

UNITED STATES PATENT OFFICE

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METHOD OF MARKING TEXTILE ARTICLES

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6 Claims. (Cl. 154—118)

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This invention relates to a method of marking articles, and more particularly to a method for marking textile articles with numerals or other indicia for such purposes as identification marking in laundries and indication of the price of an article.

This application is a division of my copending application Serial No. 7,711, filed February 11, 1948, and is directed to a modified form of the general method of marking disclosed in the aforesaid copending application. Claims to this modified form were found allowable but have been required to be divided out of said application because no generic claim was found to be presentable.

The practices heretofore followed in marking articles which are to be laundered have had various serious drawbacks and consequently have not been satisfactory. For example, the practices of sewing or stapling identification tabs on to each article in an inconspicuous place are unsatisfactory because it takes the operator a considerable time to find an inconspicuous place for placing the mark, and, when the laundering process has been finished, it takes still more time to locate the marks or tabs and remove them. Similarly, the prior practice of printing identification marks on each article with permanent black ink is time-consuming, and, moreover, has the disadvantage that the markings are multiplied if the article has gone through a different laundry or several laundries.

As set forth in my aforesaid application, I have devised a method of marking textile articles for laundry marking purposes and other purposes whereby it is made possible in a simple and relatively inexpensive way to mark textile articles with markings that remain unaffected by the mechanical strain and/or solvent action of water, detergents and other liquids or chemicals to which the textile articles are subjected in washing, bleaching, or dry-cleaning operations and are also unaffected by the temperatures and mechanical conditions to which the textile articles are subjected in hot-drying and ironing.

My improved marking method involves the use of a marking tab which contains, consists or presents on at least a substantial area of one side thereof (the reverse side with reference to the face of the tab) a thermoplastic material which is not softened at 100° C. but which is softened at a temperature well below the scorching point of the textile material to which it may be attached by heat and pressure and which is easily

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affected by heat, for example, artificial silk. The tab used in the method of the present invention is further designed to receive numerals or other marking indicia on the face thereof, and the thermoplastic material presented on the reverse side is of such character as to permit the tab to be easily removable by tearing-off without affecting the textile material to which the tab is attached.

The marking tab used in practicing the method of the present invention may take various forms and can be prepared in various ways. In one form a finely woven fabric, such as cotton, serving as a backing, is coated on one side with the thermoplastic material. The coating may extend over the entire surface of one side of the fabric or, if desired, a part may be left uncoated and the tabs cut so as to leave part of them free from the thermoplastic material. It will be understood that more than one coating may be applied to the backing, if desired.

The side of the tab not coated with the thermoplastic material is used for marking with numerals, with or without letters or other indicia for the purpose of identifying the article to which the tab is to be attached or for indicating the price of the article.

According to another form the tab may consist of a fabric formed at least in part of filaments or yarn of a thermoplastic material.

The side of the tab which is not to be attached to the article is used for marking with numerals, with or without letters or other indicia for the purpose of identifying or indicating the price of the article.

The softening range of the thermoplastic material usually will be between about 120 and 160° C.

The thermoplastic material may be, for example, synthetic resin, chlorinated rubber, or cellulose derivative, plasticised if necessary to bring it within the softening range referred to above.

It is a feature of the method of the present invention that it makes it possible to utilize any one of the types of tabs mentioned above and at the same time insures that at the end of the marking operation an end portion of the tab remains unbonded or unadhered to the fabric so that it may serve as a finger piece and be grasped by the operator, thus facilitating the tearing off of the tab from the article after the marking has served its purpose.

According to the present method of marking, tabs prepared in one of the described ways or in an equivalent manner and containing, consist-

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ing or presenting thermoplastic material of the described characteristics on the reverse side thereof are first printed with the desired identification or other marking indicia on the face side, then positioned on the garment or other textile article to be marked thereby and thereafter bonded to the article by application of heat and pressure to a portion only of the exposed face of the tab to thereby cause the tab along the corresponding portion of the opposite face or reverse side thereof to become adhered to the article while leaving the remainder free to serve as a finger piece for eventual tearing off of the tab. In applying the tab the heat is regulated to such a degree, having regard to the softening properties of the thermoplastic contained in the tab or presented at the reverse side thereof and also having regard to the scorching properties of the textile material of the article being marked, as to cause the thermoplastic material to be softened and adhesive while at the same time keeping the temperature low enough to avoid scorching or other untoward action on the textile material of which the article is constituted.

Conveniently and in a preferred form of the method, a suitable material in the form of a sheet, strip or tape and presenting on one side thereof a thermoplastic material which is not softened at 100° C. but is softenable and capable of being rendered adhesive by heat and pressure at temperatures within the range above defined, is cut into smaller strips or pieces of suitable size for a marking tab or label, and then, as individual tabs are required for marking articles, each tab is successively printed with suitable indicia on one face thereof, positioned on the article to be marked thereby and thereafter bonded to the article over a portion only of the reverse side of the tab by applying heat and pressure to a portion only of the face of the tab, leaving a finger piece for tearing off purposes.

The following examples further illustrate how the process of the invention may be carried into effect:

1. A finely woven cotton material is coated with a solution consisting of 19 parts by weight of a co-polymer of vinyl acetate and vinyl chloride, 10 parts by weight of amyl tartrate, 5 parts by weight of tricresyl phosphate and 66 parts by weight of acetone, with the aid of a coating machine. The material is dried, cut into tabs of a suitable size and the tabs are printed with numerals, with or without letters or other suitable identification marks. On positioning the tab on the article with the coated side of the tab against the article and applying heat and pressure to a portion only of the face of the tab, the portion to which heat and pressure are not applied does not adhere and remains free to be grasped in the fingers, thus greatly facilitating the removal of the tab after the laundering process or other need for the tab has ended.

2. A fabric in which are employed mixed yarns containing approximately 40% of filaments of cellulose acetate (in the manufacture of which has been incorporated a water-insoluble plasticising agent such as diethyl or dimethyl phthalate) and approximately 60% of fibres of cotton, is cut into tabs of a suitable size and the tabs are printed with numerals, with or without letters or other suitable identification marks. On the application of heat and pressure to only part of the tab this part will adhere firmly to the article to be laundered, whereas the other part will not adhere, thus facilitating the removal of the tab

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after the laundering process. If it is desired to assist the melting or softening of the cellulose acetate, a volatile solvent for the cellulose acetate, and a plasticiser, can be present during the application of heat and pressure, a suitable mixture being 92% of acetone and 8% of diethyl phthalate.

I claim:

1. A method of marking textile articles comprising the steps of applying to the surface of a textile article a marking tab in the form of a strip of material carrying identifying indicia on one face thereof and presenting on the reverse side thereof thermoplastic material having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material of which the article is formed, positioning said tab with the identifying indicia facing outward from said article and with its opposite face against the article, applying pressure and heat at a temperature within the aforesaid range to a portion only of the exposed face of said tab to cause said portion to adhere to said article while leaving the remainder free to serve as a finger piece for eventual tearing-off of said tab, and finally removing the heat and pressure.

2. A method of marking textile articles comprising the steps of cutting from a larger piece a strip of material carrying on one face a layer of thermoplastic substance having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material of which the article is formed, impressing the strip on its opposite face with an identification marking, placing said strip with its thermoplastic-carrying surface downwards upon the article, applying pressure and heat at a temperature within the aforesaid range to only a portion of the identification marking face thereof while leaving the remainder free to serve as a finger piece for eventual tearing-off of said strip and finally removing the heat and pressure.

3. A method of marking textile articles comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip containing thermoplastic material having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material to which the tab is applied, applying identifying indicia to one face of the tab, positioning the tab with its opposite face against the said article, applying pressure and heat at a temperature within the aforesaid range to a portion only of the exposed face of said tab to cause the tab along the corresponding portion of the opposite face thereof to adhere to said article while leaving the remainder free to serve as a finger piece for eventual tearing-off of said tab, and finally removing the heat and pressure.

4. A method of marking textile articles comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip consisting of thermoplastic material having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material to which the tab is applied, applying identifying indicia to one face of the tab, positioning the tab with its opposite face against the said article, applying pressure and heat at a temperature within the aforesaid range to a portion only of the exposed face of said tab to cause the tab along the corresponding portion of the opposite face thereof to adhere to

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said article while leaving the remainder free to serve as a finger piece for eventual tearing-off of said tab, and finally removing the heat and pressure.

5. A method of marking textile articles comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip containing thermoplastic filaments having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material to which the tab is applied, applying identifying indicia to one face of the tab, positioning the tab with its opposite face against the said article, applying pressure and heat at a temperature within the aforesaid range to a portion only of the exposed face of said tab to cause the tab along the corresponding portion of the opposite face thereof to adhere to said article while leaving the remainder free to serve as a finger piece for eventual tearing-off of said tab, and finally removing the heat and pressure.

6. A method of marking textile articles comprising the steps of applying to the surface of the textile article a marking tab in the form of

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a strip consisting of thermoplastic filaments having an initial softening point lying in the temperature range above 100° C. and below the scorching point of the textile material to which the tab is applied, applying identifying indicia to one face of the tab, positioning the tab with its opposite face against the said article, applying pressure and heat at a temperature within the aforesaid range to a portion only of the exposed face of said tab to cause the tab along the corresponding portion of the opposite face thereof to adhere to said article while leaving the remainder free to serve as a finger piece for eventual tearing-off of said tab, and finally removing the heat and pressure.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,139,377	Mull et al. _____	Dec. 6, 1938
2,319,272	Starr _____	May 18, 1943
2,446,618	Stephano _____	Aug. 10, 1948