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MEANS AND METHOD OF MARKING
TEXTILE ARTICLES

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This invention relates to means and a method for marking articles.

It is common practice to identify articles which are to be laundered by printing identification marks upon each article in an inconspicuous place with permanent black ink. Another method is to employ identification tabs, some of which are made of cloth and sewn to the article, whilst others are made of metal and clamped or stapled to the article. Still another method is to sew identification figures or letters directly into the article.

None of these methods works satisfactorily, and the question of laundry marking has been a constant source of trouble for commercial laundries. The permanent black identification marks are very objectionable because they disfigure the laundry article, and the same applies to the sewn-on tabs and the sewn-in identification marks, as they cannot be removed. In the case of metal tabs, which can be removed by the laundry, these tabs often become caught or entangled, and torn from the article in the course of the washing, and they also wear out the article. Furthermore, in the case of permanent black identification marks and sewn-on tabs or sewn-in identification marks, 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 him still more time to locate these marks or tabs, which must be comparatively small in order to confine the disfigurement of the article to a minimum. These are drawbacks and difficulties which arise when an article is sent to a laundry and laundered even for the first time. They are, obviously, multiplied if the article has gone through a different laundry, or several laundries, before, and bears more than one identification mark.

It has also been proposed in United Kingdom specification No. 478,699 to provide a label adapted to adhere to an article upon being applied to said article with heat and pressure, said label comprising a front face bearing or constituting a legend or device and a back face of fabric having yarns or filaments of a thermoplastic derivative of cellulose exposed thereon.

It is stated that the label may be applied to a shirt or like article to which it is substantially permanently welded or from which it can be separated only with difficulty.

It is an object of the present invention to provide means for marking articles which are to be laundered whilst overcoming the aforesaid disadvantages and difficulties.

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It is a further object of the invention to provide means for marking articles for other purposes e. g. for indicating the price thereof.

It is a still further object of the invention to provide an improved method of marking textile articles.

With these objects in view the present invention provides a tab for marking articles which contains or consists of or presents on a substantial area of one side thereof a thermoplastic material which is not softened at 100° C., but which is softened at a temperature well below the scorching point of textile material to which it may be attached by heat and pressure and which is easily affected by heat, for example, artificial silk, and has on the face thereof numerals, and which is easily removable by tearing off without affecting the material to which it is attached.

In one application of the invention a finely woven fabric, such as cotton, serving as a backing, is coated on one side with the thermoplastic material. It will be understood that more than one coating may be applied to the backing, if desired. When the tab is to be used in marking articles in the manner disclosed and claimed herein the coating will be applied to a portion only of one side of the fabric and the coated fabric is cut into tabs or strips so as to leave a part of the coated side free from the thermoplastic material.

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.

The marking method claimed herein involves the use of a marking tab having one end portion

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that is left substantially free from the thermoplastic material in order to facilitate removal. The tab is applied to the article by heat and pressure, with or without the use of solvents or plasticizing or softening agents.

According to the method of marking claimed herein, tabs prepared in one of the described ways or in an equivalent manner and containing, consisting or presenting thermoplastic material of the described characteristics on a portion only of 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 the exposed face of the tab to thereby cause the tab along the portion of the reverse side thereof bearing or presenting the thermoplastic material 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 a portion only of 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 the face of the tab, leaving a finger piece for tearing-off purposes.

If desired, the tabs may be prepared in such manner as to provide thermoplastic material over the whole of the surface, in which case in applying the tabs in the marking operation care should be taken to see that heat and pressure are applied to a portion only of the face of the tab leaving one edge portion free to serve as a finger piece in removing the tab when it has served its purpose. This method of marking is claimed in my copending divisional application Serial No. 320,622 filed November 14, 1952.

Owing to the comparatively high softening range of the thermoplastic material the bond between the tab and the article will not be affected by the temperature at which the laundering is carried out. Furthermore, the bond will be such as not to be affected by the mechanical strain of the washing, bleaching, souring, extracting, hot-drying and ironing. Before the final distribution of the marked articles to customers the tab can conveniently be removed by tearing it off.

The following examples further illustrate how 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

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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. Part of the cotton material, however, is left uncoated, and the tabs cut so as to leave part of them free from the thermoplastic material. On the application of heat and pressure, this part of the tab will not adhere to the article to be laundered, and this will greatly facilitate the removal of the tab after the laundering process.

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 plasticizing 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 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.

What I claim is:

1. A removable tab for marking textile articles by adhesive application thereto, said tab comprising a strip of material carrying identifying indicia on one surface thereof and presenting on a portion only of the reverse side thereof exposed 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, the remainder of the reverse side of said tab being free of thermoplastic material and serving as a tear-off finger piece.

2. A removable tab for marking textile articles by adhesive application thereto, said tab comprising a strip of textile material carrying identifying indicia on one surface thereof and presenting on a portion only of the reverse side thereof exposed filaments 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 of which the article is formed, the remainder of the reverse side of said tab being free of thermoplastic material and serving as a tear-off finger piece.

3. A removable tab for marking textile articles by adhesive application thereto, said tab comprising a strip of material carrying identifying indicia on one surface thereof and carrying on a portion only of the reverse side thereof a layer 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 of which the article is formed, the remainder of the reverse side of said tab being free of thermoplastic material and serving as a finger piece for eventual tearing off of said tab from a textile article to which said tab has been previously adhered by heat and pressure.

4. A method of marking textile articles com-

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prising the steps of applying to a surface of a textile article a marking tab in the form of a strip of textile material carrying identifying indicia on one face thereof and presenting on a portion only of 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 fabric and with its opposite face against the article, applying pressure and heat at a temperature within the aforesaid range to the indicia-carrying face of said tab to cause said tab to adhere to said article over the portion of said tab presenting said thermoplastic material 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 which are to be laundered or dry cleaned, comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip carrying on a portion only a 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 carrying thermoplastic material on a portion thereof against the said article, applying pressure and heat at a temperature within the aforesaid range to the indicia-carrying face of said tab to cause said tab to adhere to said article over a portion of said tab carrying the thermoplastic material 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 which are to be laundered or dry cleaned, comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip of textile material containing on only a portion thereof 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

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the said article with thermoplastic filaments in contact with said article, applying pressure and heat at a temperature within the aforesaid range to the indicia-carrying face of said tab to cause said tab to adhere to said article over the portion of said tab containing the thermoplastic filaments 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.

7. A method of marking textile articles which are to be laundered or dry cleaned, comprising the steps of applying to the surface of the textile article a marking tab in the form of a strip of textile material consisting in only a portion thereof 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 with thermoplastic filaments in contact with said article, applying pressure and heat at a temperature within the aforesaid range to the indicia-carrying face of said tab to cause said tab to adhere to said article over the portion of said tab containing the thermoplastic filaments 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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