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(54) Inflatable sloping manikin to support trousers for artificial wear treatment

(57) Supporting dress form for trousers, particularly for scratching processes, provided with an upright (M), at least a couple of inflatable ducts (C), a support (S) for said couple of inflatable ducts (C) hinged on said upright (M) and inclinable, and wherein a lever system, a mechanism or other mean (R) is suitable for allowing the variation of the tilt and for keeping the desired tilt of the support (S) and of the couple of inflatable ducts (C). One or more air inlets (B) are positioned near to the inflatable ducts (C), and said air inlets (B) are connected to a suction line (Aa).

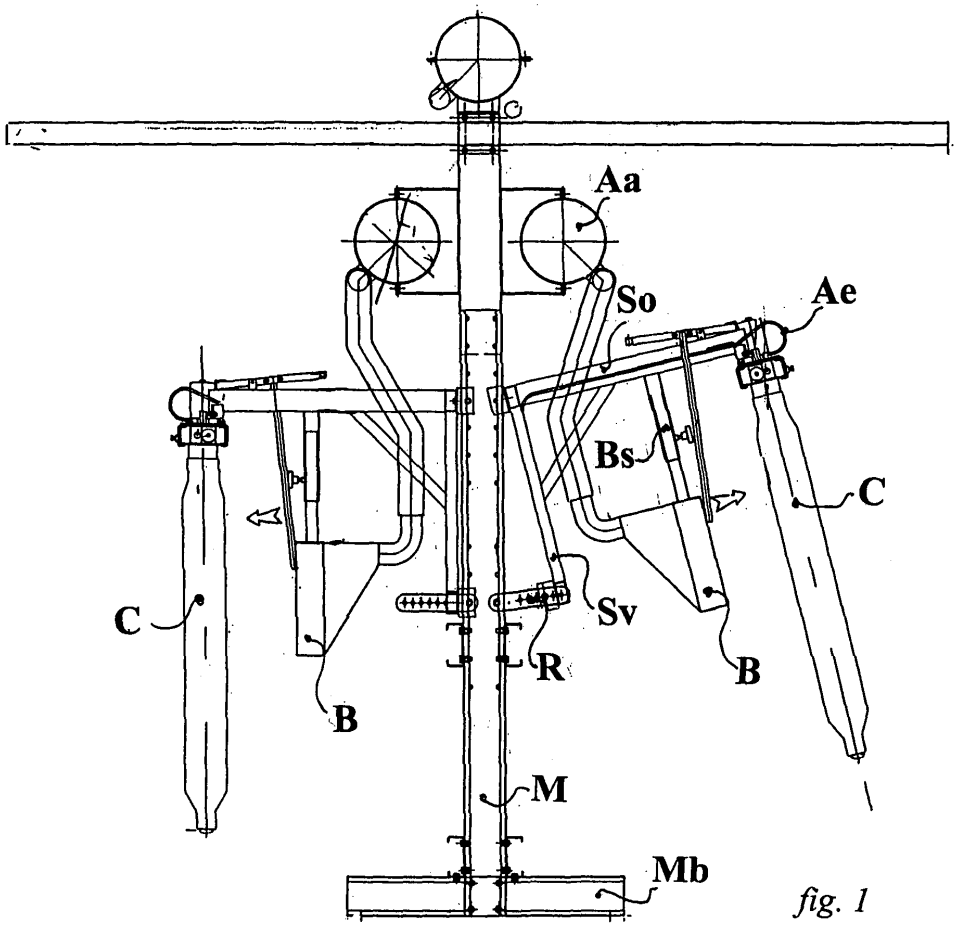

fig. 1

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Description

FIELD OF THE INVENTION

[0001] This patent relates to the equipment for the production and the treatment of garments, and in particular it concerns the supports for trousers for scratching operations.

BACKGROUND OF THE INVENTION

[0002] Some kinds of garments, in particular denim trousers, must undergo a treatment for the artificial surface wear

[0003] Said artificial wear treatment is realized with a pumice stone in the washing machine, thus realizing an uniform wear on the whole garment, or with manual scratching, that produces localized wear in some points.

[0004] To perform a scratching process on trousers, the trousers themselves are worn by suitable dress forms provided with inflatable legs that stretch the fabric of the trousers in order to allow the scratching process.

[0005] Substantially said dress forms comprise two inflatable cylinders one next to the other in a way to generically form a U shape, and in which the trousers are inserted or by which they are worn. The cylinders are inflated until they stretch the fabric of the trousers. The same pressure of the inflatable cylinders holds the trousers too.

[0006] Said dress forms are known in two variations: vertical and horizontal.

[0007] The vertical dress forms have the two inflatable cylinders positioned vertically, they are hanged on the ceiling or on the wall and they have reduced encumbrance.

[0008] The vertical dress forms have many drawbacks, for example they compel the operator to work always in erect position, standing up, and with a wide vertical range that turns to be very tiring for the arms.

[0009] The horizontal dress forms have the inflatable cylinders positioned horizontally, and they are lean on a ground support.

[0010] Said horizontal dress forms have various drawbacks, for example the large encumbrance and the continuous walking of the operator around the trousers worn by the dress form.

[0011] It is also worth to consider that the scratching process produces a big amount of dust and fabric fibres free and suspended in the air, that dirty the environment, can prejudice the following working processes of the trousers, can deposit on the air ducts of the persons thus making the respiration process difficult with subsequent health problems.

SUMMARY OF THE INVENTION

[0012] In order to overcome to the above cited drawbacks a new dress form for the support of trousers inclinable and with suction, particularly for scratching processes has been studied and carried out.

[0013] Aim of the new supporting dress form is to position the trousers with inclinations different from the vertical or the horizontal.

[0014] Other aim of the new supporting dress form is to allow the desired inclination of the trousers depending on the kind of working and on the operator's requirements.

[0015] Other aim of the new supporting dress form is to suck and remove all the dust and all the fabric fibres cut out during the process.

[0016] These and other direct and complementary aims are achieved by the new supporting dress form for trousers inclinable and with suction, particularly for scratching processes, comprising a vertical upright on the upper part of which at least a couple of inflatable cylinders is hinged.

[0017] The inflatable cylinders are substantially positioned parallel one to the other and are united with their upper ends in a way to form a reverse U shape.

[0018] The inflatable cylinders are maintained in the desired inclination by a levers system, a mechanism or another mean capable of allowing the variation of the inclination and of keeping the desired inclination.

[0019] On the upright there is a generically truncated cone shaped air inlet connected to a sucking device.

[0020] It is possible to foresee that said air inlet is adjustable and inclinable as desired.

[0021] It is possible to foresee that said air inlet is fixed on the support behind the couple of inflatable ducts in order to stay always at a suitable distance from the trousers under process no matter what the inclination of said couple of inflatable ducts is.

[0022] It is possible to foresee that on said upright two couple of inflatable cylinders with their air inlets, are hinged on two opposite sides in order to obtain two opposite working stations.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0023] The characteristics of the new supporting dress form for trousers will be clarified by the following description, referring to the figures attached as a non-limitative example.

[0024] Figure 1 represents a lateral view of the new supporting dress form comprising an upright (M), an inclinable support (S), a couple of inflatable ducts (C), an air inlet (B) with its coupling support (Bs), compressed air feeding ducts (Ac), air suction ducts (Aa).

[0025] The upright (M), provided with basement (Mb), supports all said other parts.

[0026] The inclinable support (S) is made of two arms (So, Sv) positioned perpendicular one to the other in an immovable way.

[0027] The inclinable support (S) is hinged to the upright (M) near or in correspondence to the union zone of

the two arms (So, Sv) of the inclinable support (S) itself.

[0028] In particular one of said arms (So), from now on called first arm (So), is generically horizontal while the other arm (Sv), from now on called second arm (Sv), is generically oriented towards down.

[0029] The hinge between upright (M) and inclinable support (S) allows the inclination of said inclinable support (S) in a way that its first arm (So) passes from a generically horizontal position to a generically vertical position towards up.

[0030] On the upright (M) and/or on the second arm (Sv) of the inclinable support (S) there are mechanisms, levers or other devices (R) that allow and keep the inclination of said inclinable support (S).

[0031] On the free end of the first arm (So), that is on the end of the first arm (So) opposite to the upright (M), the two inflatable ducts (C) are fixed.

[0032] Said two inflatable ducts (C) are positioned on the first arm (So) parallel and generally oriented towards down and at a distance such to allow the insertion in them of a pair of trousers.

[0033] Said inflatable ducts (C) are made mainly of an internal cylinder, stiff and drilled on its surface, and around which an airtight elastic sheet is applied.

[0034] Said elastic sheet is fixed in correspondence or at the ends of the internal tube. The inflatable ducts (C), and in particular their internal cylinders, are connected to the compressed air feeding ducts (Ac).

[0035] The air inlet (B) is made of a generically pyramidal element, or alike, with the largest opening directed towards said inflatable ducts (C).

[0036] Said air inlet (B) is supported by a coupling support (Bs) applied on the first arm (So) of the inclinable support (S) in a way that said air inlet is generically parallel and near to said inflatable ducts (C).

[0037] The air inlet (B) is connected to the air suction ducts (Aa).

[0038] It is possible to foresee that said air inlet (B) is applied to the upright (M), and not to the first arm (So).

[0039] It is possible to foresee that pedals (P) or other equivalent controls, are included in the basement (Mb) of the upright (M), or connected to said basement (Mb) of the upright (M), in order to comfortably control the inflation or deflation of the inflatable ducts (C), the quick deflation of said inflatable ducts (C) and the switching on and off of the suction from the air inlet (B).

[0040] The new supporting dress form for trousers, inclinable and with suction, particularly for scratching processes has many advantages.

[0041] The inflatable ducts (C) can be inclined as desired so as to make the operator's job easier and more comfortable.

[0042] The inclinable inflatable ducts (C) allow a comfortable working to operators with any height: the tall ones, the shorts one and the normal height ones.

[0043] The inclinable inflatable ducts (C) allow the most suitable positioning of the trousers for any specific working process that has to be realized: front side, back side, upper side, bottom side, and so on.

[0044] The inclinable inflatable ducts (C) can be positioned as desired in any moments, thus avoiding the taking off and wearing again of trousers in order to complete the front and back working.

[0045] The air inlets (B) allow the removal of the dust and of the fibres deriving from the working processes.

[0046] With reference to the above description the following claims are put forth.

Claims

1. Supporting dress form for trousers, particularly for scratching processes, **characterized in that** it comprises an upright (M), at least a couple of inflatable ducts (C), a support (S) for said couple of inflatable ducts (C) hinged on said upright (M) and inclinable, and wherein a lever system, a mechanism, or other mean (R) is suitable for allowing the variation of the inclination and for keeping the desired inclination of the support (S) and of the couple of inflatable ducts (C).

2. Supporting dress form for trousers of claim 1, **characterized in that** it has at least a compressed air feeding duct (Ac) for the deflation of the inflatable ducts (C), and wherein suitable switches, pedals, or controls allow the entrance and the going out of the compressed air in the inflatable ducts (C).

3. Supporting dress form for trousers of claim 1, 2, **characterized in that** it has one or more air inlets (B) positioned near to the inflatable ducts (C), and wherein said air inlets (B) are connected to a suction line (Aa).

4. Supporting dress form for trousers of claim 1, 2, 3, **characterized in that** said air inlets (B) are fixed on the support (S) of the inflatable ducts (C).

5. Supporting dress form for trousers of claim 1, 2, 3, **characterized in that** said air inlets (B) are fixed to the upright (M).

6. Supporting dress form for trousers of previous claims, **characterized in that** it has on said upright (M) two supports (S) and two couple of inflatable ducts (C) with their air inlets (B) positioned on two opposite sides of said upright (M).

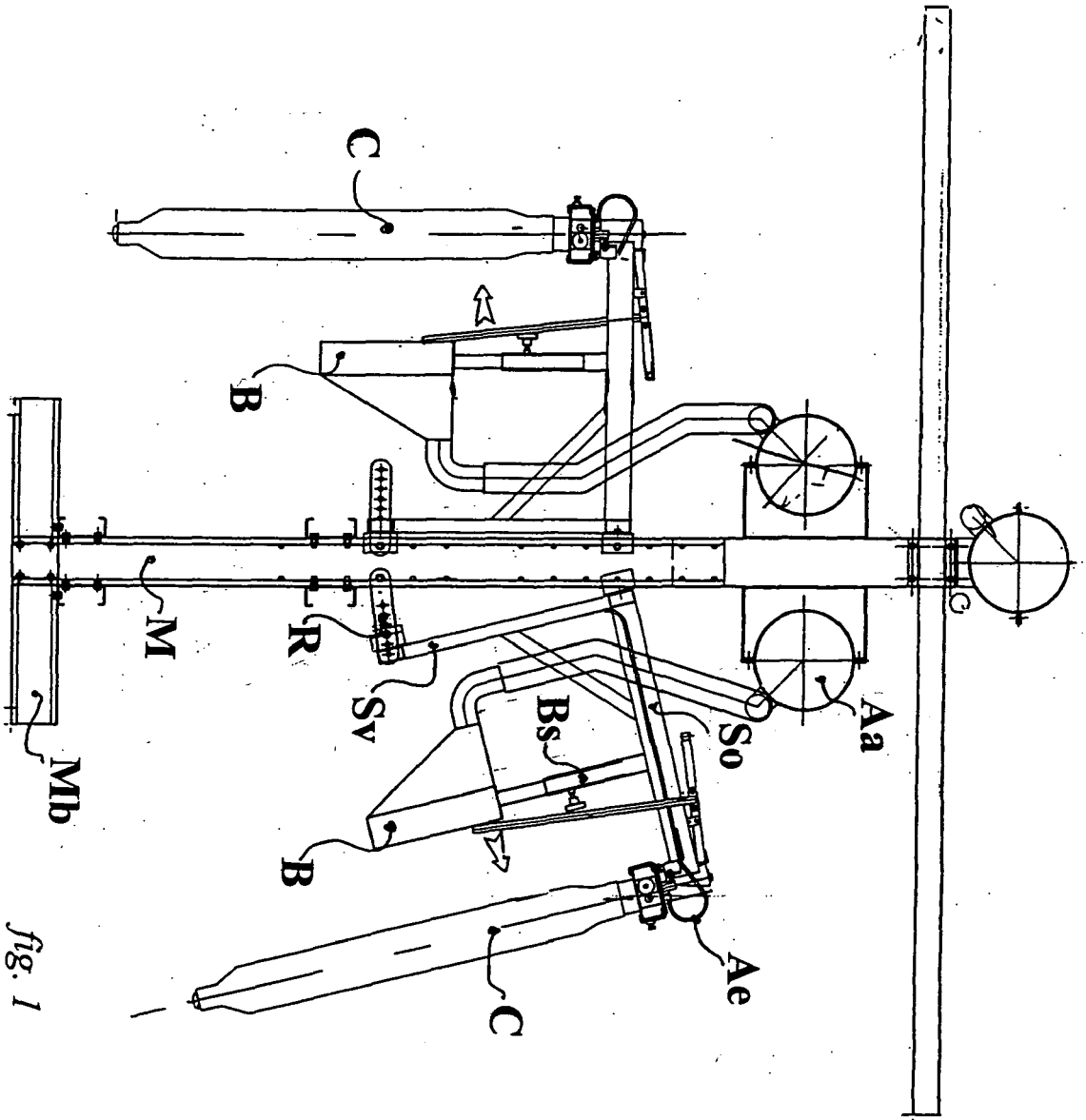

fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 04 42 5793

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.7)
X	US 2003/146194 A1 (BOWKER ROLAND D ET AL) 7 August 2003 (2003-08-07) * paragraph [0037] - paragraph [0072]; figures 1-23 *	1-6	D06B11/00
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A	US 5 458 265 A (HESTER ET AL) 17 October 1995 (1995-10-17) * column 4, line 64 - column 12, line 15; figures 1-8 *	1-6	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

A41H
D06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	10 March 2005	Klintebäck, D

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 04 42 5793

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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