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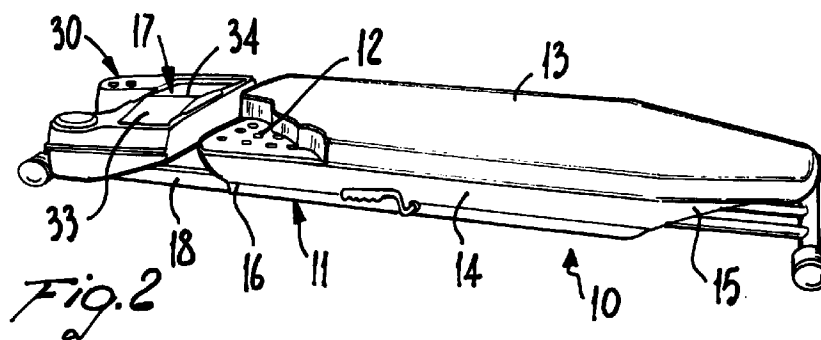
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(54) **Ironing board, particularly for home use**

(57) Ironing board, particularly for home use, which comprises an elongated box-like body (11) constituted by a perforated upper metal plate (12) that is covered by one or more layers (13) of a soft air-permeable material, said plate resting on a shell (14) made of thermoformed plastic material, said box-like body (11) having a first tapered end (15) and a second end (16) that supports an iron holder structure (17), said box-like body (11)

being supported by ground resting elements (19, 20), suction means being furthermore provided which are adapted to produce a negative pressure inside said box-like body (11), said shell having, in a downward region, one or more seats (29) inside which said ground resting elements retract in the collapsed configuration.



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Description

The present invention relates to an ironing board, particularly for home use.

Ironing boards for home use have long been known and commercially available that despite the variety of available embodiments have a structure that is substantially constituted by a board supported by folding legs provided in the most disparate shapes.

The board usually has an iron holder that is constituted by a frame that can be coupled or inserted in guides associated with said board and by a region that is adapted to support the iron.

Said region is normally provided by means of a metallic rod that is bent several times and forms a grid that constitutes the actual supporting surface for the iron or, in more advanced models, by a boiler that forms, in an upward region, a supporting surface for the iron that is covered by a layer of temperature-resistant rubber.

Ironing boards of this kind, despite performing their tasks, have some drawbacks.

First of all, such ironing boards, in a collapsed configuration, occupy quite a lot of space, thus causing considerable problems in placement, especially if the user does not have wide storage spaces because he lives, for example, in a miniflat without a closet.

In addition to considerable bulk, in these ironing boards the legs usually provide a rather limited ground resting surface, since said legs are made with the most compact possible shapes in order to limit said bulk.

Moreover, practical experience has shown that commonly commercially available ironing boards do not provide sufficient performance as regards overall operating ergonomics, and this entails that the user quickly becomes tired during ironing.

These ergonomic problems combine with the fact that the increasing use of steam irons even in home use produces a double problem that is linked specifically to the iron holder; a steam iron, even when in standby, is in fact not free from steam leaks, which must be contained as much as possible; this containment is also useful during actual ironing.

The aim of the present invention is to provide an ironing board that solves the drawbacks indicated above in conventional types by having high-level functional ergonomics linked to high ground resting stability in an operating configuration and to a small space occupation when collapsed.

In relation to this aim, an object of the present invention is to provide an ironing board whose constructive complexity is not greater than that of conventional boards.

Another object of the present invention is to provide an ironing board that has a solid and durable structure and requires a low level of maintenance.

Another object of the present invention is to provide an ironing board that achieves a good percentage of recovery of the steam released by steam irons, avoiding the loss of said steam into the environment.

Another object of the present invention is to provide an ironing board whose costs are competitive with those of conventional types.

This aim, these objects, and others which will become apparent hereinafter are achieved by an ironing board, particularly for home use, which comprises an elongated box-like body constituted by a perforated upper metal plate that is covered by one or more layers of a soft air-permeable material, said plate resting on a shell made of thermoformed plastic material, said box-like body having a first tapered end and a second end that supports an iron holder structure, said box-like body being supported by ground resting elements, suction means being also provided which are adapted to produce a negative pressure inside said box-like body, said ironing board being characterized in that said shell has, in a downward region, one or more seats inside which said ground resting elements retract in the collapsed configuration.

Further characteristics and advantages of the present invention will become apparent from the description of two embodiments thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is an axonometric view of an ironing board according to a first embodiment of the invention;
figure 2 is an axonometric view of the board of figure 1 in collapsed configuration;
figure 3 is a bottom view of the ironing board of figure 1, in collapsed configuration;
figure 4 is an axonometric view of a detail of the ironing board according to the invention shown in figure 1;
figure 5 is a perspective view of the boiler of the board of figure 1 and of the iron, accommodated in a support formed in said boiler;
figure 6 is an enlarged-scale bottom view of a detail of the boiler of figure 5;
figures 7 and 8 are two axonometric views of another detail of the ironing board of figure 1, in two possible operating positions thereof;
figure 9 is a view of another detail of the ironing board of figure 1;
figure 10 is an axonometric view of a detail of an ironing board, in a second embodiment;
figure 11 is a side view of the detail of figure 10;
figures 12 and 13 are axonometric views of a safety device related to the ironing board in its second embodiment, in a first configuration thereof;
figures 14 and 15 are axonometric views of a second configuration of the safety device;
figures 16 and 17 are views of a third configuration of the safety device;
figures 18 and 19 are perspective views of details of a third embodiment of the ironing board.

With reference to figures 1 to 9, an ironing board, particularly for home use, according to the invention, is

generally designated by the reference numeral 10 in a first embodiment.

The ironing board 10 comprises a substantially elongated box-like body 11 that is constituted by a perforated upper metal plate 12 that is covered, in this case, by a layer 13 of soft air-permeable material.

The metal plate 12 is rested and fixed on a shell 14 made of thermoformed plastics.

The box-like body 11 has a first tapering end 15 and a second end 16 that supports an iron holder structure that is generally designated by the reference numeral 17.

In particular, in this case, the iron holder structure 17 is supported by two tubular elements 18 that are substantially parallel to each other and are fixed below the shell 14.

Two ground resting elements, designated respectively by the reference numerals 19 and 20, are also rotatably coupled to the shell 14.

Both rod ground resting elements 19 and 20 are constituted by two tubular elements 21 and 22 whose ends that lie opposite to those pivoted to the shell 14 are rigidly associated with a corresponding resting cross-member 23 that is also constituted by a tubular element that has a substantially circular cross-section.

The ends of each one of the resting cross-members 23 are telescopically adjustable, since each one fits in a respective tubular cylindrical element 24 that is furthermore shaped, in its lower part, so as to form resting ribs 25.

Each one of the tubular cylindrical elements 24 is made of plastics and has an end which, upon assembly, is substantially orientated outward and is closed by a corresponding plug 24a made of antislip material; its stroke related to the corresponding end of the respective resting cross-member 23 is also limited by a tooth 26 that protrudes from its inner surface and is inserted in a corresponding slotted hole 27 that is formed in the corresponding end of the resting cross-member 23.

Said tubular cylindrical elements 24 produce, as mentioned, a variation in the resting surface of the ironing board without however increasing the space occupation thereof in the collapsed configuration.

As regards the ground resting elements 19 and 20, despite being structurally similar, they are not identical, since the ground resting element 19 has respective tubular elements 21 and 22 whose mutual distance is substantially less than that of the corresponding tubular elements 21 and 22 related to the resting element 20.

In this manner, the ground resting elements 19 and 20 can, upon assembly, be inserted inside one another and be mutually coupled by means of two hinges 28 so as to substantially form an overall scissorlike ground resting structure.

Furthermore, the ground resting elements 19 and 20, in a collapsed configuration, retract into a seat 29 that is formed under the shell 14, thus producing a high degree of collapse and compactness of the ironing board which, when closed, appears as a single block.

In this first embodiment, the iron holder structure 17 is constituted by the upper part of a pressurized or non-pressurized steam-generating boiler 30 of the iron, designated here by the reference numeral 31.

The boiler 30 is shaped, in an upward region, so as to form a perimetric rim 32, inside which two symmetrically inclined surfaces 33 are also formed; their central ridge line 34 is substantially parallel to the longitudinal axis of said box-like body 11.

The two surfaces 33 are adapted to accommodate, for resting on either one of them, the iron 31; in this position, said iron is slightly tilted and is available to the user at an ergonomic grip angle.

The surfaces 33 are also covered by a layer 35 made of antislip and heat-resistant material of a per se known type.

In this case, the boiler 30 has a cavity 36 that is adapted to contain the electric cables 37 of the iron 31 and of said boiler 30.

Furthermore, said boiler 30 supports a bracket-like structure, generally designated by the reference numeral 38, that is adapted to support the iron 31, directly affecting the body 31a and locking it, in a position in which said body is substantially tilted on one side (figure 6).

The coupling of the structure 38 also allows the boiler 30, with the iron 31, to be removed and carried as shown in figure 5, with particular ease, by gripping the handle 31b of the iron 31.

It should be noted that the shape of the boiler 30 is such that the iron 31, when inactive and supported by the structure 38, is practically surrounded by said boiler 30, and this is done to protect said iron and for user safety.

Furthermore, the ironing board 10 includes: a flexible rod element 39 that constitutes a support for the electric cable 37 of the iron 31, and a handle 40 that is available for operation on the part of the user and, by moving rods 41 that are arranged below the shell 14 at the seat 29, produces, according to a mechanism of a per se known type, the locking or release of the ground resting elements 19 and 20.

There are also actuation and control means and an electric outlet that are not shown in the figures and are fixed, in this case, to the shell 14 at the second end 16, thus being protected against impacts substantially by the iron holder structure 17 as a whole.

There are also suction and heating means, also not shown in the figures; said suction means generate a negative pressure inside the box-like body 11, and said heating means are of the electric type, but may be of other types in other cases, and heat the metal plate 12.

The suction and heating means are all of a per se known type.

Finally, the fact that the particular structure of the board allows all its parts, in collapsed configuration, to be substantially inside the footprint of the ironing board that is associated with the boiler is particularly important.

With reference to figures 10 to 15, an ironing board, particularly for home use, according to a second embod-

iment of the invention is generally designated by the reference numeral 100.

The ironing board 100 comprises a box-like body 101 and ground resting elements, not shown in the figures, that are fully similar to those described with regard to the first embodiment.

The ironing board 100 also has an iron holder structure that is generally designated by the reference numeral 103 and is supported by two metal elements 102 that are fixed to the box-like body 101 in a cantilevered fashion.

The iron holder structure 103 is constituted by a shaped metal plate 104 that forms two wings 105 that are inclined symmetrically, with a ridge line 106 that is central and substantially parallel to the longitudinal axis of the box-like body 101.

The shaped plate 104 is supported in a bridge-like fashion by the metal elements 102.

Furthermore, in this case the wings 105 are covered by a layer 107 made of antislip and heat-resistant material; they are also adapted to accommodate the iron, designated here by the reference numeral 108, so that it rests thereon; in this manner, the iron is tilted and available to the user at an ergonomic grip angle, and is locked by respective rims 104a that are formed by the shaped plate 104 at its sides that lie opposite to the ridge line 106.

The shaped plate 104 also supports an iron rod 109 that is folded several times so as to form an annular structure 110 that surrounds said plate and is adapted to provide an additional retention for the iron 108.

Furthermore, the iron rod 109 forms a structure 111 with two cantilevered portions that protrudes from the shaped plate 104 in opposition to the box-like body 101.

Said structure 111 with two cantilevered portions is adapted to accommodate said iron 108 in the inactive state.

In particular, the structure 111 with two cantilevered portions comprises a first lower cantilevered portion 112 that is adapted for the resting of the base of the iron 108, and a second cantilevered portion 113 that is adapted to fit inside the handle of said iron 108, locking it in position.

The ironing board 100 also comprises means for the safety locking of a handle 114 whose functions are fully similar to those of the handle 40 shown with reference to the first embodiment.

Said safety locking means are described hereinafter in three possible configurations, with reference to which they are generally designated by the reference numerals 115, 116, and 121.

The locking means 115 comprise a translating rod element 117 that is slidably coupled to a support 118 that is fixed to the box-like body 101 proximate to the handle 114; in one of its positions, said rod element 117 locks said handle.

The locking means 116 comprise a shaped rod element 119 that is rotatably coupled to a supporting block 120 that is fixed to the box-like body 101 proximate to the handle 114 and, in one of its positions, locks said handle.

The locking means 121 comprise a shaped rod element 122 that is rotatably coupled to the body 101 proximate to the handle 123 for actuating the opening of the board.

The element 122 has, at its free end, a tab 124 which locks the rotation of the handle 123 by means of the rotation of said element 122 (figure 16).

This second embodiment of the ironing board, too, includes actuation and control means, not shown in the figures, which are fixed to the box-like body 101 at the end thereof that is related to the iron holder structure 103; in this manner, said iron holder structure provides impact protection of said actuation and control means.

There are suction and heating means, also not shown in the figures and of a per se known type, which respectively produce a negative pressure inside the box-like body 101, thus avoiding the loss of generated steam into the environment, and heat a perforated metal plate that constitutes the upper part of the box-like body 101 and is not shown in the figures related to this second embodiment.

With reference now to figures 18 and 19, a third embodiment of the ironing board entails that the boiler, now designated by the reference numeral 230, is provided with a structure 238 made of rod metal elements that form, between the body of the boiler 230 and themselves, a seat for inserting and locking the edges of the ironing plate 231c and therefore the entire iron 231.

In practice it has been observed that the intended aim and objects have been achieved; in particular, the substantially complete collapse achieved by the ironing board according to the invention should be noted; however, this collapse, in view of the solution adopted for the ground resting elements, in no way compromises overall structural stability, and offers considerable advantages as regards packaging (smaller bulk of the boxes and therefore smaller amounts of material for them) and storage and transport and, for the user, a reduced space occupation when not in use, as well as the safety due to the particular accommodation and locking of the iron.

This stability can also be adjusted according to the requirements of the user in a simple manner and without requiring particular tools.

It should also be noted that the present invention achieves a structure that is highly ergonomic as a whole, in view of the position and shape of the iron holder and of the structure of the legs.

Furthermore, the coupling of the iron and the possibility of using its handle to carry the boiler are particularly handy.

It should also be noted that the suction inside the box-like body that substantially forms the ironing surface almost completely eliminates the loss of steam into the environment, consequently achieving an ideal environmental working condition for the operator.

It should also be noted that the arrangement of the actuation and control means, in addition to providing high-level protection against impacts or other accidental damaging events, entails a pleasant aesthetic effect,

since appliances that are usually unsightly are concealed.

The present invention is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept; thus, for example, it is possible to add to the ironing board devices of a known type that are dedicated to particular types of clothing.

All the details may furthermore be replaced with other technically equivalent elements.

The materials and the dimensions may be any according to the requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. Ironing board, particularly for home use, of the type that comprises an elongated box-like body (11, 101) constituted by a perforated upper metal plate (12) that is covered by one or more layers (13) of a soft air-permeable material, said plate (12) resting on a shell (14) made of thermoformed plastic material, said box-like body (11, 101) having a first tapered end (15) and a second end (16) that supports an iron holder structure (17, 103), said box-like body (11, 101) being supported by ground resting elements (19, 20), suction means being also provided which are adapted to produce a negative pressure inside said box-like body (11, 101), said ironing board being characterized in that said shell (14) has, in a downward region, one or more seats (29) inside which said ground resting elements (19, 20) retract in the collapsed configuration.

2. Ironing board according to claim 1, characterized in that said iron holder (17) is constituted by the upper part of a pressurized or non-pressurized steam-generating boiler (30) of the iron (31), said boiler (30) being shaped, in an upward region, so as to form at least one resting surface (33) for said iron (31).

3. Ironing board according to claim 2, characterized in that said boiler (30) is shaped, in an upward region, so as to form a perimetric rim (32) inside which two symmetrically inclined surfaces (33) are formed, their central ridge line (34) being substantially parallel to the longitudinal axis of said box-like body (11), said two surfaces (33) being adapted to accommodate for resting on either one of them said iron (31), which, in this position, is inclined and available to the user at an ergonomic grip angle.

4. Ironing board according to claim 2, characterized in that said at least one resting surface (33) is covered

by a layer (35) of antislip and heat-resistant material of a per se known type.

5. Ironing board according to claim 1, characterized in that said iron holder (103) is constituted by a shaped metal plate (104) that forms two symmetrically inclined wings (105), with a common central ridge line (106) that is substantially parallel to the longitudinal axis of said box-like body (101), said shaped plate (104) being supported by supporting elements (102) that are rigidly coupled to said box-like body (101) and being adapted to accommodate the iron (108), so that it alternatively rests on either one of its wings (105), said iron (108), in this position, being inclined and available to the user at an ergonomic grip angle.

6. Ironing board according to claim 5, characterized in that said shaped plate (104) supports an iron rod (109) that is bent several times and forms an annular structure (110) that surrounds said plate (104) and is adapted to provide a retention element for said iron (108), said one iron rod (109) also forming a structure (111) with two cantilevered portions (112, 113) that protrudes from said shaped plate (104) in opposition to said box-like body (101) and is adapted to accommodate said iron (108) in an inactive state.

7. Ironing board according to claim 6, characterized in that said structure with two cantilevered portions comprises a first lower cantilevered portion (112) that is adapted for the resting of the body of said iron (108) and a second cantilevered portion (113) that is adapted to fit inside the handle (31b) of said iron (31, 108) or between the ironing plate (231c) and the body, locking said iron (31, 108).

8. Ironing board according to claim 7, characterized in that the shape of the boiler (230) is such that the inactive iron (231) supported by said structure with two cantilevered portions is practically surrounded by said boiler (230).

9. Ironing board according to one or more of the preceding claims, characterized in that each one of said ground resting elements (19, 20) ends with a respective resting cross-member (23), whose ends are telescopically adjustable in length.

10. Ironing board according to one or more of the preceding claims, characterized in that it comprises actuation and control means and/or one or more electric outlets (37) that are fixed to said box-like body at said second end (16) and are thus protected against impacts and are visually concealed by said iron holder.

11. Ironing board according to one or more of the preceding claims, characterized in that said perforated

upper metal plate (12) is heated independently by virtue of electric or equivalent heating means, all of a per se known type.

12. Ironing board according to one or more of the preceding claims, characterized in that it comprises a mechanism, of a per se known type, for locking and releasing said ground resting elements, said mechanism being actuated by a handle (40, 141, 123) that is available for operation on the part of the user. 5 10
13. Ironing board according to one or more of the preceding claims, characterized in that it comprises means (115, 116, 121) for the safety locking of said handle (141, 123) of the type with translatory or rotary motion of a rod element (117, 119, 122) that is coupled to the body of said board. 15
14. Ironing board according to one or more of the preceding claims, characterized in that in the collapsed configuration all its parts are substantially inside the footprint of the ironing board that is associated with the boiler. 20

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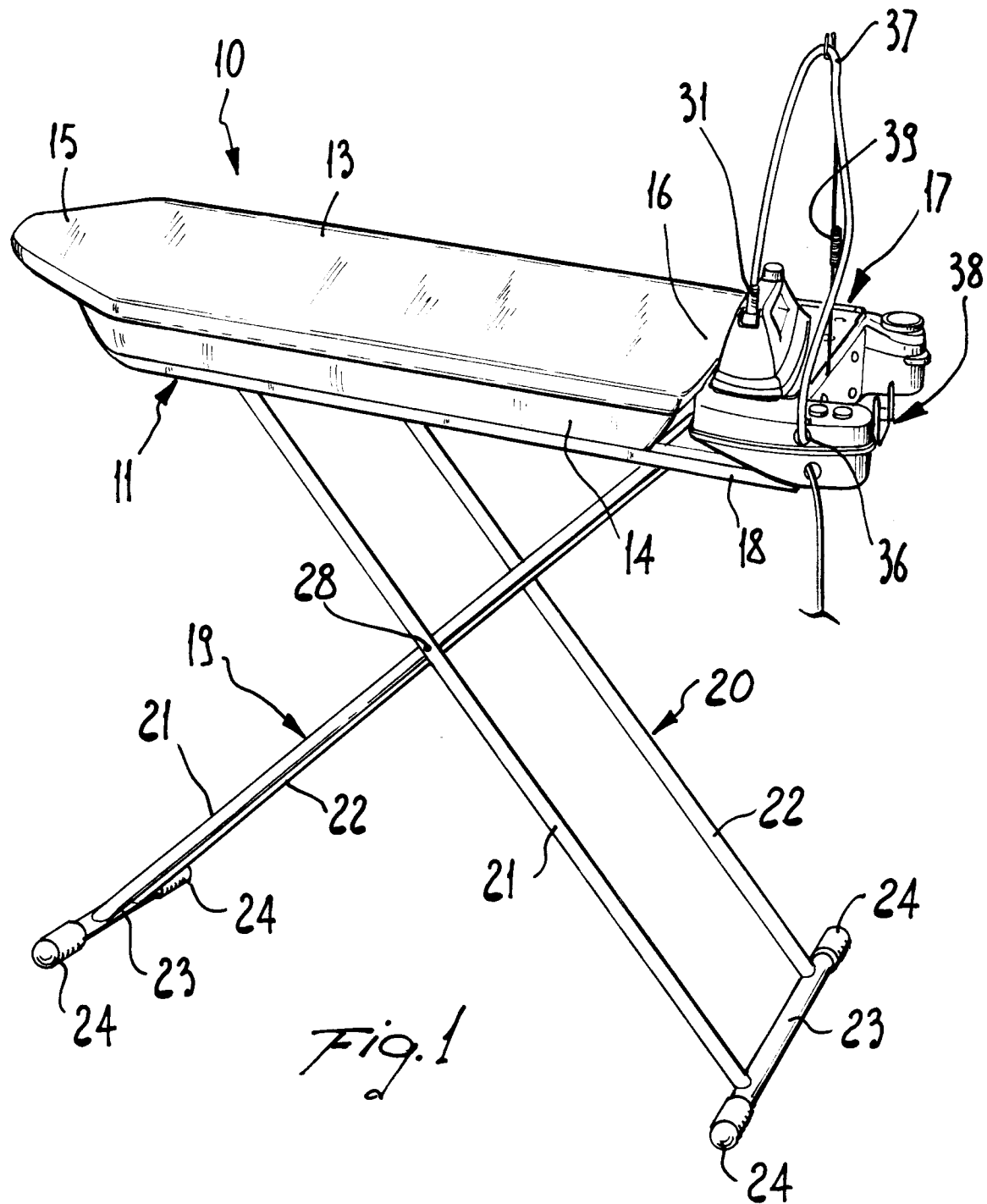
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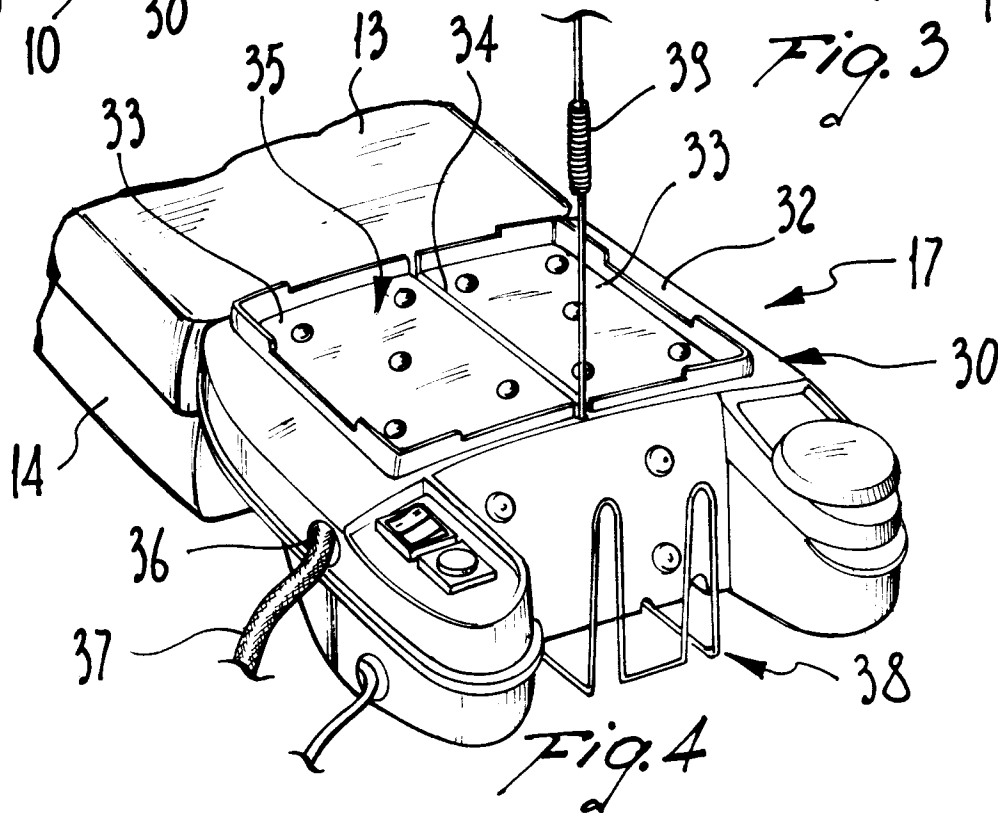
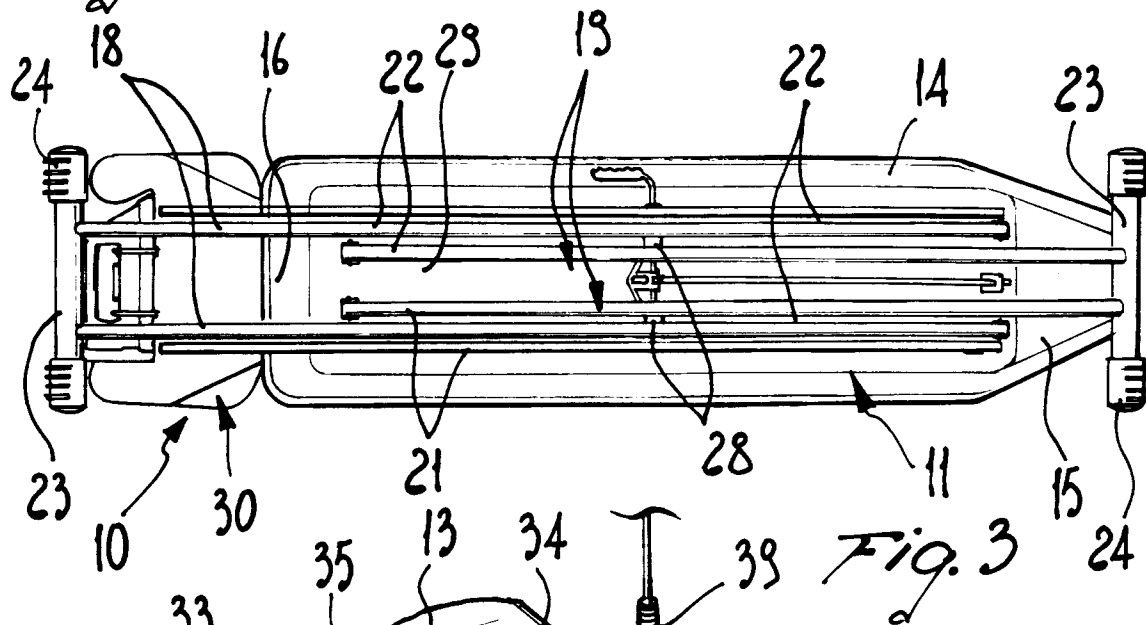
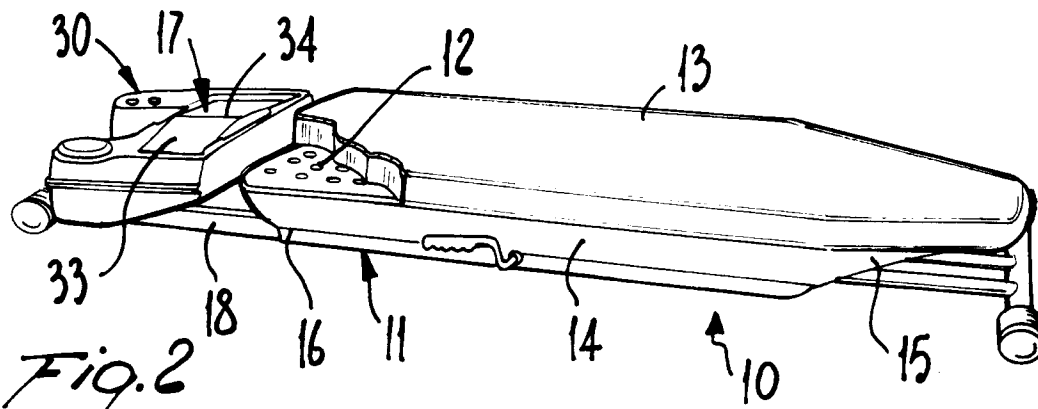
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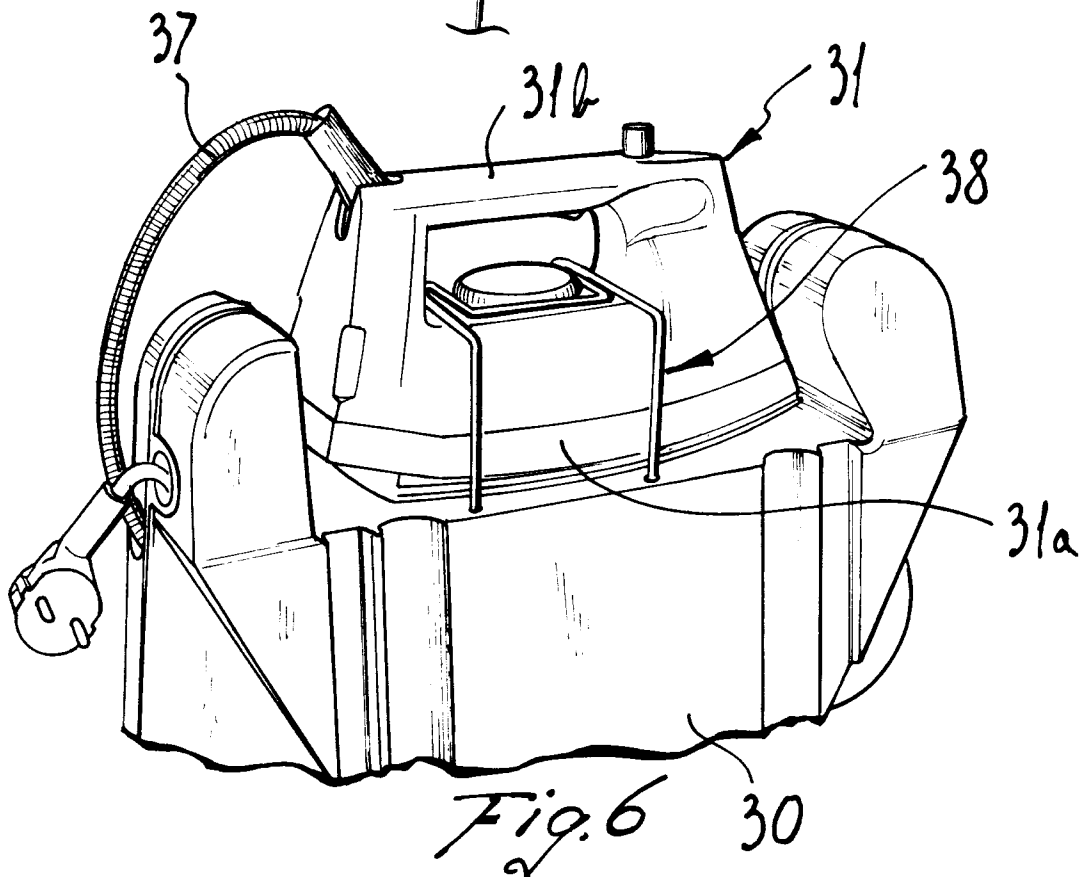
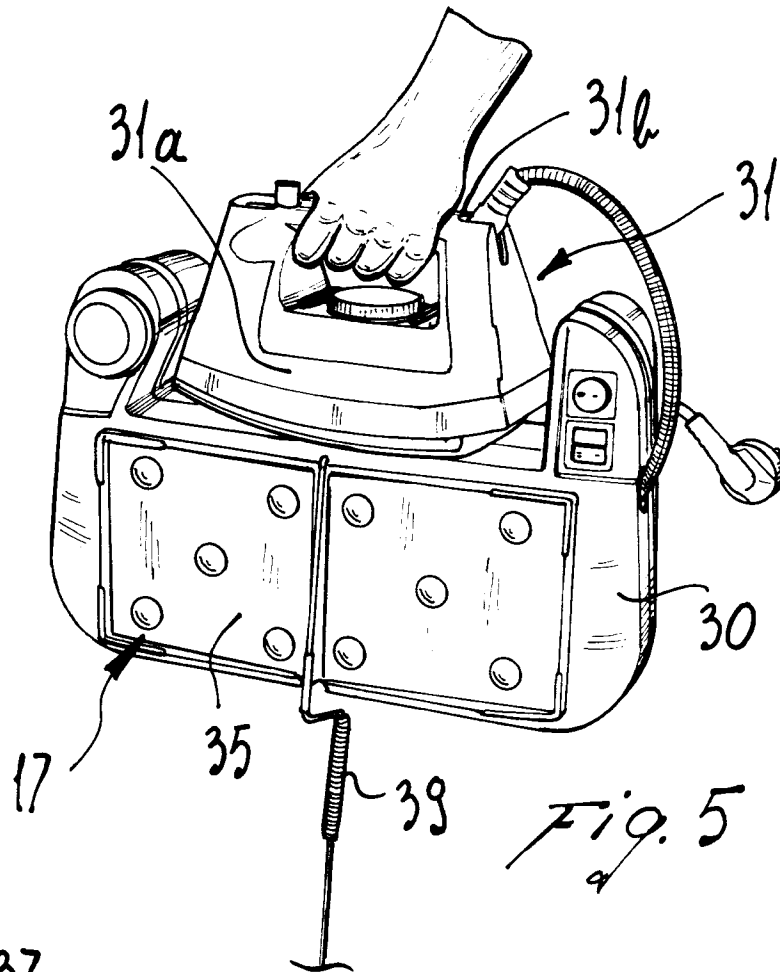
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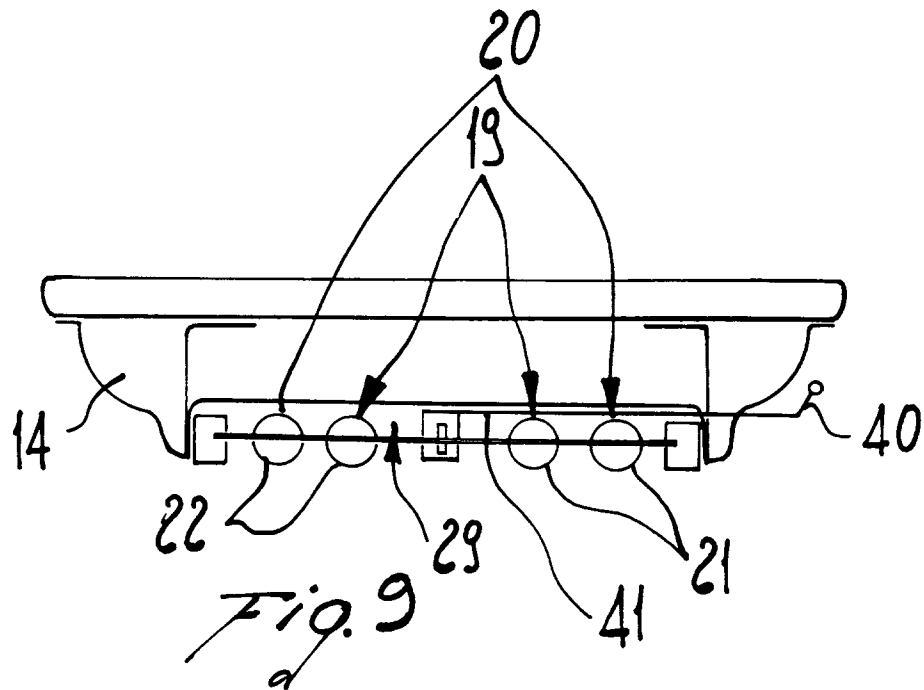
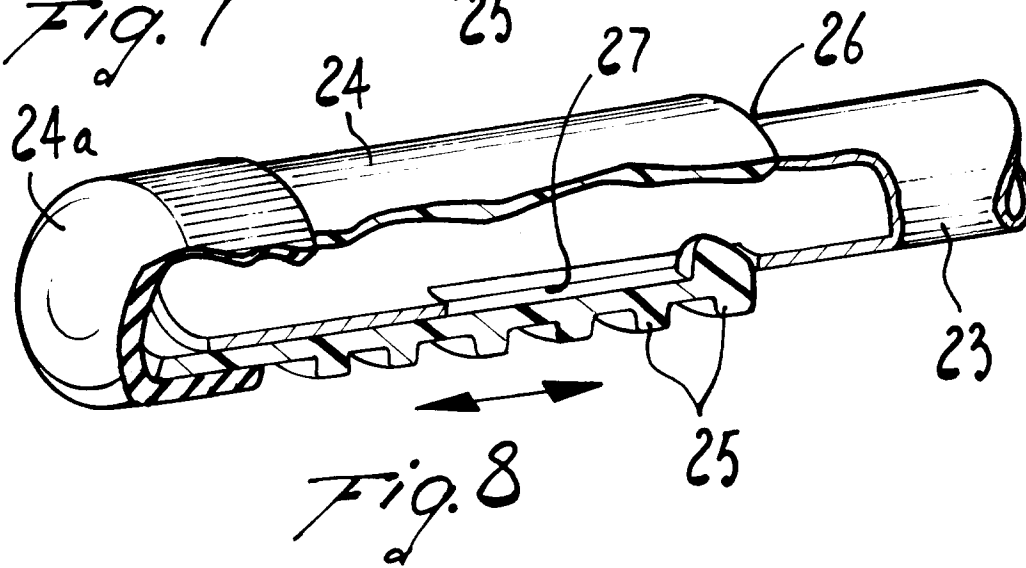
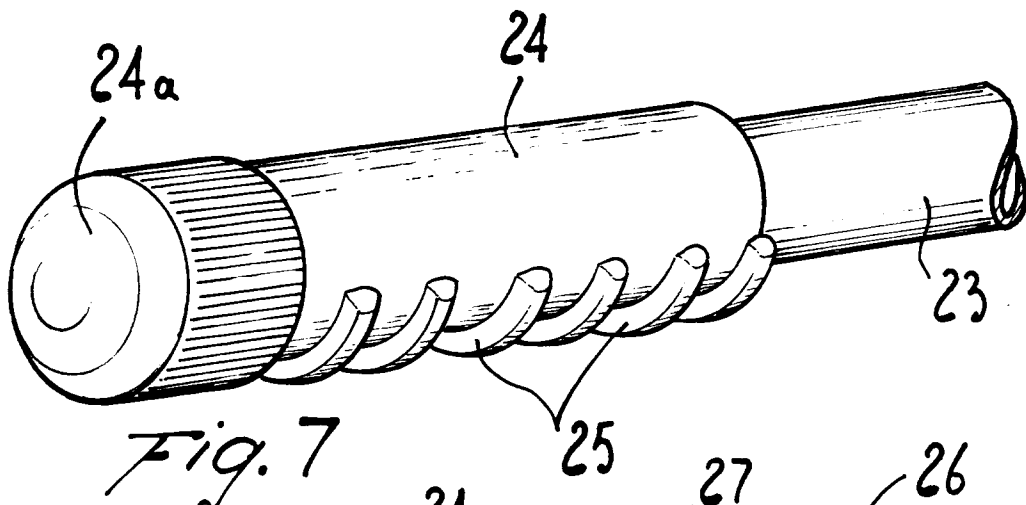
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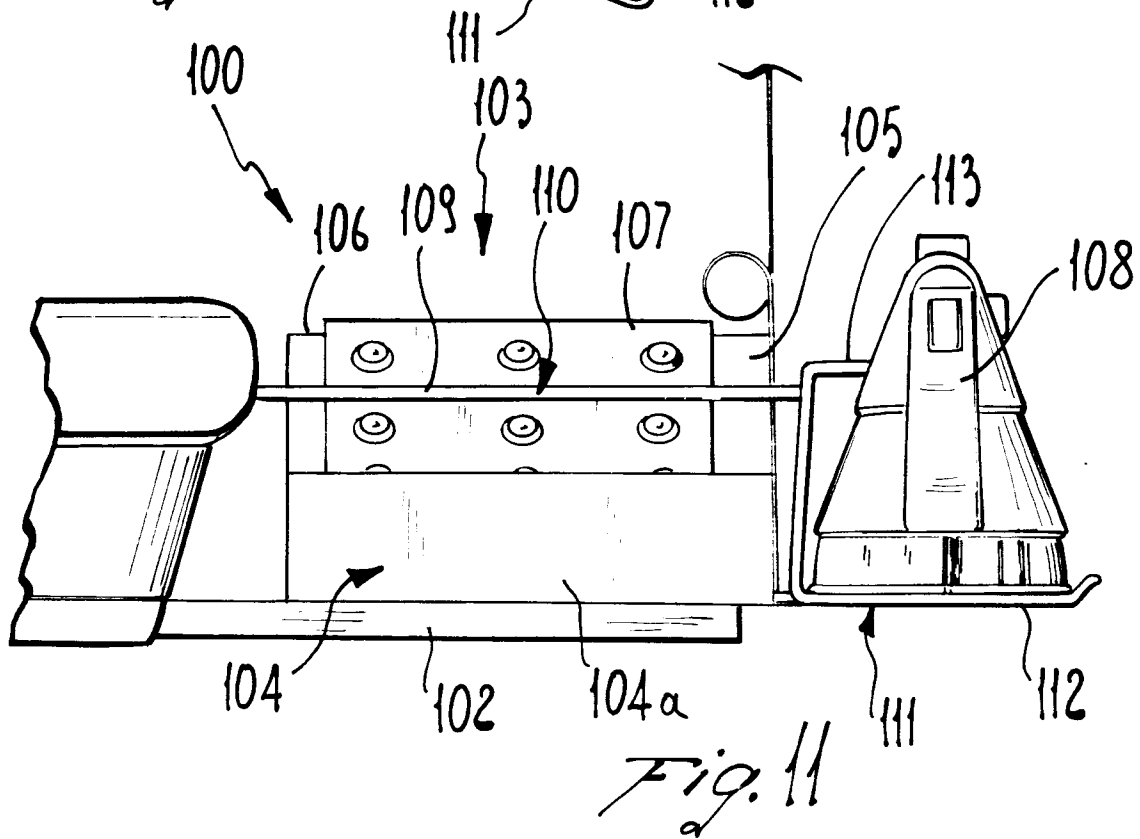
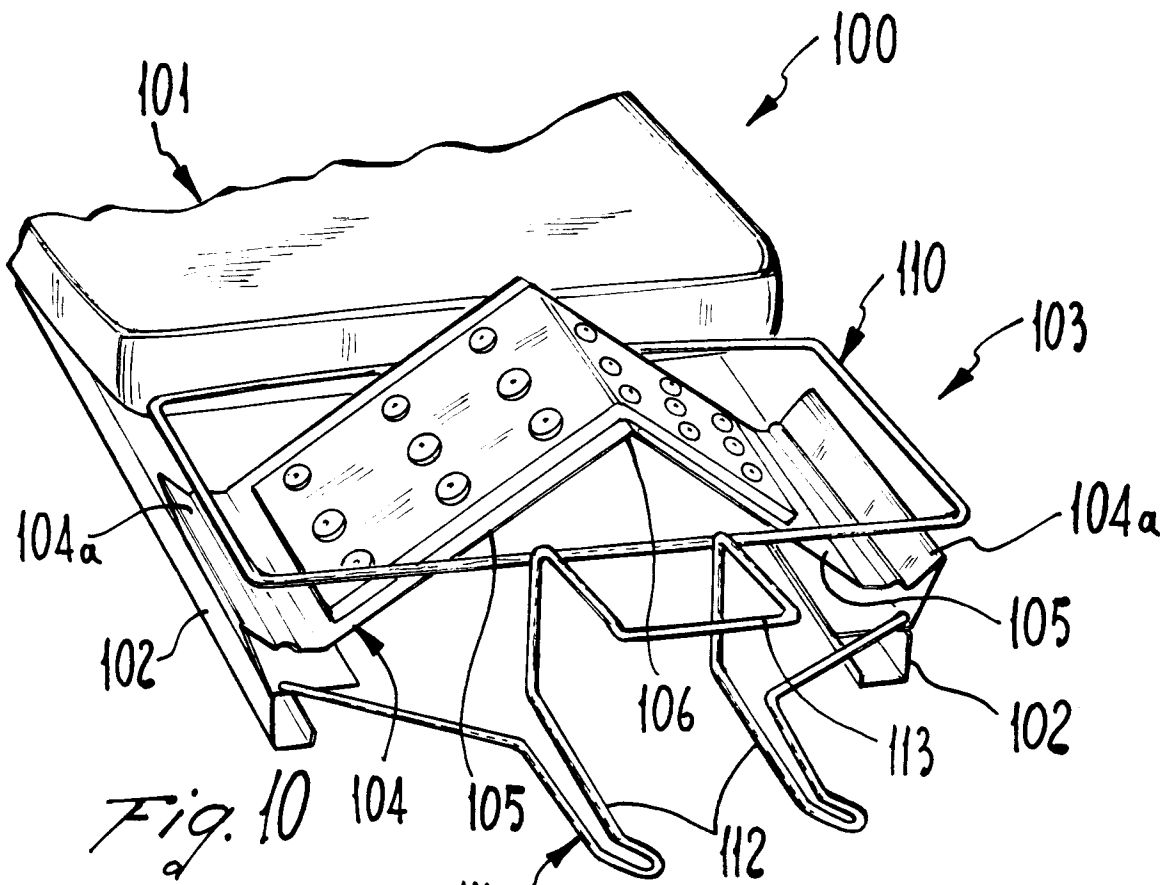
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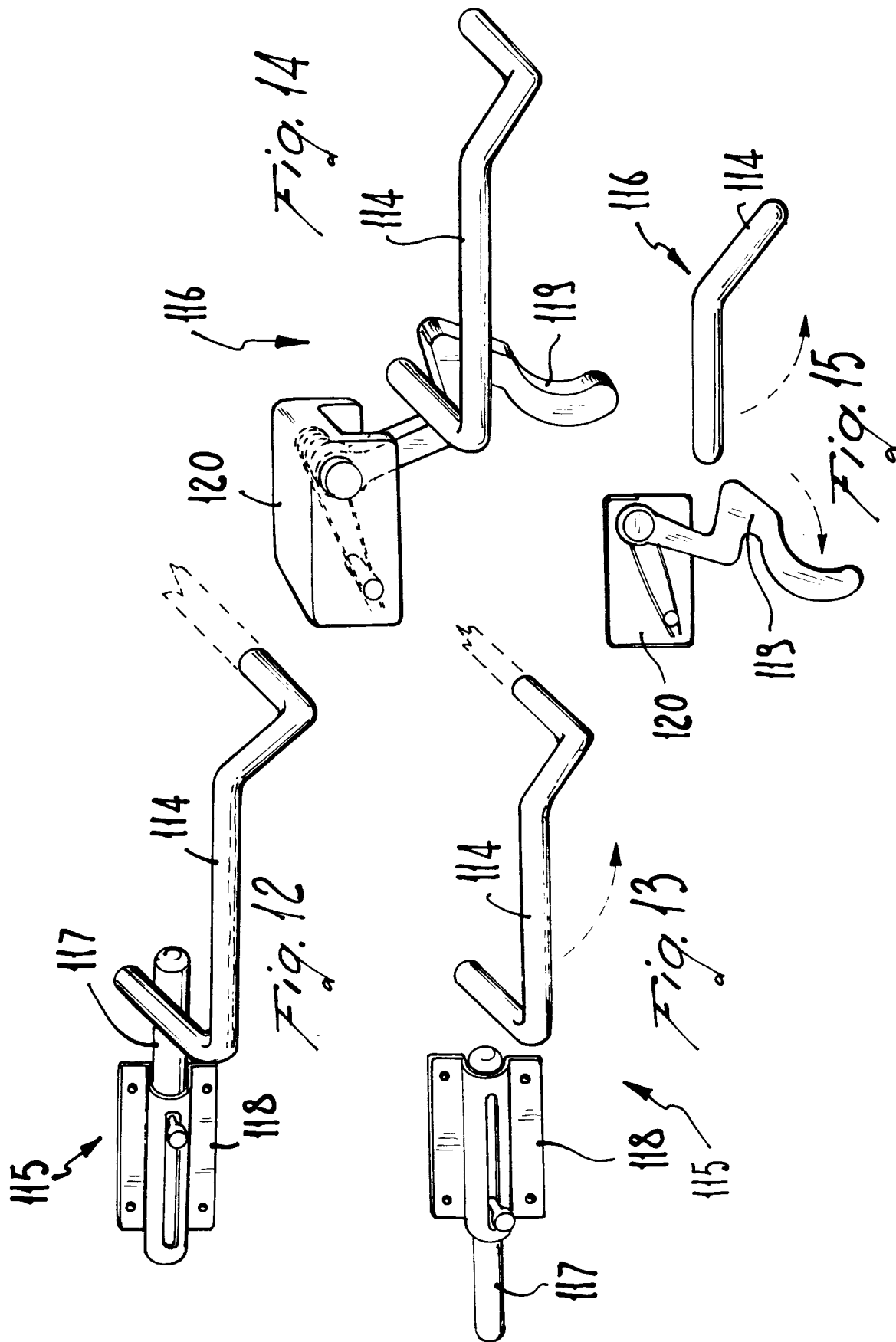


Fig. 19

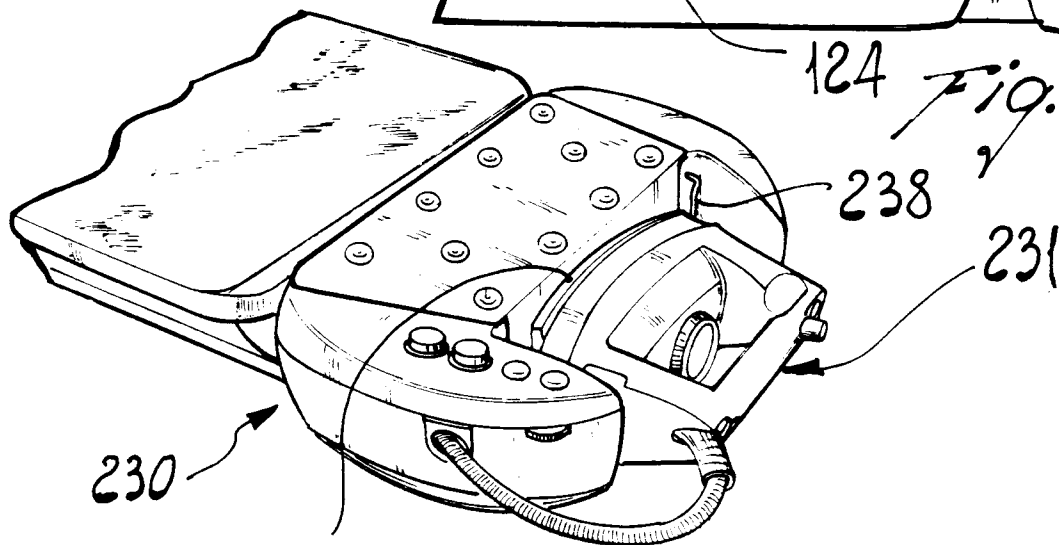
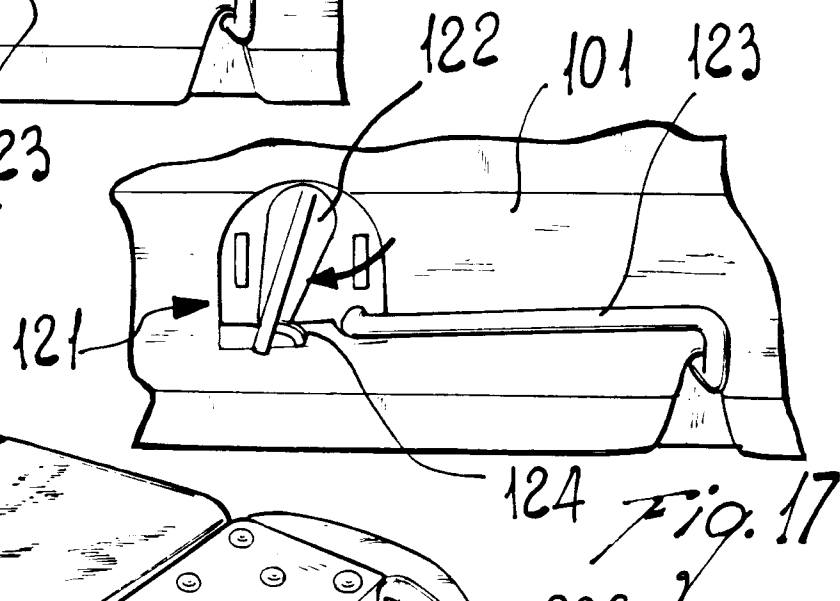
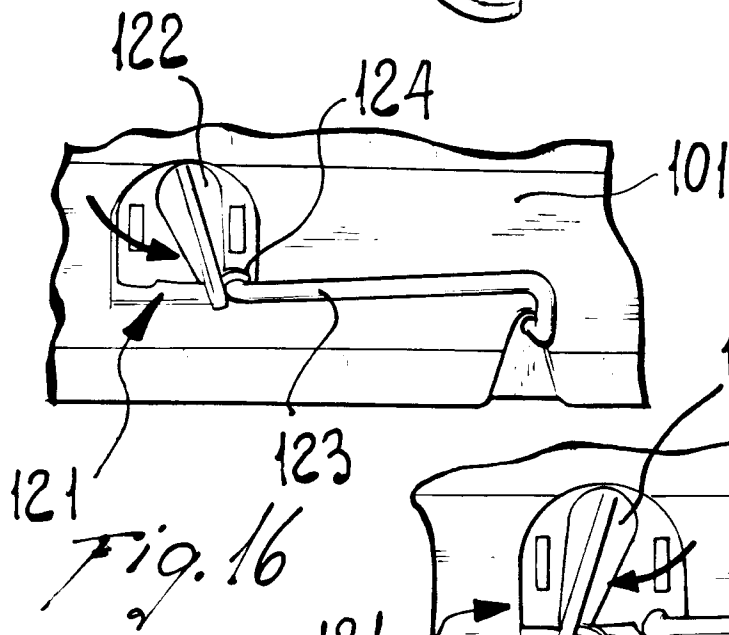
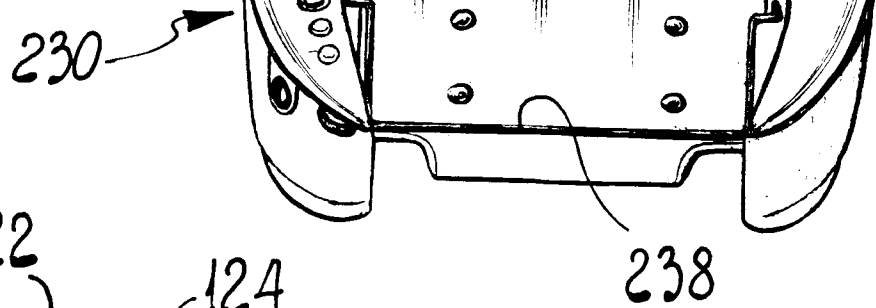


Fig. 18



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EUROPEAN SEARCH REPORT

Application Number
EP 95 11 8372

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.6)
A	WO-A-91 09170 (D S BERNSTEIN) * page 4, line 19 - page 6, line 22; figures 1-4 *	1	D06F81/08 D06F81/02 D06F81/00 D06F75/12
A	US-A-3 893 401 (THE RAYMOND LEE ORGANIZATION INC.) * abstract; figures *	1	
A	GB-A-2 263 285 (HILLS INDUSTRIES LIMITED) * abstract; figures *	1	
A	US-A-3 206 881 (G.H. KLEINSORGE) * claims; figures *	1,11	
A	US-A-4 970 968 (HERBERT GLATT) * figure 3 *	1,9	
A	EP-A-0 131 547 (ALPI S.R.L. & BEB S.R.L.) * claims 1-4; figures 1,2 *	1,2	
A	US-A-2 661 552 (L. REICHOLD) * column 2, line 5 - line 15; figures 1-4 *	1,2	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	EP-A-0 493 765 (MATSUSHITA ELECTRIC INDUSTRIAL CO. LTD.) * column 5, line 40 - column 6, line 30; figures 1-4 *	1,5	D06F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 5 March 1996	Examiner Courrier, G
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 (P04C01)