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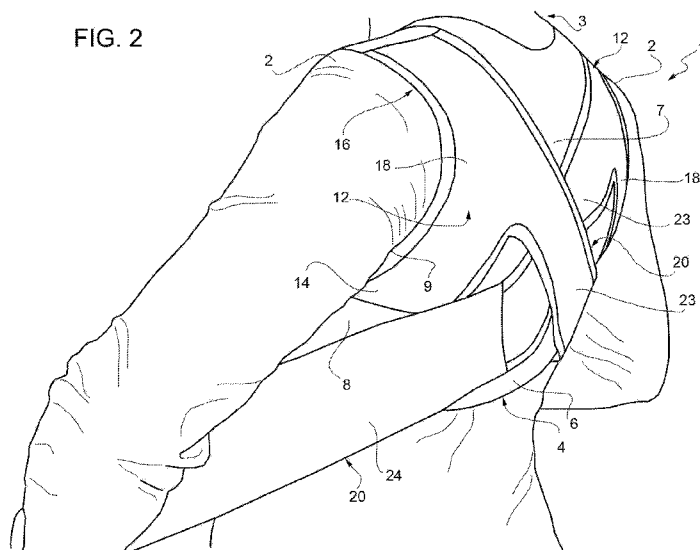
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(54) Title: STRAP SUPPORT DEVICE FOR THE CORRECTION AND PREVENTION OF AN INCORRECT SHOULDER POS-
TURE

FIG. 2



(57) Abstract: A strap support device (1) for the correction and prevention of an incorrect posture of the shoulders (2) has a thoracic band (4) adapted to be worn around the chest (5) of a user; two straps (12) are fixed to the thoracic band (4) so as to define respective passages (16) for the shoulders (2); the device has, in addition, two bands (20), which are elastically extensible, extending from back portions (18) of the straps (12) one towards the other so as to cross on the back (7) of the user and so as to pass under the opposite armpit (9), and end with respective fastening portions (26), which are adapted to be fixed to each other in front of the chest (5) of the user.



"STRAP SUPPORT DEVICE FOR THE CORRECTION AND PREVENTION OF AN INCORRECT SHOULDER POSTURE"

TECHNICAL FIELD

5 The present invention relates to a strap support device for the correction and prevention of an incorrect posture of the shoulders.

BACKGROUND ART

10 To correct the posture of the shoulders, bodices and corsets are known that are worn under normal clothing and have a rear support, to brace the back, and two lateral bands that start from the rear support, are passed over the shoulders and under the armpits, and put the shoulders in backward traction.

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The known type corsets just described are not very comfortable, since the lateral bands tend to rub the skin under the armpits during normal movements of everyday life. Furthermore, some of the known corsets are somewhat difficult
20 to put on, if there is not another person available who can help.

The U.S. patent US6387067 shows a support device which is easy to wear and more comfortable with respect to the corsets
25 described above.

Said device has an elastic band that is worn so as to extend all around the chest, and is provided with two straps, the ends of which are fixed to the band, so as to form respective
30 passages for the arms and shoulders. The band can be frontally open, i.e. it has two ends which are fixed to one another in front of the chest, with a variable fixing point. In this configuration, the straps are attached to the band in points spaced from the spine and do not rub against the armpits.

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The need is felt to improve this latter solution, in order to

increase the traction on the shoulders and to be able to adjust the traction in an effective way.

DISCLOSURE OF INVENTION

- 5 The purpose of the present invention is to provide a strap support device for the correction and prevention of an incorrect posture of the shoulders, which allows to simply and economically fulfill the aforementioned needs.
- 10 According to the present invention, a strap support device is provided for the correction and prevention of an incorrect posture of the shoulders, comprising:
- a thoracic band adapted to be worn around the chest of a user;
 - 15 - two straps having the ends fixed to said thoracic band so as to define respective passages for said shoulders; each of said straps comprising a front portion and a back portion adapted to be arranged, respectively, in front and at the back of the corresponding said shoulder;
 - 20 characterized by also comprising two bands, which are elastically extensible, extending from the back portions of said straps one towards the other, so as to cross on the back of the user and in order to pass under the opposite armpit of the user, and end with respective fastening portions adapted
 - 25 to be fixed to each other in front of the chest of the user.

BRIEF DESCRIPTION OF THE DRAWINGS

- The invention will now be described with reference to the accompanying drawings, which illustrate an example of non-limiting embodiment, wherein:
- 30 - Figure 1 is a front perspective view of a preferred embodiment of the strap support device for the correction and prevention of an incorrect posture of the shoulders, according to the present invention; and
- 35 - Figure 2 is a perspective side and rear view of the device of Figure 1.

BEST MODE FOR CARRYING OUT THE INVENTION

In figure 1, with number 1 is indicated a strap support device for the correction and prevention of an incorrect posture of the shoulders 2 of a user 3.

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The device 1 comprises a thoracic band 4, which is elastically extensible, and is worn around the chest 5 of the user 3. The thoracic band 4 comprises: an intermediate portion 6, which in use is arranged on the back 7 of the user 3, in correspondence
10 of the spine; two lateral portions 8, which in use pass under the armpits 9 of the user 3; and two terminal portions 10, which in use are arranged in front of the chest 5 and define a releasable fastening system so that one can be fixed to the other. The fixing between the portions 10 also allows to
15 tension the thoracic band 4, and therefore to keep it in a fixed position under the armpits 9. In particular, the fixing point between the portions 10 can be varied, so as to adjust the tension of the thoracic band 4 and adapt its length to the effective thoracic circumference of the user 3. For example,
20 the portions 10 define a Velcro type fixing system.

The device 1 also comprises two straps 12 which are fixed, at their ends 14, to the portions 8 by seams, so as to form two passages 16 which are engaged, in use, by the arms and/or by
25 the shoulders 2. In particular, the ends 14 of each strap 12 are sewn one in front of the other along the corresponding portion 8 in consecutive positions, i.e. substantially without leaving gaps between the ends 14 along the thoracic band 4, and therefore at positions spaced from the portion 6.

30

Preferably, also the shoulder straps 12 are elastically extensible, and comprise a front portion 17 and a back portion 18 arranged respectively in front of and behind the shoulders 2. The width of the portions 17 is preferably greater than or
35 equal to 5 centimeters, so as to define a sufficient support area against the shoulders 2 and exert an effective backward

traction on the shoulders 2 themselves.

Therefore, since the ends 14 are attached to the thoracic band 4, the straps 12 pass in front of and behind the shoulders 2, without touching and rubbing against the armpits 9.

According to the present invention, in order to exert and adjust this traction, the device 1 comprises two bands 20, which are elastically extensible and extend from the portions 18.

With reference to Figure 2, the bands 20 extend one towards the other and comprise respective portions 23, which in use are arranged on the back 7 and cross each other, above the portion 6. Preferably, the portions 23 are defined by pieces made from a fabric (or other similar material) of a non-elastic type, for example, fabric, forming respective curves with a slight upward concavity.

According to the embodiment shown, on each side of the device 1, the portions 23 and 18 are made of the same material and, preferably, are in one piece. Alternatively, the portions 23 are fixed to the portions 18 by means of seams.

After the portions 23, the bands 20 continue with respective portions 24 substantially rectilinear, which in use pass beneath the armpits 9 and overlap the portions 8 of the thoracic band 4.

Finally, with reference to Figure 1, the bands 20 end with respective fastening portions 26, which in use remain in front of the chest 5, overlap the portions 10, and define a releasable and adjustable fastening system, for example of the Velcro type, to be able to be fixed to one another (in a manner not shown) and put in tension the bands 20.

The tension of the band 20 tends to pull toward each other the portions 18 of the straps 12 and, therefore, to pull back the portions 17 to exert traction on the shoulders 2. Such traction is adjustable by varying the point of connection
5 between the portions 26.

To wear the device 1, it is sufficient to insert the arms in the passages 16 so as to wear the thoracic band 4, fix one to the other the portions 10, grasp and pull the bands 20, and
10 finally fix the portions 26 so as to keep the straps 12 in tension.

From the foregoing, it is clear that the device 1 is simple to wear and allows to effectively put the shoulders 2 in
15 traction, by way of the bands 20. This traction is then adjustable at will, thanks to the adjustable fastening system defined by the portions 26.

The device 1 is extremely comfortable, thanks to the thoracic
20 band 4 and to the position in which the straps 12 are coupled, as it avoids discomfort and rubbing against the armpits 9.

The thoracic band 4 keeps the position of the device 1 in a stable manner and contributes to the support of the shoulders
25 2.

From the above it is finally clear that the device 1 described and illustrated may be subject to modifications and variations which do not depart from the scope of the present invention,
30 as defined in the appended claims.

In particular, the elasticity of the thoracic band 4, and/or straps 12, and/or bands 20 may be localized at some points, and not given by the entire material of such components and/or
35 for the entire length.

The portions 10 could be arranged in a different position from the front one shown by way of preference; or the thoracic band may be open at the rear, i.e. without the portion 6, and at the same time be closed in a continuous way in front of the chest 5, without having releasable fastening systems, even if the support would be less effective.

The portions 24 and 18 could be made of an elastically extensible material and/or may be fixed together by means of seams.

In addition, the support device 1 can be adapted to form a so-called "reinforced fabric corset". In this case, the thoracic band is defined by a bodice having a relatively large height, possibly reinforced by bones: in other words the portions 6, 8 and 10 are replaced by said bodice, and the straps 12 are fixed to the upper end of the bodice, both front and rear.

CLAIMS

1.- A strap support device (1) for the correction and prevention of an incorrect posture of the shoulders (2), comprising:

- 5 - a thoracic band (4) adapted to be worn around the chest (5) of a user;
- two straps (12) having the ends (14) fixed to said thoracic band (4) so as to define respective passages (16) for said shoulders (2); each of said straps (12) comprising a front
10 portion (17) and a back portion (18) adapted to be arranged respectively in front and at the back of the corresponding shoulder (2);

characterised by also comprising two bands (20), which are elastically extensible, extend from the back portions (18) of
15 said straps (12) one towards the other, so as to cross on the back (7) of the user and so as to pass under the opposite armpit (9) of the user, and end with respective fastening portions (26) adapted to be releasably fixed to one another in front of the chest (5) of the user.

- 20 2.- The strap support device (1) according to claim 1, characterised in that said fastening portions (26) define a releasable fastening system adjustable so that one can be fixed to the other in a variable position.

3.- The strap support device (1) according to claim 1 or 2,
25 characterised in that said thoracic band (4) comprises:

- an intermediate portion (6) adapted to be arranged on the

back (7) of the user;

- two side portions (8) adapted to pass under the armpits (9) of the user;

- two end portions (10) adapted to be releasably fixed to one another by the user in front of the chest (5) and under said fastening portions (26).

4.- The strap support device (1) according to claim 3, characterised in that the ends (14) of said straps (12) are fixed by seams to said side portions (8).

5.- The strap support device (1) according to claim 4, characterised in that the ends (14) of each of said straps (12) are fixed to the corresponding side portion (8) in subsequent positions.

6.- The strap support device (1) according to any of the preceding claims, characterised in that said front portions (17) have a width greater or equal to 5 centimetres.

7.- The strap support device (1) according to any of the preceding claims, characterised in that said bands (20) comprise respective curved portions (23), which cross above said thoracic band (4), are defined by pieces made of non-elastic material, and form respective curves with an upward concavity.

8.- The device according to claim 7, characterised in that, on each side, said curved portion (23) and back portion (18) are made of the same non-elastic material.

9.- The device according to claim 8, characterised in that,

on each side, said curved portion (23) and back portion (18) are integral.

10.- The strap support device (1) according to any of the preceding claims, characterised in that said straps (12)
5 and/or said thoracic band (4) are elastically extensible.

FIG. 1

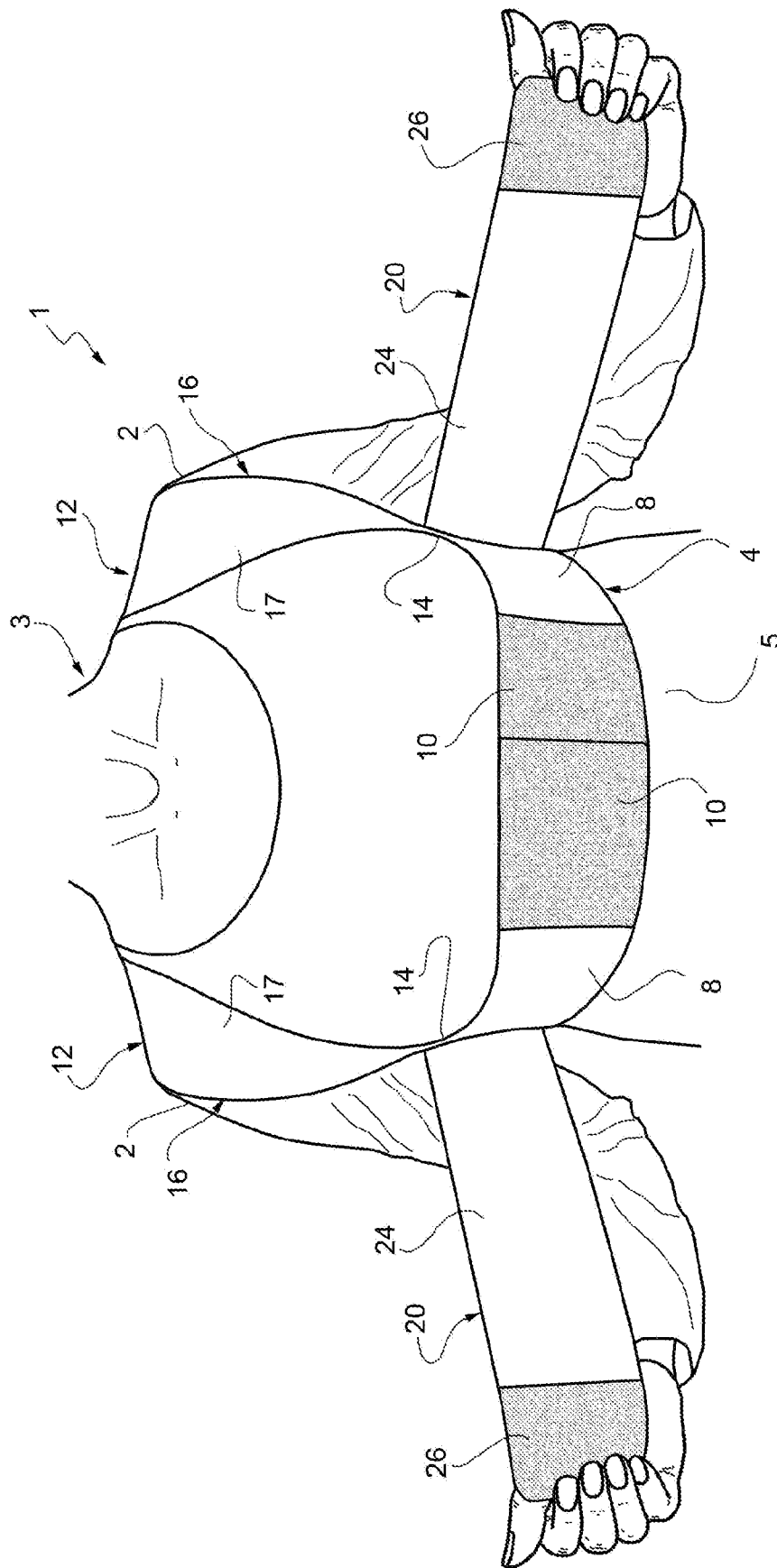
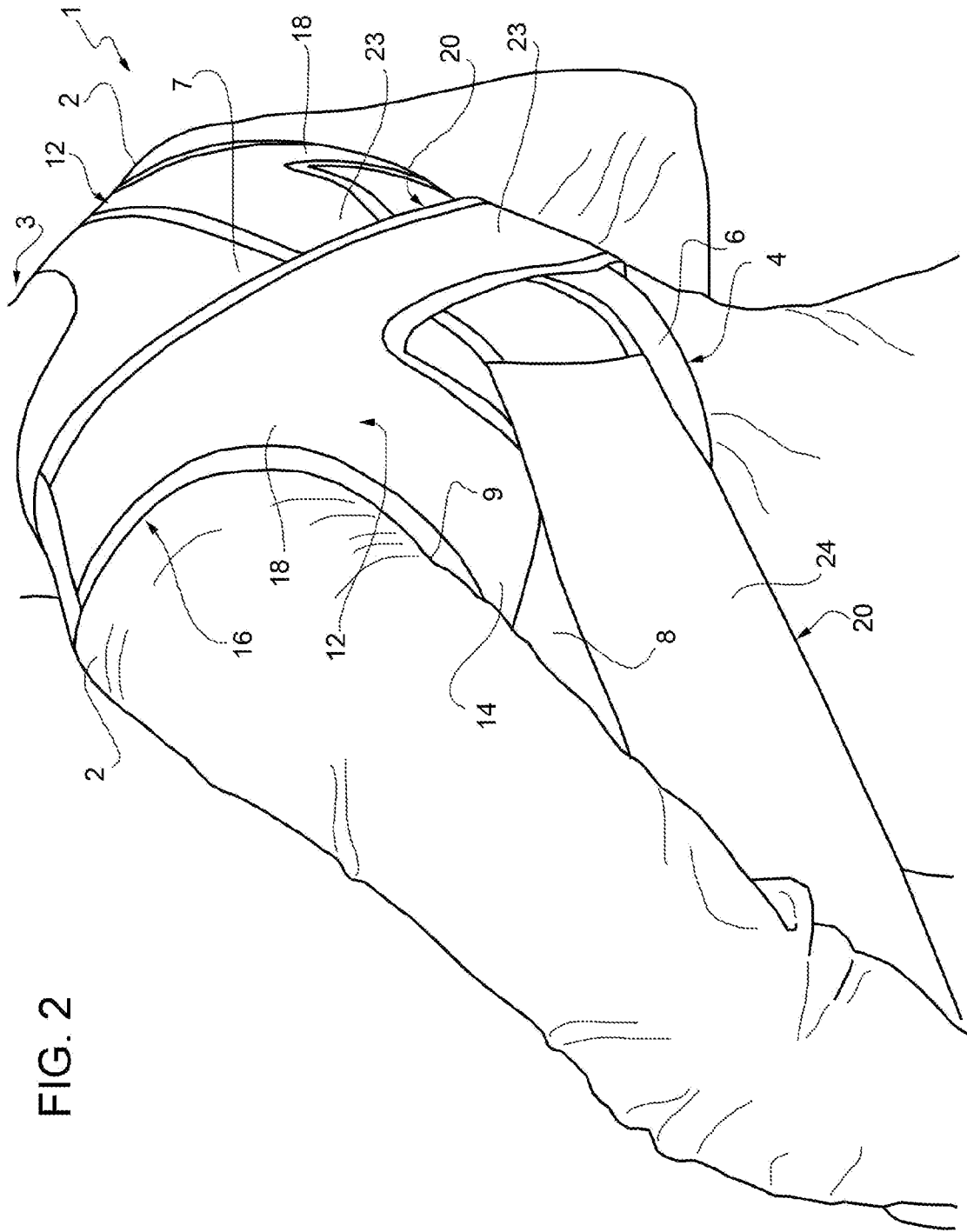


FIG. 2



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61F5/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 387 067 B1 (HEBERT JEANNE E [US]) 14 May 2002 (2002-05-14) cited in the application the whole document -----	1
A	US 2003/153855 A1 (RHEE JHOON GOO [US]) 14 August 2003 (2003-08-14) the whole document -----	1
A	DE 17 38 705 U (GERZER LINA [DE]) 31 January 1957 (1957-01-31) the whole document -----	1
A	US 1 532 304 A (CUNNING DONALD V) 7 April 1925 (1925-04-07) the whole document -----	1



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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6387067	B1	14-05-2002	NONE
US 2003153855	A1	14-08-2003	US 2003153855 A1 14-08-2003
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