

APPLICATION ACCEPTED AND AMENDMENTS
ALLOWED 27.9.90

605004
COMMONWEALTH OF AUSTRALIA

Patents Act 1952

PATENT SUB OFFICE

22 DEC 1988

SYDNEY

CONVENTION APPLICATION FOR A STANDARD PATENT

I/WE, SORAI SAITO, 177-1, Sengen-cho 3-chome, Nishi-ku,
Yokohama-shi, Kanagawa-ken, Japan

hereby apply for the grant of a Standard Patent for an
invention entitled:

PRESSING BOARD

which is described in the accompanying complete specification.

This application is made under the provision of Part XVI of
the Patents Act 1952 and is based on an application for a
patent or similar protection made

in Japan

on 19 January 1988

No. (63-4152)

in Japan

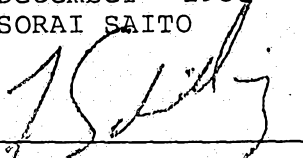
on 10 June 1988

No. (63-76452)

My/Our address for service is:

F.B. RICE & CO.,
28A Montague St.
Balmain NSW 2041

Dated this 22nd day of December 1988
SORAI SAITO

By: 

Registered Patent Attorney

To: The Commissioner of Patents

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Patents Act 1952

DECLARATION IN SUPPORT OF AN APPLICATION OR A CONVENTION APPLICATION FOR A PATENT OR PATENT OF ADDITION

In support of the ~~Application~~
Convention Application made by

Sorai SAITO, 177-1, Sengen-cho 3-chome,
Nishi-ku, Yokohama-shi, Kanagawa-ken, Japan
for a ~~patent~~
~~patent of addition~~ for an invention entitled:

PRESSING BOARD

I, Sorai SAITO

~~of and on behalf of the applicant company~~ do solemnly and sincerely declare as follows:

*^a(1) I am the applicant for the ~~patent~~
~~patent of addition~~

~~*^a(1) I am authorised by the applicant for the~~ ~~patent~~ ~~to make this declaration~~
~~on its behalf.~~ ~~patent of addition~~

*^b(2) The basic application(s) as defined by section ~~141~~
142 of the Act ~~was~~
were made

in Japan

on January 19, 1988

in Japan

on June 10, 1988

~~in~~~~on~~

by Sorai SAITO

*^a(3) I am the actual inventor of the invention.

~~*^a(3)~~

~~is/are the actual inventor(s) of the invention and the facts upon which~~

~~is/are entitled to make the application are as follows.~~

*^b(4) The basic application(s) referred to in paragraph 2 of this Declaration ~~is/are~~ the first
application(s) made in a Convention country in respect of the invention the subject of the
application.

Declared at Kanagawa-ken, this 1 st day of December 19 88 .
Japan

To: The Commissioner of Patents,
Commonwealth of Australia.

Sorai Saito

.....Sorai SAITO.....

This Form is suitable for any type of Patent Application.
No legalisation required.

Status

F.B. RICE & CO.,
Patent Attorneys,
Sydney.

*^a — Delete whichever is inapplicable.
*^b — Delete if not a Convention application.

(12) PATENT ABRIDGMENT (11) Document No. **AU-B-27437/88**
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. **605004**

(54) Title
PRESSING BOARD

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(71) Applicant(s)
SORAI SAITO

(72) Inventor(s)
SORAI SAITO

(74) Attorney or Agent
F B RICE & CO, 28A Montague Street, BALMAIN NSW 2041

(56) Prior Art Documents
GB 1179/55
GB 22251/49

(57) Claim

1. A pressing board comprising:

a base having an upwardly facing working surface being rounded convex in transverse cross-section, being bordered by a pair of longer sides and a pair of shorter sides and having a plurality of projections defining a substantial volume of grooves therebetween;

a resilient substantially uniform thickness steam permeable cover superimposed over the entire working surface; and

outlet apertures disposed throughout the volume of grooves leading to an external region of base,

and wherein,

said apertures are such as to allow only excess steam to escape said grooves during steam pressing so as to form substantially steam filled grooves acting to steam underside areas of garments being pressed.

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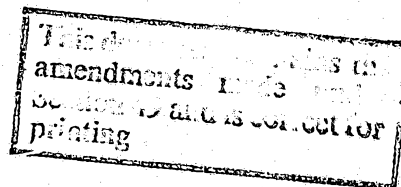
605004

Patents Act 1952

C O M P L E T E S P E C I F I C A T I O N

(ORIGINAL)

Application Number :
Lodged :
Complete Specification Lodged :
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Priority : 19 January 1988, 10 June 1988

Related Art :

Name of Applicant : SORAI SAITO

Address of Applicant : 177-1, Sengen-cho 3-chome,
Nishi-ku, Yokohama-shi,
Kanagawa-ken, japan

Actual Inventor/s : SORAI SAITO

Address for Service : F.B. RICE & CO.
Patent Attorneys
28A Montague Street,
Balmain N.S.W. 2041

Complete Specification for the invention entitled:
PRESSING BOARD

The following statement is a full description of this invention
including the best method of performing it known to me:-

5004466 22/12/88

BACKGROUND OF THE INVENTION

The present invention relates to a pressing board and, more particularly, to a pressing board having a rounded surface.

5 Fig. 13 is a side sectional view of a conventional pressing board 100. Referring to Fig. 13, the pressing board 100 is constructed as follows. A rectangular flat board is employed as a base material 2, a cushion material 4 with proper shock absorbing property and a uniform thickness is stuffed between the base material 2 and a covering cloth 3 covering the base material 2, and ends of the covering cloth 3 are stapled to the base material 2 by a plurality of rivets 5.

15 When an iron I is pressed on a clothing C using the pressing board 100, heat generated from the flat back surface of the heated iron I is applied to the clothing, and the clothing is flattened by the back surface. Thus, wrinkles of the clothing C are ironed out.

20 The base material 2 of the conventional pressing board 100 employs a solid particle board or plywood in consideration of mechanical strength, cost, and the like.

25 As is known, a metal gauze or the like can be used as the base material 2 of the pressing board in order to facilitate release of steam when a steam iron is used.

Normally, in the pressing board, a rectangular flat board is employed as the base material 2, the cushion material 4 with proper shock absorbing property and a uniform thickness is stuffed between the base material 2 and the covering cloth 3 covering the base material 2, and ends of the covering cloth 3 are stapled to the base material 2 by the plurality of rivets 5.

When a steam iron is used, steam generated by the steam iron temporarily passes through the clothing, and is then filled between the covering cloth 3 and the base material 2. The base material 2 sometimes employs a metal gauze or the like in order to facilitate release of steam, thereby preventing steam from being filled as described above. In this case, since the metal gauze releases too much steam, the steam cannot be effectively utilized.

The solid particle board or plywood has a sufficient mechanical strength but has a large weight and is not easy to handle. For this reason, the base material 2 serving as the base portion of the pressing board is preferably formed by resin molding such as blow molding capable of forming a hollow member, thus reducing weight and cost.

However, since the conventional pressing board is constructed as described above, when the iron I is moved in a direction indicated by arrow z, in particular, when the clothing C is thin like a white

shirt, the clothing C is excessively squeezed and stretched by the back surface and the corner of the back surface of the iron I, and a crease A may be created. If the iron is moved in such situation, more wrinkles are left on the clothing C.

When a sliding frictional resistance between the iron I and the clothing C is large, undesirable luster may be left on the clothing C.

Therefore, the ironing operation using the conventional flat pressing board 100 requires skill and time.

Since the conventional pressing board is constructed as described above, steam is easily released, and cannot be sufficiently applied to the clothing.

A resin material used for blow molding which can be performed at relatively low cost cannot withstand high temperatures, and has poor mechanical strength. Such a resin material cannot be used for the pressing board.

SUMMARY OF THE INVENTION

The present invention has been made in consideration of the above problems, and has as its first object to provide a pressing board in which its iron working surface is rounded so as to achieve an almost line or point contact state between the back surface of an iron and the working surface, thereby preventing creation of a crease, and which has a low



SUMMARY OF THE INVENTION

Accordingly, in one broad form, the present invention can be described as a pressing board comprising:

a base having an upwardly facing working surface being rounded convex in transverse cross-section, being
5 bordered by a pair of longer sides and a pair of shorter sides and having a plurality of projections defining a substantial volume of grooves therebetween;

a resilient substantially uniform thickness steam permeable cover superimposed over the entire working
10 surface; and

outlet apertures disposed throughout the volume of grooves leading to an external region of base,

and wherein,

said apertures are such as to allow only excess steam
15 to escape said grooves during steam pressing so as to form substantially steam filled grooves acting to steam underside areas of garments being pressed.

Other features and advantages of the present invention will be apparent from the following description
20 taken in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the figures thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1A is a plan view of a first embodiment of a
25 pressing board 1;

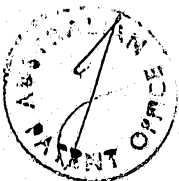


Fig. 1B is a cross-sectional side view of Fig. 1A;

Fig. 2A is a plan view showing a state wherein a white shirt W is put on the pressing board 1;

Fig. 2B is a side view showing a state wherein
5 after the white shirt W is put on the pressing board 1, the pressing board 1 is placed on a working base G;

Fig. 3 is a side view of a pressing board 10 of a second embodiment;

Fig. 4A is a perspective view showing an outer appearance of a state wherein a pressing board 1 of a third embodiment is in use;

Fig. 4B is a partially cutaway perspective view of Fig. 4A;

Fig. 5 is a plan view showing a part of a corner portion of a base material 2 of the pressing board 1 shown in Fig. 4B;

Fig. 6 is a sectional view taken along a line X - X in Fig. 5;

Fig. 7 is a plan view showing a part of the base material 2 of the pressing board 1 shown in Fig. 4A;

Fig. 8 is a sectional view taken along a line Y - Y in Fig. 7;

Fig. 9 is a partially cutaway perspective view showing a pressing board 10 of a fourth embodiment, and a steam iron 200;

Fig. 10 is a sectional view cut along a plane parallel to a longitudinal groove 18 of the pressing board 1 of the fourth embodiment;

5 Figs. 11A, 11B, and 11C are plan views of a base material 2 of a pressing board 1 of other embodiments;

Figs. 12A, 12B, and 12C are side views showing states wherein legs 6 are provided to the base material 2; and

10 Fig. 13 is a side sectional view of a conventional pressing board 100.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Various embodiments of a pressing board according to the present invention will now be described with reference to the accompanying drawings.

15 Fig. 1A is a plan view of a first embodiment of a pressing board 1, and Fig. 1B is a cross-sectional side view of Fig. 1A.

Referring to Fig. 1A, the pressing board 1 has substantially the shape of a body with a pair of longitudinal sides 17 which are sufficiently longer than lateral sides. On one lateral side, a head 12 and a pair of shoulders 13 are formed, and on the other lateral side, a border 15 is formed.

20 The pair of shoulders 13 are formed by parts of circles having a radius R1, whereas the border 15 is formed by part of a circle having a radius R2.

Although it is ideal to prepare various sizes of pressing boards 1 for use as clothings of adults and children, it is enough to prepare a pressing board for adults use only in consideration of the frequency of use.

Referring to Fig. 1B, the pressing board 1 is constructed as follows. The substantially body-shaped board is formed to be rounded with a radius R3 and to serve as a base material 2. A cushion material 4 having proper shock absorbing property and uniform thickness is stuffed between the base material 2 and a covering cloth 3 covering the base material 2. Ends of the cloth 3 are stapled to the base material 2 by a plurality of rivets 5.

Fig. 2A is a plan view showing a state wherein a white shirt W is put on the above-mentioned pressing board 1.

Referring to Fig. 2A, the back portion of the white shirt W is located on the back side of the pressing board 1, so that the head 12 of the pressing board 1 extends from the neck portion of the white shirt W.

When the white shirt W is put on the pressing board 1, the shoulders 13, formed as parts of circles, cause proper tension force in the inner portion of the shoulder part of the white shirt W. Thus, the ironing operation can be performed without pressing the white shirt W by hand.

Fig. 2B is a side view showing a state wherein after the white shirt W is put on the pressing board 1, the pressing board 1 is placed on a working base G. Referring to Fig. 2B, the back of the white shirt W is supported between both ends 1a of the pressing board 1 and the working base G. Thus, during ironing, the white shirt W need only be lightly pressed by hand.

Fig. 3 is a side view of a pressing board 10 according to a second embodiment of the present invention. As can be seen from Fig. 3, the pressing board 10 has a flat back surface in order to achieve stability in use.

Referring again to Fig. 2A, the state of use of the pressing board 1 will be described below. When the iron I is pressed on a white shirt W put on the pressing board 1 and is placed parallel to the longitudinal direction of the pressing board 1, as indicated by 11 in Fig. 2A, a contact state between the iron I and the white shirt W is approximate to a line contact state indicated by a dotted line x in Fig. 2A. Meanwhile, when the iron I is placed to be perpendicular to the longitudinal direction of the pressing board 1, the contact state is approximate to a point contact state as indicated by a dotted line y.

Since the cushion material 4 is appropriately deformed to serve as a shock absorbing material, the

clothing C of the white shirt W can be prevented from being damaged.

Therefore, the iron I contacts the white shirt in this manner, so that creation of crease as the conventional problem can be prevented, and a sliding frictional resistance can be reduced. As a result, an ironing operation can be performed while turning the iron I, thus preventing damage to the clothing C.

Sleeves of clothings, trousers, skirt, and the like can be ironed on the rounded iron working surface.

In the above description, the base material 2 has a rounded surface as a part of circle with the radius R3 but may have a more complicated rounded surface.

Fig. 4A shows a perspective view showing a state wherein a pressing board 1 of a third embodiment is in use, and Fig. 4B is a partially cutaway perspective view of Fig. 4A.

Referring to Figs. 4A and 4B, the iron working surface of the pressing board 1 is rounded upward, so that a contact state between an iron and the iron working surface is not a surface contact state but is approximate to the above-mentioned line or point contact state.

The pressing board 1 is constructed as follows. A cushion material 4 with proper shock absorbing property and uniform thickness is arranged under a covering cloth 3 covering the entire iron working surface of the

pressing board 1. Ends of the cloth 3 are fixed to the base material 2 by a plurality of rivets (not shown) or laces 14.

Foldable legs 6 on the distal ends of which rubber shoes 7 are fitted under pressure are provided to the back surface portion of the base material 2.

Fig. 5 is a plan view partially showing the corner portion of the base material 2 of the pressing board 1 shown in Fig. 4B, and Fig. 6 is a sectional view taken along a line X - X in Fig. 5. In Figs. 5 and 6, a large number of circular projections 20 are formed on the top surface, i.e., the iron working surface of the base material 2, and projecting members 20A are formed on its edge portion. The base material 2 has a hollow structure as shown in Fig. 6 since it is formed by blow molding.

Fig. 7 is a plan view partially showing the base material 2 of the pressing board 1 shown in Fig. 4A, and Fig. 8 is a sectional view taken along a line Y - Y in Fig. 7.

In Figs. 7 and 8, a large number of projections 40 each having an illustrated shape are formed on the top surface, i.e., the iron working surface of the base material 2. A large number of projections 40 each having a shape other than the illustrated shape may be formed.

Fig. 9 is a partially cutaway perspective view showing a pressing board 10 and a steam iron 200 according to a fourth embodiment.

In Fig. 9, the pressing board 10 is constructed as follows. That is, as shown in Fig. 9, a large number of longitudinal and lateral grooves 18 and 19 are formed in the working surface, on which the steam iron 200 is pressed, of the base material 2 of the pressing board 10. A cushion material 4 having proper shock absorbing property and uniform thickness is arranged between the working surface and a covering cloth 3 covering the entire surface of the working surface on which the steam iron 200 is pressed. Ends of the cloth 3 are fixed to the base material 2 by a plurality of rivets (not shown) or rubber laces. In consideration of easy removal from molds upon blow molding, appropriate removal slopes are formed on the side walls of the longitudinal and lateral grooves 18 and 19.

The function of the pressing boards 1 and 10 shown in Figs. 4A and 9, respectively, i.e., a case wherein the steam iron 200 is used, will be described with reference to Fig. 10.

Fig. 10 is a sectional view cut along a plane parallel to the longitudinal groove 18 of the pressing board 10 of the fourth embodiment. The same function can be obtained by the pressing board 1 on which the large number of projections 20 are formed shown as in

Fig. 5. Therefore, a description will now be made with reference to only Fig. 10.

In Fig. 10, steam S is generated by the steam iron 200, and is applied to the clothing C. Of the steam S passing through the clothing C, a steam S component reaching a top surface 2A is applied to the clothing C in the same manner as in the conventional pressing board. A steam S component reaching the lateral or longitudinal groove 19 or 18 is stored in the groove. As a result, the clothing C is vertically sandwiched by the steam S components. That is, since the steam S is caught in the grooves, the clothing C is steamed, and hence, the steam can be effectively applied to the clothing C.

On the other hand, some components of the steam S generated by the steam iron 200 are appropriately released inside the base material 2 through steam holes 8. Excessive steam S components are released to air through steam holes 8 formed in the back surface of the base material 2.

Furthermore, since the longitudinal and lateral grooves 18 and 19 and the projections 20 serve as heat radiation members, heat generated from the iron can be appropriately radiated. Therefore, the base material 2 can be formed of a blow-molded material having a low heat-resistant temperature.

Note that in the above embodiment, the longitudinal and lateral grooves are formed in the base material 2. However, grooves may be formed obliquely in a diamond shape, or recesses may be locally formed. With this structure, the same result can be obtained as a matter of course.

Fig. 11A is a plan view of a base material 2 of a pressing board 1 according to a fifth embodiment. In order to obtain a ship-like shape shown in Fig. 11A, a head 12 and a border 15 are formed.

Fig. 11B is a plan view of a base material 2 of a pressing board 1 according to a sixth embodiment. In this embodiment, a border 15 and a linear side are formed.

Fig. 11C is a plan view of a base material 2 of a pressing board 1 according to a seventh embodiment. In this embodiment, two linear sides are formed.

When the pressing board 1 is constructed using the base material 2 having the shape illustrated in Fig. 11A, 11B, or 11C, the iron working surface of the pressing board 1 is rounded upward, and a contact state between the iron and the working surface almost becomes the line or point contact state, as described above, thus facilitating ironing.

Figs. 12A, 12B, and 12C are side views showing states wherein the legs 6 are provided to the base material 2.

Fig. 12A shows a state wherein the legs 6 of the pressing board are retractably arranged on the base material 2. Legs 6A and 6B cross at the central portion. When the end portion of the leg 6A is engaged with an engaging hole of a hook 16, the illustrated height can be held. A portion of a bag-like clothing, which is not subjected to ironing is housed in a gap portion defined according to the height of the legs 6, and a portion of the clothing C, which is to be ironed is spread on the pressing board, so that the bag-like clothing can be ironed.

A chain 21 is bridged between the crossing portion of the legs 6A and 6B and the base material 2, so that the legs 6 are not excessively separated from the base material 2.

Figs. 12B and 12C are side views showing modifications of the legs 6. A portion of a bag-like clothing is housed under the pressing board, and a portion to be ironed of the clothing C is spread on the pressing board, so that the bag-like clothing can be ironed.

As many apparently widely different embodiments of the present invention can be made without departing from the spirit and scope thereof, it is to be understood that the invention is not limited to the specific embodiments thereof except as defined in the appended claims.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A pressing board comprising:

a base having an upwardly facing working surface being rounded convex in transverse cross-section, being bordered by a pair of longer sides and a pair of shorter sides and having a plurality of projections defining a substantial volume of grooves therebetween;

a resilient substantially uniform thickness steam permeable cover superimposed over the entire working surface; and

outlet apertures disposed throughout the volume of grooves leading to an external region of base,

and wherein,

said apertures are such as to allow only excess steam to escape said grooves during steam pressing so as to form substantially steam filled grooves acting to steam underside areas of garments being pressed.

2. A pressing board as defined in claim 1, wherein said base is a substantially hollow structure adapted to maintain steam within the hollow volume during steam pressing.

3. A pressing board as defined in claim 1 or 2, wherein said base is produced by a blow moulding process.

4. A pressing board as defined in any one of the preceding claims including at one longitudinal end of the base, a working surface area of reduced transverse dimension in order to facilitate improved pressing of shoulder, sleeve and similar parts of shirt-like garments.

5. The pressing board according to any one of claims 1 to 3, wherein said pressing board has a base material which has a large number of grooves formed in a surface on which an iron is pressed.



6. The pressing board according to claim 4, wherein a large number of steam release holes are formed in said base material.
7. The pressing board according to any one of claims 1 to 6, wherein said pressing board has legs.
8. The pressing board according to any one of claims 1 to 5, wherein said pressing board is formed into a ship-like shape.
9. The pressing board according to any one of claims 1 to 5, wherein said shorter side of said pressing board is rounded outwardly in the general plane of the working surface.
10. The pressing board according to any one of claims 1 to 3, wherein said base material is made of woods.
11. The pressing board according to any one of claims 1 to 3, wherein said base material is made of metal gauze.

DATED this 11th day of September 1990

SORAI SAITO
Patent Attorneys for the
Applicant:

F.B. RICE & CO.



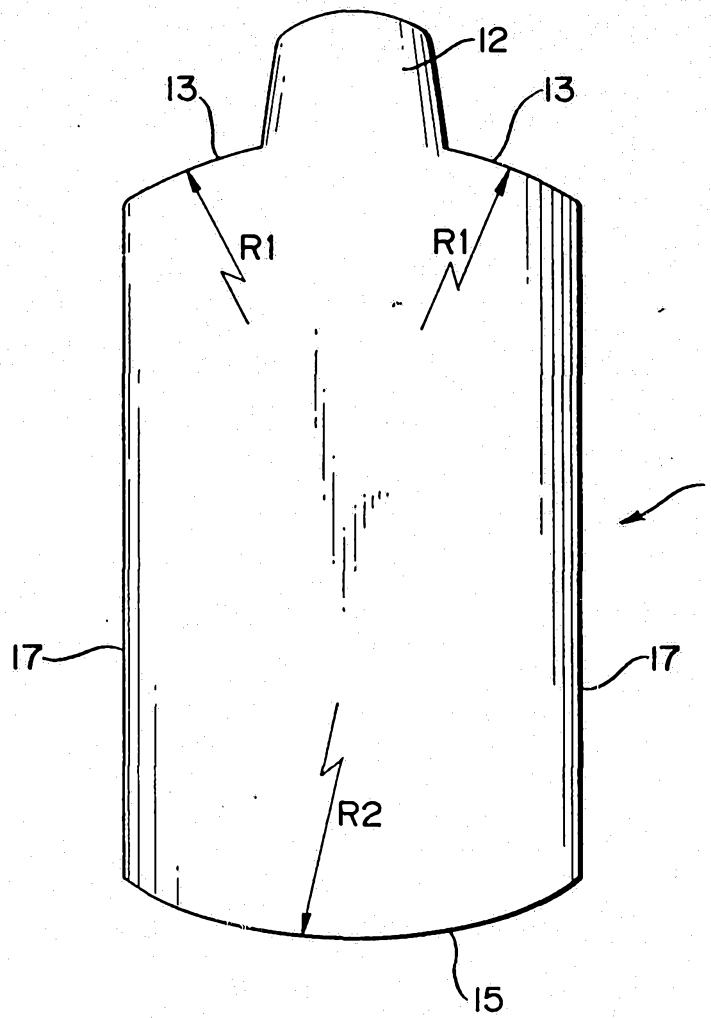


FIG. 1A

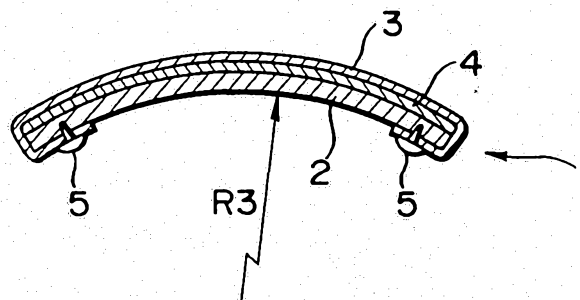


FIG. 1B

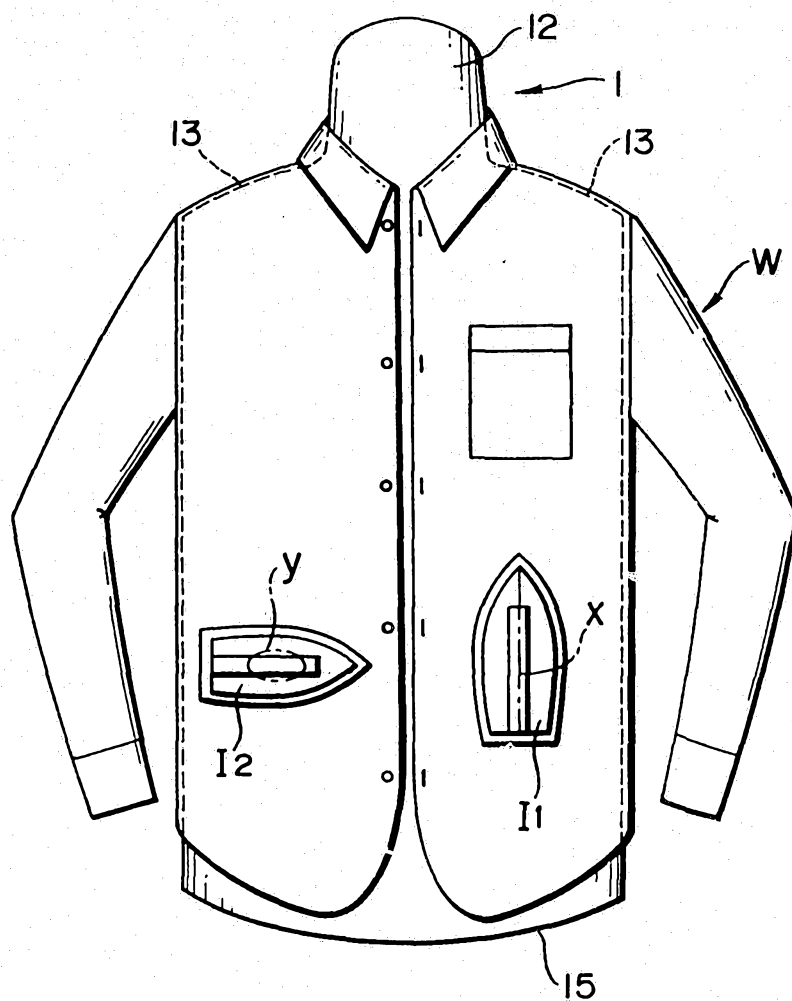


FIG. 2A

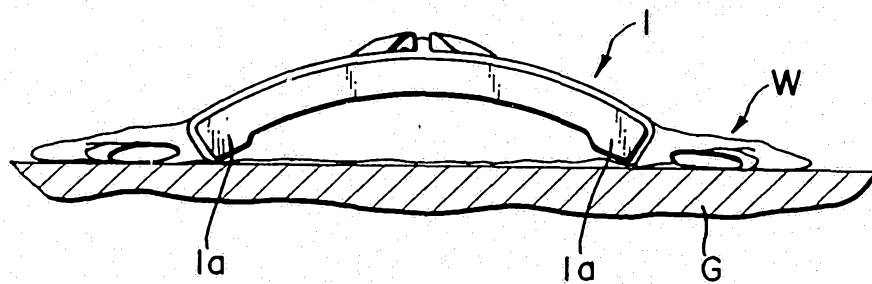


FIG. 2B

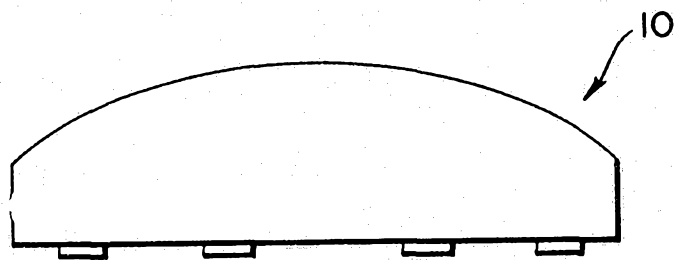


FIG. 3

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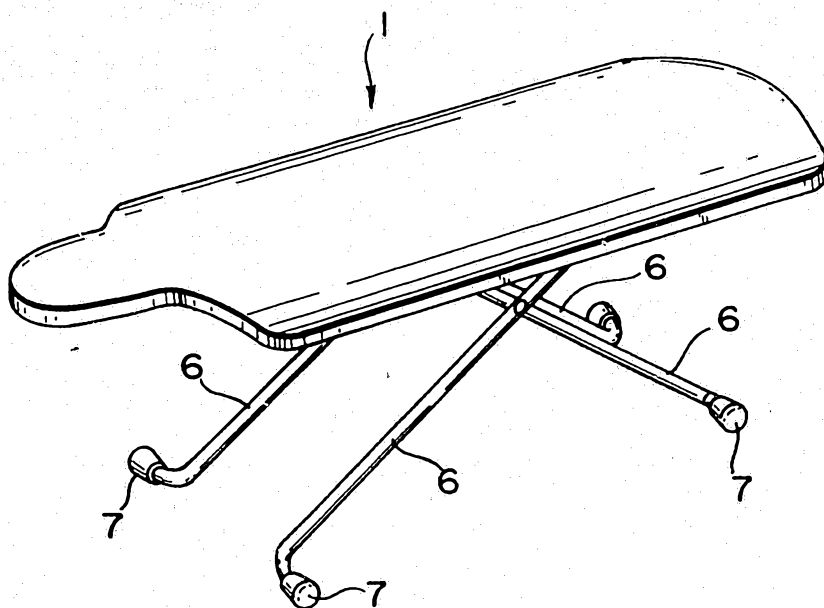


FIG. 4A

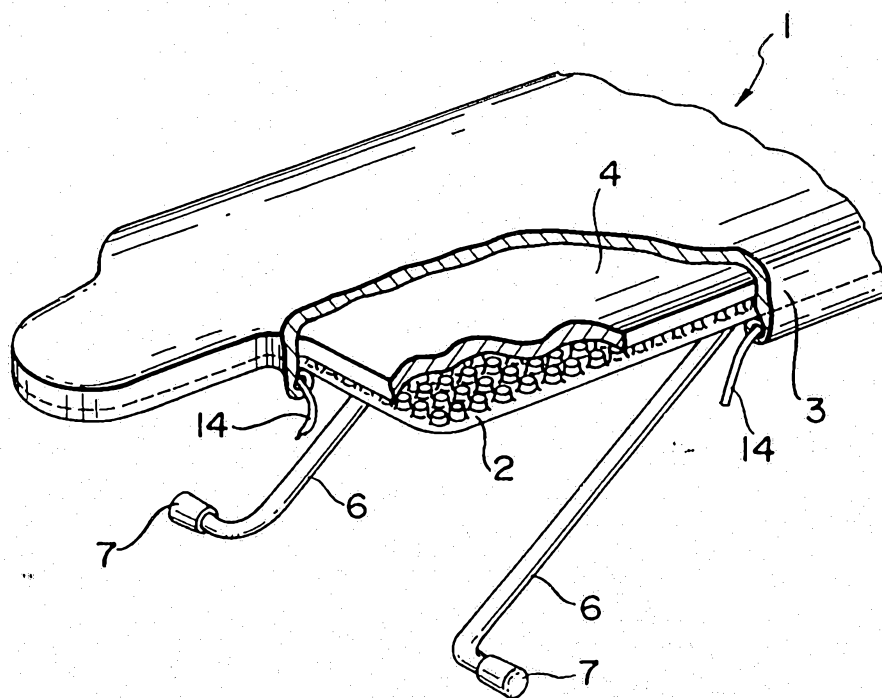


FIG. 4B

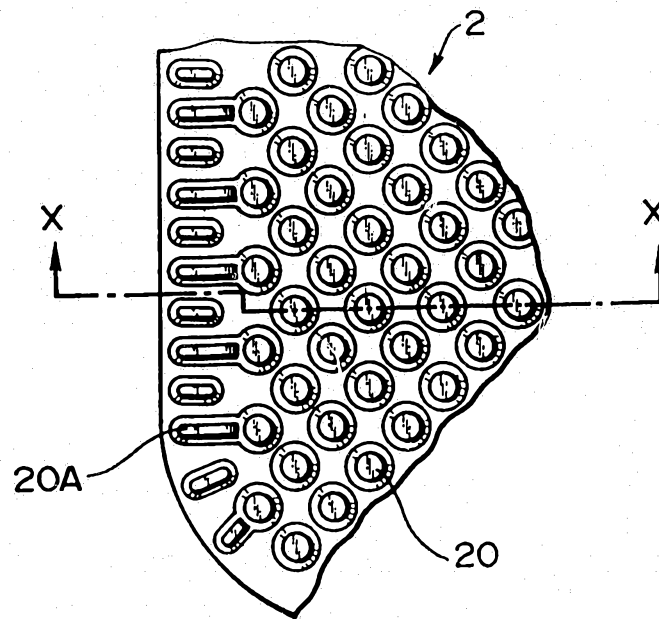


FIG. 5

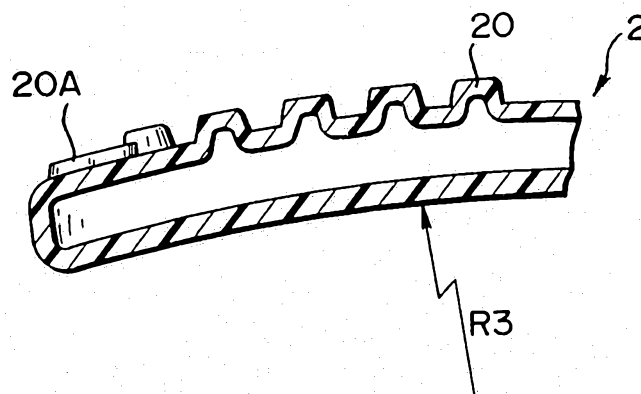


FIG. 6

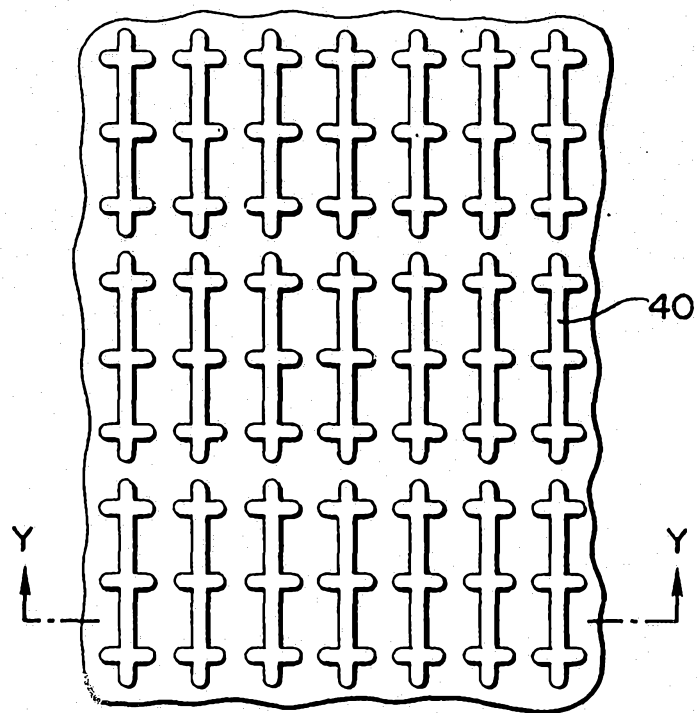


FIG. 7

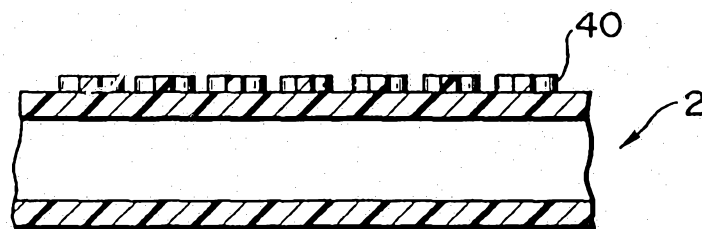
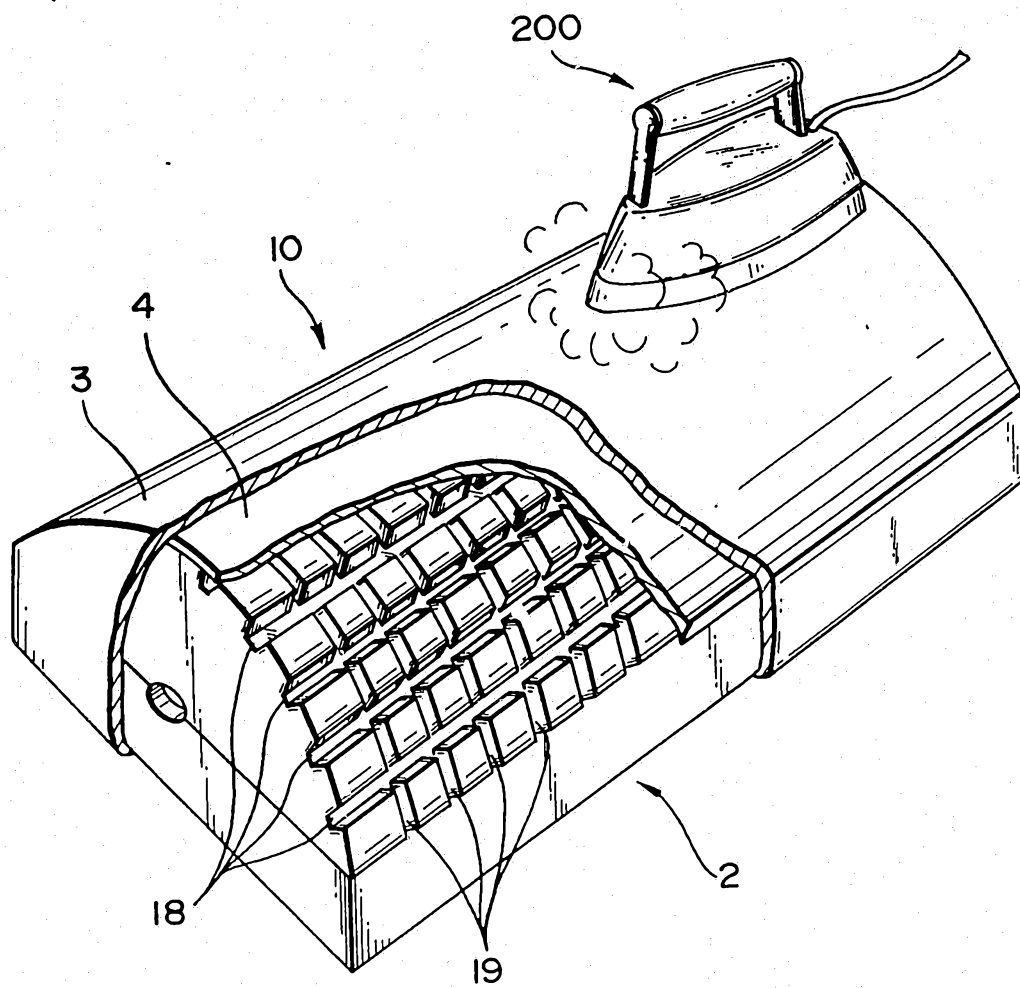
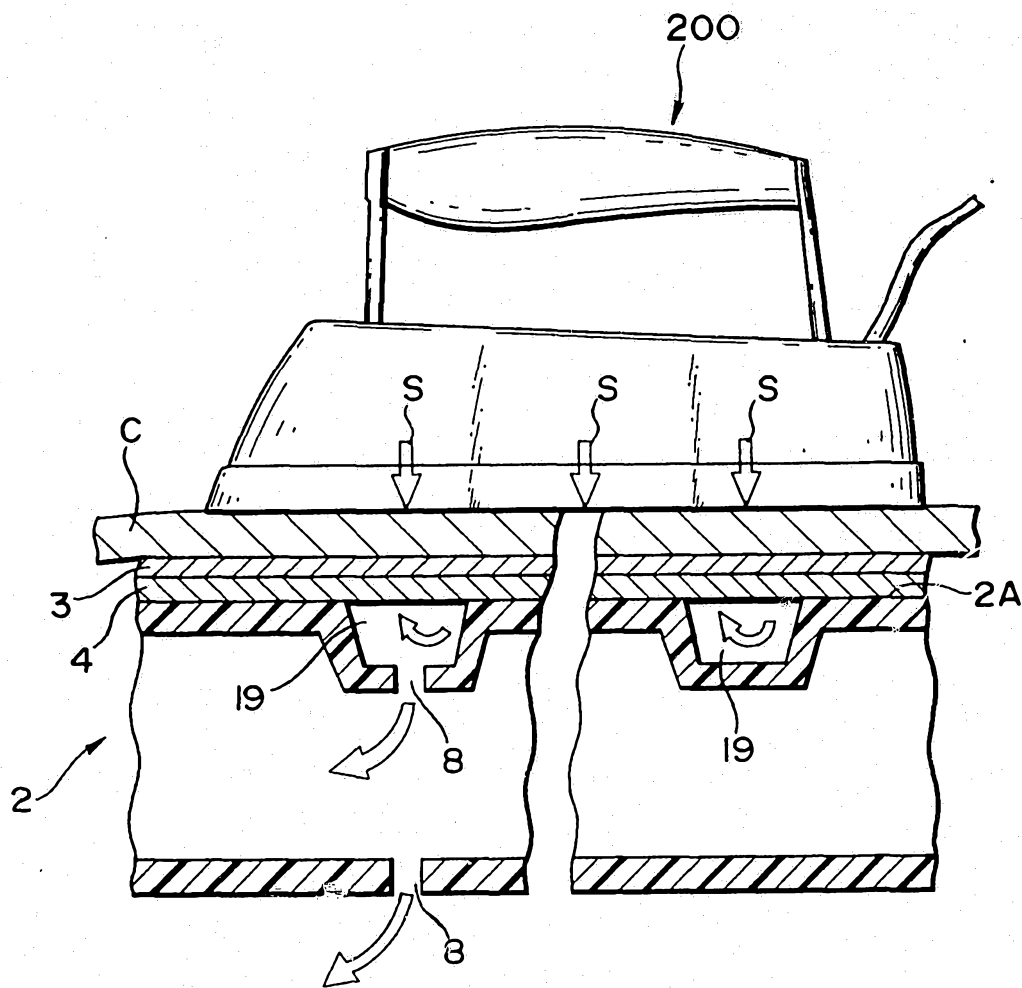


FIG. 8



F I G. 9



F I G. 10

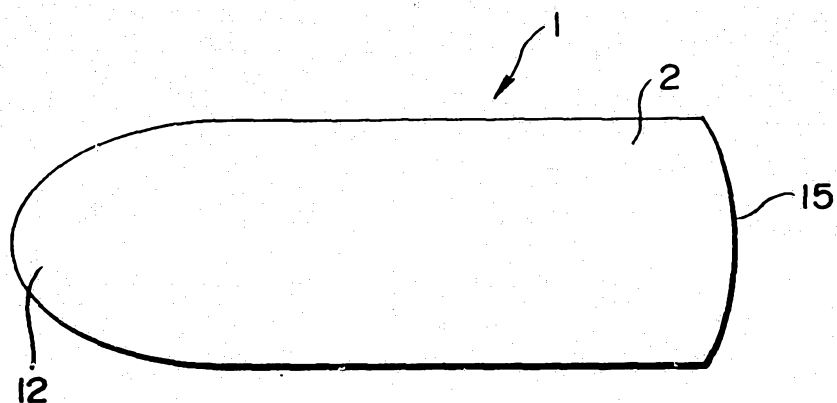


FIG. IIA

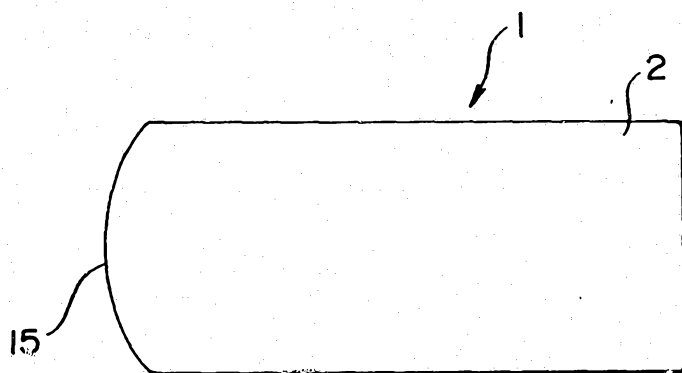


FIG. IIB

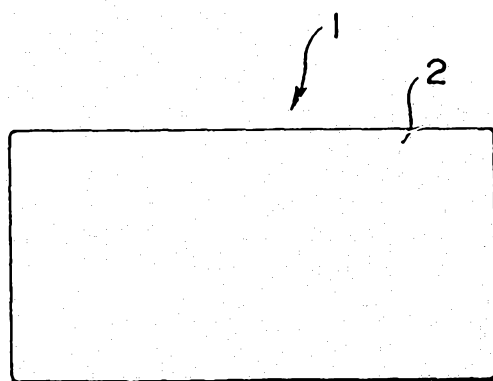


FIG. IIC

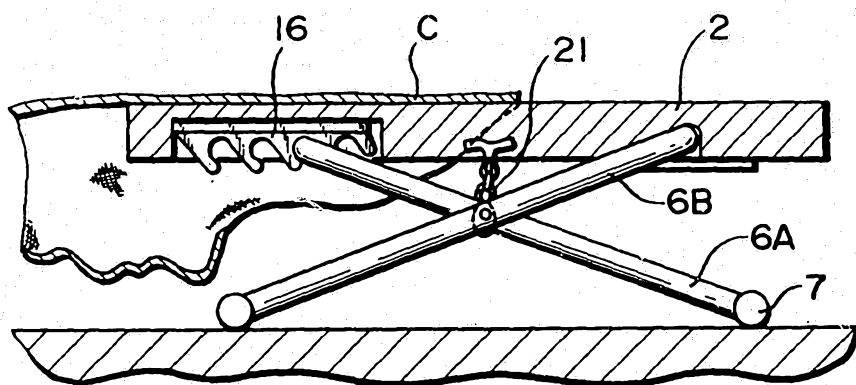


FIG. 12A

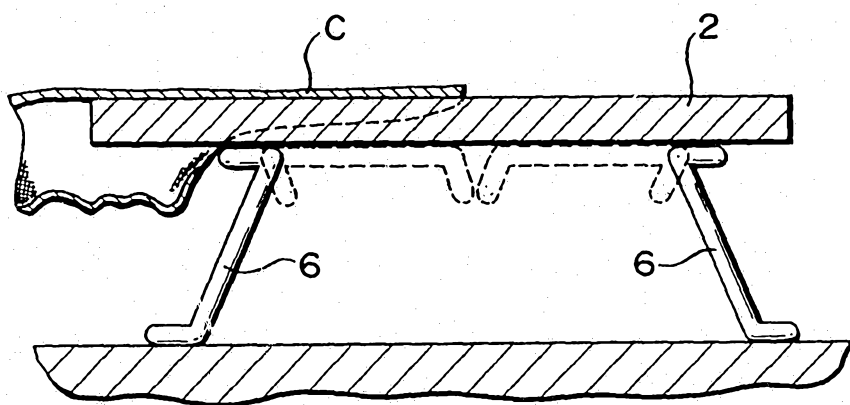


FIG. 12B

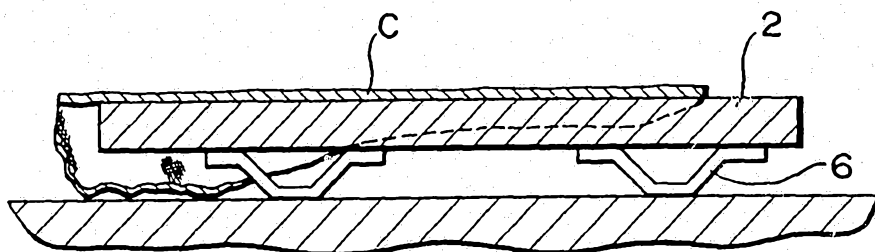


FIG. 12C

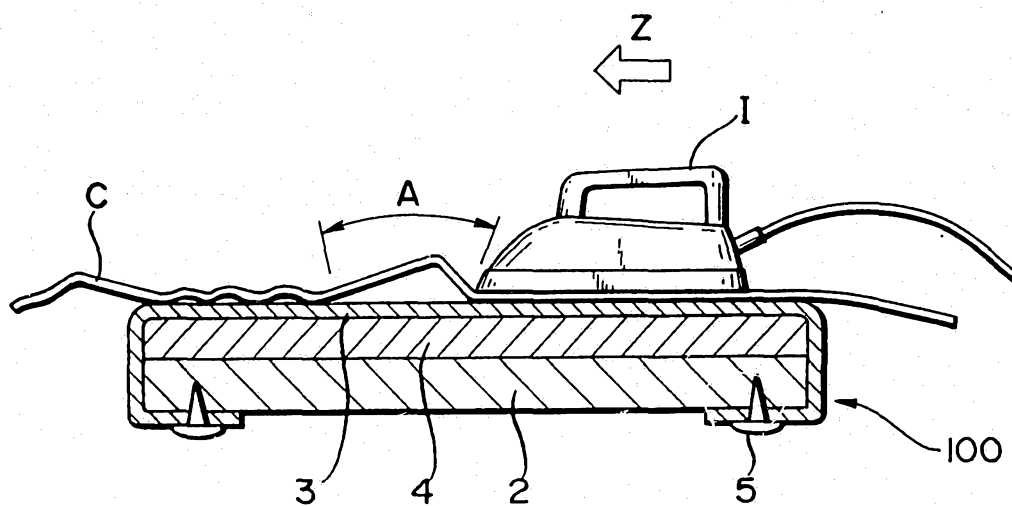


FIG. 13