(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 113 132**
A1

(12) # EUROPEAN PATENT APPLICATION

(21) Application number: 83200543.3

(22) Date of filing: 14.04.83

(51) Int. Cl.³: D 06 F 71/34
D 06 F 71/36

(30) Priority: 30.12.82 NL 8205072

(43) Date of publication of application:
11.07.84 Bulletin 84/28

(84) Designated Contracting States:
CH DE FR GB IT LI NL SE

(71) Applicant: Pantex-Cissell B.V.
Industrieweg 27
NL-9672 AP Winschoten(NL)

(72) Inventor: Plomp, Roeland
Stationsstraat 25
NL-9679 EA Scheemda(NL)

(74) Representative: Urbanus, Henricus Maria, Ir. et al,
c/o Vereenigde Octrooibureaux Nieuwe Parklaan 107
NL-2587 BP 's-Gravenhage(NL)

(54) **Pressing shoe.**

(57) A pressing shoe (5) applicable through the use of steam in a universal pressing apparatus for textiles and at least comprising a steam distribution chamber having a shape determining a substantially elongate pressing shoe form and comprising a steam exit wall and an opposite wall as well as a steam supply means, while the steam distribution chamber is divided into at least 2 compartments (1,2,3,4), each compartment being provided with steam supply means (1',2',3',4') operable both separately and in combination.

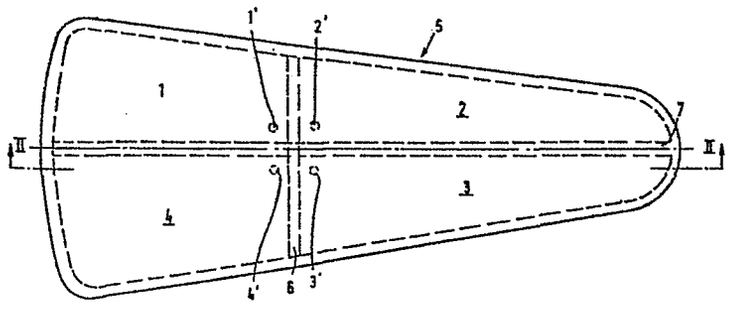

FIG.1

EP 0 113 132 A1

0113132

Pressing shoe.

The invention relates to an elongate pressing shoe which can be applied through the use of steam in a universal pressing apparatus for textiles and at least comprising a steam distribution chamber having a shape determining a substantially elongate pressing shoe form and provided with a steam exit wall and an opposite wall ,as well as a steam supply means.

Such a pressing shoe is generally known.

It is an object of the invention to provide an improved pressing shoe with better controllable and hence more economical steam consumption.

To this effect according to the invention, a pressing shoe of the above described type is characterized in that the steam distribution chamber is divided into at least 2 compartments, each one having steam supply means operable both separately and in combination.

According to a further embodiment of the pressing shoe according to the invention, wherein this is usable as upper pressing shoe in a universal pressing apparatus,the steam distribution chamber subdivided into 4 compartments disposed in quadrant arrangement, while the pressing shoe, in the scope of a different embodiment of the invention, wherein said pressing shoe is suitable for application as lower pressing shoe in a universal apparatus for textiles, is provided with a steam distribution chamber which, viewed in

transverse direction, is divided into two compartments.

Designed as a lower pressing shoe, said pressing shoe may have other functions besides the steam supply and be provided for that purpose with connecting means for supplying air and/or for applying partial vacuum and be characterized in that each of the compartments is connectible both separately and in combination to the steam, air and partial vacuum source.

Experiments have established that application of a pressing shoe having a steam distribution chamber divided into compartments operable both separately and in combination results in a more economical steam consumption. In particular, substantial savings in steam have been experimentally established in a so-called universal pressing apparatus, i.e. a pressing apparatus with which various types of articles of dress such as ladies' skirts, blouses, men's trousers, jackets etc. can be treated, comprising a lower pressing shoe and a coacting upper pressing shoe, said lower pressing shoe according to the invention being divided into two, and the upper shoe into four compartments.

A pressing shoe employed in the art normally comprises, besides the steam distribution chamber, also a steam receiving chamber, wherein the steam originating from a steam source, required for the pressing of the garments and moreover for keeping the pressing shoe at the desired working temperature, is stored in the form of a certain buffer stock. The steam pressure may then be about 6 Bars. Upon command,

the steam is supplied from the steam receiving chamber via e.g. a steam gate valve comprising a distributor cap, to the steam distribution chamber. The steam exit wall of the steam distribution chamber is a bent or non-bent, perforated dividing plate covered exteriorly with a pressing cushion. The steam supplied to the steam distribution chamber is contacted with the perforated dividing plate with the pressing cushion to be heated and the garment being pressed.

According to a preferred embodiment of the pressing shoe according to the invention, it is ensured that the steam exit wall and the opposite wall of the steam distribution chamber are substantially parallel to each other, and that the steam to be supplied to the compartments via the steam supply means connected thereto, can be supplied directly from the steam source, while the pressing shoe is heatable likewise through one or more electric heating means. As a result, the electric heating means take over the part of the normal steam functions which normally serves for keeping the pressing shoe at working temperature. As advantages of the application of electric heating can be mentioned: that a) the temperature of the pressing surface is controllable, and b) the construction of the pressing shoe is simpler, since upon application of a steam receiving chamber, this should be completely tight and be tested in this regard. Naturally, the capacity of the steam source, e.g. the boiler, may thereby be more limited, which enhances the economy of the pressing process. By making the steam exit wall and the opposite wall of the steam distribution chamber parallel to each

other, furthermore the steam distribution chamber may have flatter dimensions, so that a quicker steam exit is enhanced. Accordingly, a preferred embodiment of the pressing shoe according to the invention is the one wherein the steam exit wall and the opposite wall of the steam distribution chamber are substantially parallel to each other, the steam to be supplied to the compartments via the steam supply means connected thereto can be supplied directly from the steam source, while the pressing shoe is heatable likewise through one or more electric heating means.

Two embodiments of an upper pressing shoe according to the invention will now be described, by way of example, with reference to the accompanying drawing, in which:

Fig. 1 is a bottom view, with omission of the steam receiving chamber, of an upper pressing shoe, the steam distribution chamber of which being divided into 4 compartments;

Fig. 2 is a cross-section on the line II-II of Fig. 1, and

Fig. 3 is a diagrammatic side view of an upper pressing shoe comprising instead of a steam receiving chamber an electric heating means.

In the drawing an upper pressing shoe is indicated by 5, the steam exit wall of which situated at the pressing side being designed as a perforated dividing plate 11 having openings 8, while the spaced apart, opposite wall is designed

as a plate 12. There is also provided an edge strip 13 circularly shutting off the space between the dividing plate 11 and the plate 12, there by forming a steam distribution chamber 22, which is divided into 4 compartments 1,2,3 and 4 by means of partitions 6,7. Each of the compartments comprises at the top steam supply openings 1', 2', 3' and 4'.

By means of a simple distributing mechanism, not shown, the operator of the pressing apparatus can selectively conduct steam to the following combinations of compartments:

a) 2 and 3 (right half pressing shoe);

b) 3 and 4 (front half pressing shoe);

c) 1,2,3 and 4 (entire pressing shoe).

The direction of the steam towards and from the steam distribution chamber 2 is indicated by arrows P and S, respectively.

The embodiment of the upper pressing shoe according to the invention shown in Fig.3 is not designed to contain a steam receiving chamber. Instead, for the purpose of heating the pressing shoe to the working temperature and maintaining the same at this temperature, there are provided electric heating elements, e.g. heating coils 14 and 15, received in a system of supporting ribs 16. At 17 is indicated the press covering.

Although not shown in the drawing, it is possible for a lower pressing shoe to use a system analogous to that for the upper pressing shoe according to Figs.1-2, said system

being divided into 2 halves, i.e. with omission of partion 7, into a right half (2 + 3) and a left half (1 + 4).

The operating combination for steam supply and for possible blow air supply, and creation of partial vacuum, respectively, is:

a) only right half

b) entire shoe

Naturally, modifications may be applied in the pressing shoe according to the invention, as discussed in the above and shown in the drawing,but without departing from the scope of the present invention.

C L A I M S.

1. A pressing shoe applicable through the use of steam in a universal pressing apparatus for textiles and at least comprising a steam distribution chamber having a shape determining a substantially elongate pressing shoe form and provided with a steam exit wall and an opposite wall, as well as a steam supply means, characterized in that the steam distribution chamber is divided into at least 2 compartments, each compartment having steam supply means operable both separately and in combination.

2. A pressing shoe according to claim 1 for application as an upper pressing shoe in a universal pressing apparatus, characterized in that the steam distribution chamber is divided into 4 compartments disposed in quadrant arrangement.

3. A pressing shoe according to claim 1 for application as a lower pressing shoe in a universal pressing apparatus for textiles, characterized in that the steam distribution chamber is divided, in transverse direction, into two compartments.

4. A pressing shoe according to claim 3,which comprises besides the steam supply means, possibly also connecting means for supplying air and/or for applying a partial vacuum, characterized in that each of the compartments is connectible both separately and in combination to the steam, air and partial vacuum source.

5. A pressing shoe according to claim 2, characterized in that the steam exit wall and the opposite wall of the steam distribution chamber are substantially parallel to each other, and the steam to be supplied to the compartments via the steam supply means connected thereto can be supplied directly from the steam source, while the pressing shoe is heatable likewise through one or more electric heating means.

6. A universal pressing apparatus for textiles, comprising a lower pressing shoe and a coacting upper pressing shoe according to claims 1-5.

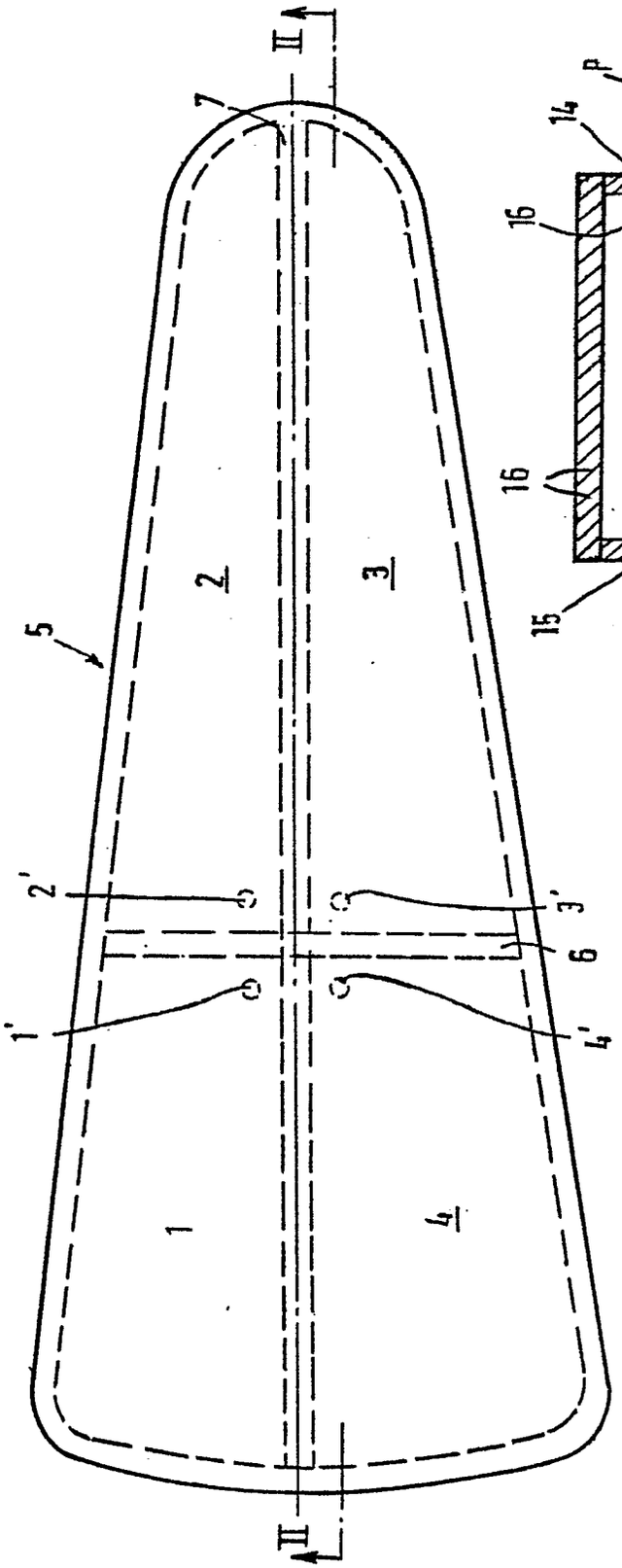

FIG.1

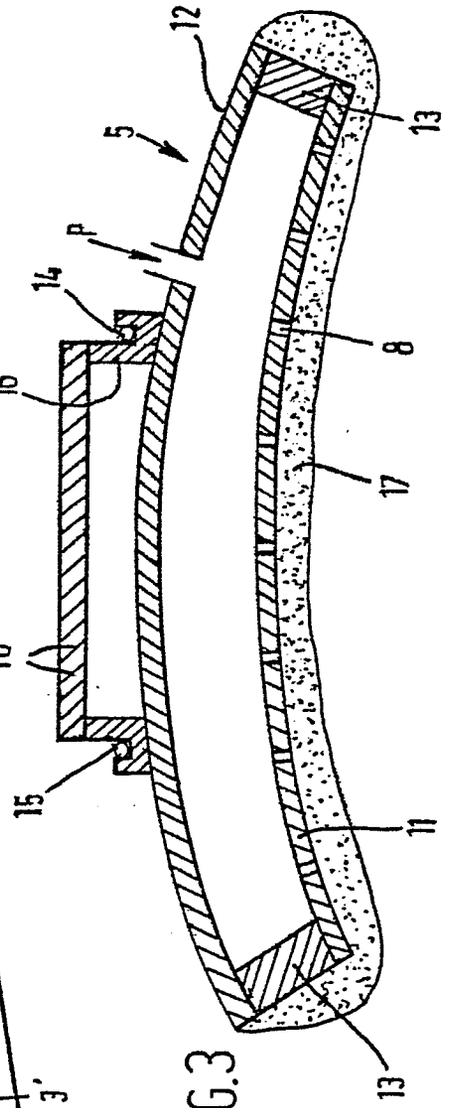

FIG.3

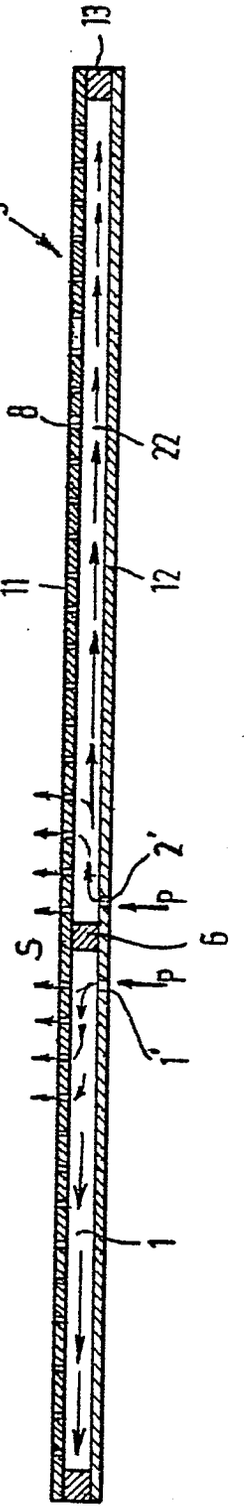

FIG 2

European Patent Office

EUROPEAN SEARCH REPORT

0113132
Application number

EP 83 20 0543

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. ³)
X	FR-A- 716 812 (ARNON ET ROUX) * Whole document *	1-6	D 06 F 71/34 D 06 F 71/36
X	GB-A- 933 554 (BROWN AND GREEN) * Page 2, lines 32-130; page 3, lines 1-16 *	1-6	
X	US-A-2 160 013 (BURNSTEIN) * Whole document *	1-6	
X	US-A-1 695 760 (ELLIS) * Whole document *	1-6	
A	GB-A- 143 081 (COHEN) * Page 1, lines 12-19 *	5	

TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

D 06 F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	15-09-1983	D HULSTER E.W.F.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO Form 1503. 03.82