINE

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This invention relates to a power operated garment marking machine of the type wherein identification indicia is affixed to garments which are to be processed as by laundering or dry cleaning. The identification indicia is utilized to correctly identify all of the garments of a particular bundle upon completion of the processing so as to prevent any garments of a bundle from being lost or separated.

Such machines of the type referred to are shown and disclosed in my prior Patents No. 2,742,828, issued April 24, 1956, and No. 2,825,480, issued March 4, 1958. Patent 2,742,828 discloses a garment marking machine for attaching identification indicia to garments, or the like, by stapling while Patent 2,825,480 discloses a machine for attaching identification indicia to garments, or the like, by heat sealing.

With each machine, however, it is essential that all of the garments of one bundle be marked with the same number or numbers and that the invoice therefor also be marked with this number. In addition, it is imperative that the garments of the next bundle to be marked be marked with a different number. Operators of the machines disclosed in the patents, however, often-times inadvertently fail to change the identification indicia printed on the identification tag by the machines shown in the patents with the result that garments of different bundles, i.e., belonging to different customers, are sometimes marked with the same number. As will be obvious, this causes delivery of the wrong garments to the wrong customer, resulting in a great deal of customer dissatisfaction.

Accordingly, it is an object of this invention to provide a garment marking machine of the type referred to which operates to prevent errors in the marking of the garments of different bundles.

More specifically, it is an object of this invention to provide a machine of the type referred to wherein the power to the machine is disconnected from the machine when the operator completes the marking of the garments of a given bundle and the power cannot be restored unless and until the operator has set the machine so as to imprint the identification tags with different identification indicia.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

In the drawings—

FIGURE 1 is a side elevational view of one embodiment of the invention with parts broken away, and parts omitted for purposes of clarity, and

FIGURE 2 is a circuit diagram for operating the machine shown in FIGURE 1.

As will be obvious, the invention of this application may be utilized with either of the machines shown in Patents 2,742,828 or 2,825,480. In both of the machines shown in those patents, a tape feed is provided and the machine operates when a garment is draped over the garment arm and moved forwardly, to first feed the tape to a printing station where the tag forming portion of the tape is imprinted with the identification indicia which may be a number and/or letters, and from thence the imprinted portion is fed to the tag affixing station where the im-

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printed portion is affixed to the garment either by heat sealing or by stapling and then severed from the tape. In such machines, power assist means are provided for the printing arm and the garment arm so as to insure the proper printing of the tag and the proper affixing of the tag to the garment.

Referring to FIGURE 1, a machine of either the heat sealing or stapling type is shown wherein the tape supply is indicated by the reference numeral 10 and the tape 12 passes around a guide post 14 and through a feed mechanism generally indicated by the reference numeral 16. The printing arm 18 is shown in its position just prior to imprinting a tag with the identification number and the garment arm 20 is shown with a garment 22 draped thereover, with the arm 20 in a position intermediate its travel from the rest position toward the tag affixing mechanism.

The means for forming the type line to print the tag forming portion of the tape 12 may comprise a plurality of type segment wheels, generally indicated by the reference numeral 24, and these wheels may be of the construction and operate in the manner more particularly shown and described in Patent 2,598,438, issued May 27, 1952. The wheels 24 are formed with handle portions 26 which project upwardly through the top cover 28 of the machine in order to permit the operator to manually set the wheels in order to give the desired identification indicia.

The side wall 30 of the machine is shown as being provided with a clip board 32 which is supported on the side wall 30 by means of the flange 34 and the brace members 36 and 38 which are affixed to the side and top surfaces, respectively, of a cylindrical housing 40 mounted on the side wall 30 of the machine. The board 32 is provided with a spring mounted clip 42 pivotally connected to the board as at 44 to permit the operator to removably affix an invoice on the surface of the board 32.

A microswitch 46 is mounted on a bracket 47 affixed by any suitable means to the underside of the board 32 and the switch arm 48 of the microswitch is positioned in the path of movement of an L-shaped arm 50 affixed to the underside of the clip 42 whereby upon movement of the clip 42, the switch 46 is actuated. This acts in a manner which will be more fully described hereinafter to interrupt the power supply to the print arm 18 and the garment arm 20. Accordingly, when the operator of the machine has marked all of the garments of a bundle with a given identification series and then removes the invoice accompanying the bundle from the board 32, the power is interrupted to the machine and the operator cannot mark the garments of the next bundle with the same identification series.

Because of the power interruption just described, the operator is reminded to set the outside type segment wheel 24 to the next successive identification number so as to mark the garments of the next bundle with a new bundle number. In performing this operation, the power to the machine is restored in order to permit the garments of the next bundle to be marked. This is brought about in the following manner. As seen to the right of FIGURE 1, wherein the side wall 30 has been broken away, the rear segment 52 of the type wheel 24 is provided with a plurality of teeth 54. A detent mechanism comprising a roller 56 is carried by a detent arm 58 which is pivotally mounted as at 60 on a bracket 62 mounted on the rear wall of the machine and the roller 56 will cause the arm 58 to be oscillated slightly as the wheel 24 is moved to a new position. As shown in the figure, a tension spring 64 is affixed to the arm 58 below the pivot point 60 and to the rear wall of the machine in order to yieldably urge the roller 56 into engagement with a notch formed by a pair of teeth 54 in the segment 52 thereby properly locating

and holding the type wheel 24 into position to form a print line in combination with the other type wheels, as more particularly described in Patent 2,598,438. The lower end of the arm 58 is positioned to engage the switch arm 66 of a microswitch 68 so as to cause an actuation of the switch 68 each time the wheel 24 is moved to a new position. This actuation of switch 68 will restore the power to permit the garments of the next bundle to be marked by the operator.

In the event that the operator wishes to mark the invoice with the same number as the garments of a bundle, the invoice may be so marked after it has been removed from the board 32 by means of an auxiliary switch means for restoring power to the machine prior to the movement of the wheel 24. This auxiliary switch is indicated by the reference numeral 70 and is carried by the side wall 30 of the machine and has an armature 72. An actuating link 74 is connected to the side wall 30 for limited reciprocating movement by means of the pins 76 which are received in the elongated slots 78. A tension spring 80 is affixed at one end to a pin 82 on the link 74 and at its opposite end to one of the pins 76 carried by the side wall 30 and projecting through the slot 78 whereby the link 74 is urged outwardly. By circuitry to be hereinafter more particularly described, when the operator depresses the link 74, the switch 70 is actuated and power is restored to the machine as long as the operator holds the link 74 in its innermost position. This permits the invoice to be marked with the same number as the garments of a bundle and/or permits errors to be corrected. However, as soon as the operator releases the link 74, the spring 80 returns to its outermost position again interrupting the power supplying the machine, thus, rendering it inoperative until the operator sets the wheel 24 to a new position.

The circuit for operating the machine is shown in FIGURE 2 and has a power supply comprising a hot line 84 and a common or return line 86, a main switch 88 is connected in the hot line 84 and is normally closed by the operator at the commencement of a day's work to render the machine operative. The line 84 is connected by the line 90 to one side of the coil 92 of a relay 94. The opposite side of the coil 92 is connected by line 96 to one side of the normally closed segment operated switch 68, the other side of which is connected by line 98 to one of the fixed contacts 100 of the relay 94. The other fixed contact 102 of the relay is connected by line 104 to the controls for the print arm and the garment arm of the machine, generally indicated by the box 106. The armature 108 of the relay 94 is normally in engagement with the fixed contact 102, as is indicated by the solid line position of the armature. The armature 108 is connected to the return line 86 whereby a main power circuit is completed from the hot side 84 of the power supply through the main switch 88, controls 106, line 104, fixed contact 102 and armature 108 to the common or return line thereby providing power for the controls to operate the machine in a normal manner.

Line 110 is connected from the lower side of the coil 92 of relay 84 to one side of the normally open switch 46 and the opposite side of this switch is connected by line 112 to the common line 86. Therefore, as will be obvious when the invoice switch is actuated by depressing the clip 42 on the invoice board 32, the switch is momentarily moved to the dashed line position wherein the relay coil 92 is energized to move the armature 108 to the dashed line position thereby interrupting the main power circuit previously described for providing power to the controls 106. The momentary closure of switch 46 causes the armature 108 to move to the dashed line position, as just described, and the armature 108 is maintained in this position through the holding circuit comprising line 90, coil 92, line 96, normally closed segment switch 68, line 98, fixed contact 100, armature 108, and the common line 86. Accordingly, even though the switch 46 is immediately returned to its open position when the clip 42 is

released, the power has been interrupted and will remain off to the controls 106 by reason of the holding circuit just described.

Thereafter when the operator moves the wheel 24 to a new position, the normally closed segment switch 68 will be momentarily open, thus, breaking the holding circuit and de-energizing the coil 92 to return the armature 108 to its upper position thereby restoring the main power circuit which provides the power for the controls 106.

Should the operator, however, desire to provide power to the controls 106 to mark the invoice or to correct any errors before setting the wheel 24 to a new position after the power circuit through the armature 108 has been broken by depressing the invoice board clip 42, as previously described, the auxiliary switch 70 may be actuated to connect the power supply to the controls 106 through an auxiliary power circuit comprising line 114 which is connected to the line 104 and to the controls 106 which are connected at their opposite side through the main switch 88 to the hot side 84 of the power supply. The line 114 is also connected to one side of the switch 70 and the opposite side of the switch is connected by line 116 to the common return line 86 whereby when the switch 70 is moved to the closed position, the armature 108, which is in the dashed line position, is by-passed and as long as the switch 70 is held closed, the power is supplied to the controls 106. When the switch 70 is released, however, the auxiliary power circuit just described is broken and it is necessary to set the wheel 24 to a new position in order to restore the power supply to the controls through the main power circuit in the manner previously described.

In the machine disclosed in Patent 2,825,480, the tags are heat sealed to the garment. As is set forth in that patent, the tag and garment are urged together against a heated iron for a predetermined time, known as the "dwell" and under a predetermined pressure in order to insure the proper affixing of the tag to the garment. In connection with that machine, the actuating link 74 for the auxiliary switch 70 may be provided with a mechanical interlock arrangement whereby when the link 74 is depressed to actuate the switch 70, the interlock will operate to hold the link 74 in the depressed position with the switch 70 closed until the power assist means on the garment arm 20 is returned to the rest position. The return movement of the garment arm may be utilized to release the interlock means whereby the switch 70 will be opened to again interrupt the power to the printing arm and the garment arm until the wheel 24 has been moved to a new position. Such a construction or arrangement is contemplated by applicant's invention and is within the scope of the appended claims.

As will be obvious, the machine, therefore, is so arranged and constructed as to render it "foolproof" so as to prevent the operator thereof from marking the garments of one bundle with the same identification indicia which has been applied to garments of a different bundle.

What we claim is:

1. A garment marking machine for affixing identification indicia to garments, or the like, comprising a tape supply, feed means for feeding said tape to a printing station, a plurality of type segment wheels movable through a plurality of positions to form a type line at said printing station and electrically operated power means for imprinting a tag forming portion of said tape presented at said station with identification indicia, a tag affixing station, said feed means being operable to present an imprinted tag forming portion at said tag affixing station, tag affixing means including a garment supporting arm and electrically operated power assist means operable upon movement of said garment arm for affixing said imprinted tag forming portion to a garment supported on said arm and severing said tag portion from said tape, said machine having a platform, fastening means movable toward and from said platform for affixing and releasing an

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invoice, or the like, thereto, said power-operated means and said power-assist means being connected to a power supply circuit through contacts of a relay operable when energized to disconnect said power circuit from said power-operated means, switch means operable upon movement of said fastening means for release of an invoice to energize said relay, a hold circuit for said relay including a normally closed switch, said switch being opened upon movement of one of said type segment wheels to a next successive position to deenergize said relay.

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2. The garment making machine of claim 1, wherein said machine is provided with auxiliary switch means manually operable to connect said power-operated means and said power-assist means to said power circuit without movement of said type segment wheel after said fastening means has been moved for release of an invoice.

References Cited in the file of this patent**UNITED STATES PATENTS**

10 2,821,122 Long ----- Jan. 28, 1958

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,114,667

December 17, 1963

Philip N. Braun et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 59, for "84" read -- 94 --; column 4, line 26, for "water" read -- power --.

Signed and sealed this 21st day of April 1964.

(SEAL)

Attest:

ERNEST W. SWIDER

Attesting Officer

EDWARD J. BRENNER

Commissioner of Patents

