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(54) Ironing machine for socks.

(57) The invention proposes a method and machine for the industrial ironing of socks preset on forms 12 which move along a determined course according to which, after an initial humidification, the socks are subjected to pressing operations between heated plates 15a alternating with being exposed to air or steam until a final unloading station 17 of the socks from the forms. The machine has a rotating horizontal polygonal table 10, at least a pair of forms 12 for the socks applied to each side of said table and a succession of pressing stations 15 which alternate with stopping or steaming stations 16 starting from a loading station 13 of the socks on said forms.

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The present invention relates to equipment for the industrial ironing of stocks and in particular to a method and an improved machine for the pressing-ironging of both men's and women's socks.

The main object of the invention is to propose a method and ironing machine which improves the treatment conditions of socks through an alternation of pressing actions and stoppages without pressing the socks enabling quick drying. Said method is not carried out by the machines available at present where the socks remain pressed during the whole drying-ironing process after being humidified. The here proposed method leads to advantages in energy-saving and in enabling the treatment of socks to be carried out at lower temperatures without danger of altering the yarn or rendering the manufactured article shiny as can often happen in traditional machines.

Another object of the present invention is to propose a method and an ironing machine for socks with both an initial humidification with atomized water and with a steaming between successive pressing operations, rendering the machine more versatile in the treatment of the socks manufactured with different yarns.

A further object of the invention is to supply an advantageously polygonal-shaped machine, the sides of which hold the forms for the socks and stop in succession in correspondence to each pressing, stopping or steaming station. Traditional machines are usually elliptical-shaped and the forms are fixed with entrainers which define the course between an initial station for the loading and a final station for the unloading of the socks. The here proposed machine therefore has a new structure which renders it more compact, simpler and more accessible.

Said objects and advantages are put into practice with an ironing method of the socks in accordance with claim 1 or 2 and with a machine for carrying out said method in accordance with claim 4.

Further details of the invention will appear clearer from the description which will follow with references to the attached drawing whose only view is a schematic plan of the machine.

Said machine has a table (10) which is commanded and rotates around a verticale axle (11) and having a polygonal outline. Two forms (12) for socks are fixed to each side of the rotating table. Said forms progressively advance on the arrow (F) following the controlled rotation of the table (10).

A station (14) for humidifying the socks on the forms by spraying atomized water delivered from suitable nozzles (14a), a pressing station (15) for the socks on the forms through electrically heated facing plates (15a), a stopping station (16) where the socks are exposed to air, followed by alternated pressing stations (15) and stopping stations (16) and a final station (17) for the unloading of the socks treated by the forms through a spinner (17a) are forseen along the parameters of the rotating table starting from a loading position (13) of the socks onto the forms.

The above described machine is suitable for ironing socks after their initial humidification. The same machine can however be preset and used for treating the socks with steam in the place of water. The humidification station can therefore be eliminateed or exluded from the ironing cycle and an airtight box (18), as show by the dotted lines in the drawing, can be forseen at every stopping station (16) between the pressing stations. Said airtight box (18) supplies steam for the steaming of the socks passing through them.

Thus, during a first treatment method of the socks, in accordance with the invention, after the initial humidification of the socks loaded on the forms, the ironing is carried out by the plates (15a) and stopping stages of the socks between successive sets of plates. Infact the rotating table progressively brings the socks loaded on the forms through the humidification station (14), into the first pressing station (15) then into the first stopping station, followed by the second pressing station, a second stopping station and so on until the unloading station (17).

It has been found that the stoppages under air between one pressing station and the other favour the drying of the socks with the possibility of reducing the treatment temperature and with the above mentioned advantages.

In a second method for the treatmenht of socks, the ironing is carried out without an initial humidification, but alternating the pressing of the socks through the plates (15a) with the socks passing twice through the steam boxes (18). This method also improves the conditions and ironing times of the socks with productive and cost-saving advantages.

Claims

1) A method for the industrial ironing of socks preset on forms moving along a determined course, characterized in that, after an initial humidification of the socks loaded onto the forms, said method subjects the socks to pressing operations between heated plated alternating with socks being exposed to air, until a final unloading stage of the socks from the forms.

2) A method for the industrial ironing of socks preset on forms moving along a determined course, characterized in that the socks are subjected to alternate operations of pressing and being treated with steam until a final unloading stage of the socks from the forms.

3) A method in accordance with claims 1 or 2 applicable to the ironing-pressing of both men's and women's socks.

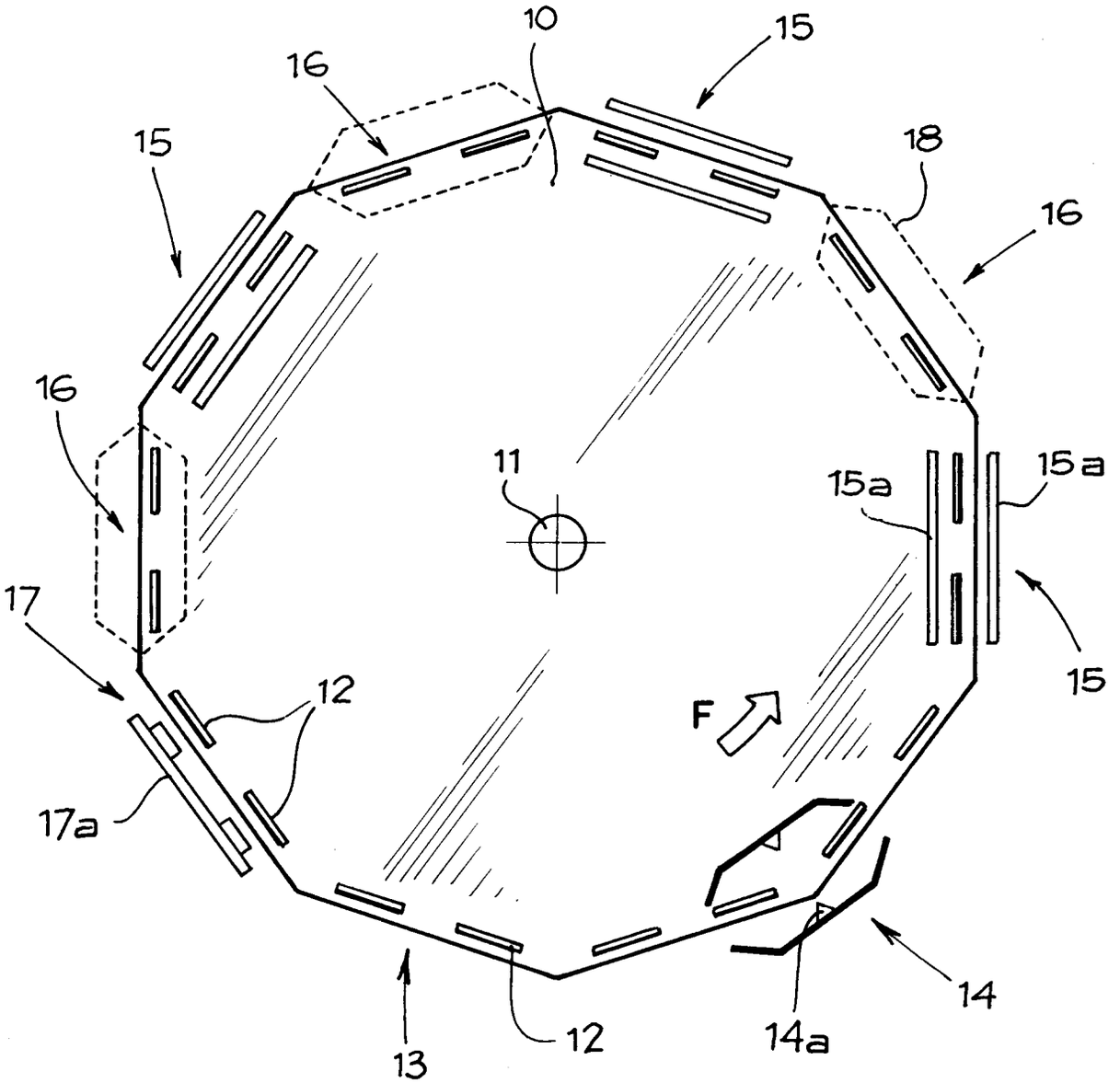
4) A machine for the industrial ironing of socks,

characterized in that a rotating horizontal polygonal table having at least one pair of forms for socks applied to each side of said table and a succession of pressing stations including heated plates which alternate with stopping stations until the final unloading station of the socks from the forms are forseen starting from a loading station of the socks on said forms.

5) A machine in accordance with claim 4, characterized in that a first humidification station for the socks in forseen before the first pressing station, the socks being exposed to air in the stopping stages.

6) A machine in accordance with claim 4, charcterized in that airtight boxes fed with steam for the steaming of the socks are forseen in the stopping stations which are alternate to the pressing ones of the socks.

7) A machine in accordance to claims 4, 5 and 6 used for carrying out the method of ironing the socks in accordance with claims 1 or 2.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EUROPEAN SEARCH REPORT

Application Number

EP 91 83 0445

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	GB-A-895 181 (ETS MAURICE HELIOT)		D06B5/24
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A	GB-A-2 216 777 (TAKATORI CORP.)		

A	US-A-3 686 726 (AUTOBOARD CORP.)		

TECHNICAL FIELDS SEARCHED (Int. Cl.5)
D06B
D06C
D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	14 FEBRUARY 1992	PETIT J.P.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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