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(54) **COMPACT FOLDABLE IRONING BOARD**

(57) The present disclosure relates to an ironing board comprising an ironing board top (3), and a leg frame (5) arranged to support the ironing board top (3). The leg frame (5) includes a first leg (7) and a second leg (9), each being pivotable relative to the ironing board top (3), which first leg (7) is pivotable relative to the ironing board top (3) about a first pivot axis (11), which first leg (7) and second leg (9) are connected via a pivot connection (15) forming a second pivot axis, and which first leg (7) has a hinge (17) arranged between the first pivot axis (11) and the second pivot axis, thereby allowing folding of the first leg (7).

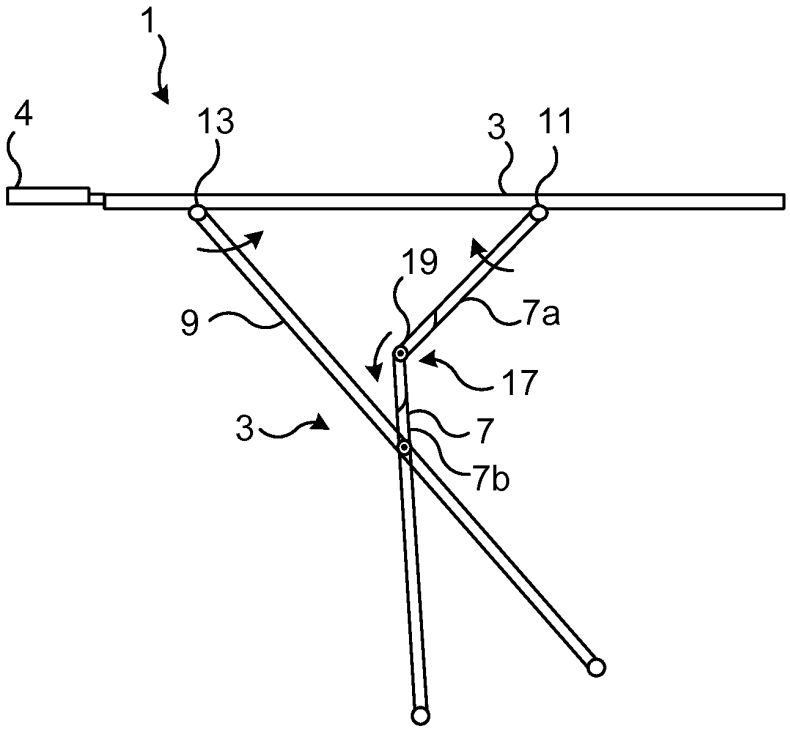


Fig. 3a

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Description

TECHNICAL FIELD

[0001] The present disclosure relates to foldable ironing boards having an ironing board top and a leg frame for supporting the ironing board top.

BACKGROUND

[0002] Ironing boards typically have an ironing board top that is provided with a heat-resistant ironing board cover, and a leg frame arranged to support the ironing board top.

[0003] Existing foldable ironing boards of the kind which allows height adjustment are typically one of a first type which has a discrete number of height settings manoeuvrable without a lever, of a second type which has a discrete number of height settings manoeuvrable with a lever, or of a third type where the height can be adjusted within an essentially continuous range of height settings by means of a lever.

[0004] For foldable ironing boards with height adjustment of the first type, the ironing board is normally folded by first disengaging one leg of the two legs included in the leg frame from the underside of the ironing board top and then folding both legs in the same direction. The feet of both legs thus lie at the same end of the ironing board top.

[0005] For foldable ironing boards with height adjustment of the second and third type, the ironing board is normally folded by sliding the legs maximally away from each other utilising a lever. This results in that the legs will be in a crossed configuration when the ironing board is in the folded state.

[0006] Foldable ironing boards of the first type take less space when folded compared to foldable ironing boards of the second and third type because the feet only extend beyond the ironing board top at one short end of the ironing board top, while for the latter type the feet extend beyond the ironing board top at both short ends thereof, and depending on the particular model, sometimes even beyond the iron holder.

[0007] Although taking more space when folded, folding and unfolding of ironing boards of the second and third type is less cumbersome than folding and unfolding of ironing boards of the first type.

[0008] To summarise, foldable ironing boards of the first type may be made more compact when in the folded state than those that have more advanced features. On the other hand the more advanced ironing boards of the second and third type are simpler to fold and unfold than ironing boards of the first type.

SUMMARY

[0009] In view of the above, an object of the present disclosure is to solve or at least mitigate the problems of the prior art.

[0010] There is hence provided an ironing board comprising: an ironing board top, and a leg frame arranged to support the ironing board top, wherein the leg frame includes a first leg and a second leg, each being pivotable relative to the ironing board top, which first leg is pivotable relative to the ironing board top about a first pivot axis, which first leg and second leg are connected via a pivot connection forming a second pivot axis, and which first leg has a hinge arranged between the first pivot axis and the second pivot axis, thereby allowing folding of the first leg.

[0011] The ironing board may therefore be folded such that the foot of each of the first leg and the second leg extend beyond the ironing board top only at one end of the ironing board. The ironing board is at the same time very simple to fold and unfold. This design provides simple folding and unfolding, and compact size when the ironing board is in the folded state, independently of the type of ironing board. Difference in compactness is especially noticeable for longer ironing boards that have extra long legs providing a higher maximal height setting in the unfolded position than regular ironing boards, and for ironing boards that are not provided with an iron holder.

[0012] The ironing board will be much simpler to fold and unfold than existing ironing boards of the first type described above.

[0013] In case the ironing board is of the second type or third type, the first leg and the second leg may be folded such that the feet extend beyond the ironing board top only at one end of the ironing board, thus providing a more compact design.

[0014] According to one embodiment the hinge defines a third pivot axis which together with the first pivot axis and the second pivot axis allows manoeuvring of the first leg between a folded position relative to the ironing board top and an unfolded position relative to the ironing board top.

[0015] According to one embodiment the first leg has an upper part and a lower part pivotally connected via the hinge, wherein the upper part is pivotable about the first pivot axis in a first direction and concurrently the lower part is pivotable about the third pivot axis in a second direction opposite to the first direction.

[0016] According to one embodiment the hinge is arranged to prevent the lower part from pivoting in one direction relative to the upper part when the first leg is fully extended and the upper part and the lower part are axially aligned.

[0017] According to one embodiment the hinge comprises a structure arranged to prevent the lower part from pivoting in said one direction relative to the upper part when the first leg is fully extended and the upper part and the lower part are axially aligned.

[0018] According to one embodiment the second leg is pivotable relative to the ironing board top about a fourth pivot axis, wherein the ironing board top has a first short

end and a second short end, and wherein the distance between the fourth pivot axis and the second short end is less than the distance between the first pivot axis and the first short end.

[0019] One embodiment comprises a height adjustment mechanism arranged to enable height adjustment of the ironing board top.

[0020] According to one embodiment the height adjustment mechanism comprises a lever for adjusting the height of the ironing board top.

[0021] Generally, all terms used in the claims are to be interpreted according to their ordinary meaning in the technical field, unless explicitly defined otherwise herein. All references to "a/an/the element, apparatus, component, means, etc. are to be interpreted openly as referring to at least one instance of the element, apparatus, component, means, etc., unless explicitly stated otherwise.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The specific embodiments of the inventive concept will now be described, by way of example, with reference to the accompanying drawings, in which:

Fig. 1a schematically shows a side view of an example of an ironing board;

Fig. 1b schematically shows a side view of another example of an ironing board;

Fig. 2 schematically shows a detail of the hinge of the ironing board in Fig. 1;

Figs 3a-b schematically show the ironing board in Fig. 1 in a partially folded state and in an almost fully folded state, respectively; and

Fig. 4 schematically shows a front view of the folded ironing board in Fig. 3b.

DETAILED DESCRIPTION

[0023] The inventive concept will now be described more fully hereinafter with reference to the accompanying drawings, in which exemplifying embodiments are shown. The inventive concept may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided by way of example so that this disclosure will be thorough and complete, and will fully convey the scope of the inventive concept to those skilled in the art. Like numbers refer to like elements throughout the description.

[0024] Fig. 1a shows an example of a foldable ironing board 1 comprising an ironing board top 3 and a leg frame 5 arranged to support the ironing board top 3. The ironing board top 3 has a first short end 3a, for example a front end, and a second short end 3b, for example a tail end.

[0025] It may be noted that for some variations of ironing board tops, it is not possible to distinguish between front end and tail end, as the shape of both ends may be identical for example in case the ironing board top is essentially rectangular, and the ironing board could furthermore be without an iron holder.

[0026] The ironing board top 3 defines an ironing board surface in the sense that ironing is performed on the ironing board top 3. The ironing board top 3 hence supports the iron during ironing. The ironing board top 3 may however normally be covered by a heat-resistant ironing board cover when the ironing board 1 is in use.

[0027] The leg frame 5 includes a first leg 7 pivotally arranged relative to the ironing board top 3. The first leg 7 is thus pivotable about a first pivot axis 11. The first pivot axis 11 is located at the attachment or mounting of the first leg 7.

[0028] The leg frame 5 includes a second leg 9 pivotally arranged relative to the ironing board top 3. The second leg 9 is thus pivotable about another axis, a fourth pivot axis 13. The fourth pivot axis 13 is located at the attachment or mounting of the second leg 9.

[0029] The ironing board 1 may according to one variation have an iron holder 4 arranged to hold a clothes iron. The iron holder 4 is in this case preferably arranged at the second short end 3b, the tail end, of the ironing board top 3. It should however be noted that the ironing board could according to some variations also be without an iron holder, as shown in Fig. 1b.

[0030] According to the example shown in Fig. 1a, the fourth pivot axis 13 is arranged closer to the second short end 3b of the ironing board top 3 than the first pivot axis 11 is. The mounting of the second leg 9 is hence arranged closer to the second short end 3b than the mounting of the first leg 7 is. The mounting of the first leg 7 is arranged closer to the first short end 3a of the ironing board top 3 than the second leg 9 is. The distance between the fourth pivot axis 13 and the second short end 3b is according to this example less than the distance between the first pivot axis 11 and the first short end 3a.

[0031] Generally, in case the mounting of the leg frame 5 is arranged offset from the centre of the ironing board top 3, the mounting of the first leg is advantageously arranged closer to that end of the ironing board top 3 that is farthest away from the centre of the mounting of the leg frame 5. This end of the ironing board top 3 is here termed the distal end relative to the mounting of the leg frame 5. Both the first leg 7 and the second leg 9 will in this case be folded towards the distal end relative to the leg frame 5 when the ironing board is folded. The first leg 7 and the second leg 9 will thereby be foldable towards the distal end. The respective section of the first leg 7 and the second leg 9 extending beyond the distal end can thereby be minimised. The opposite relation is however also envisaged as an alternative, i.e. the mounting of the first leg could be arranged closer to the proximal end of the ironing board top, i.e. the opposite end relative to the distal end. Furthermore, it should also be noted

that as yet another alternative the leg frame could be mounted centred to the ironing board top.

[0032] The first leg 7 and the second leg 9 are connected to each other via a pivot connection 15 forming a second pivot axis. The first leg 7 and the second leg 9 are thus pivotable relative to each other, about the second pivot axis. In particular, the first leg 7 and the second leg 9 form a cross-legged leg frame configuration.

[0033] The first leg 7 has a hinge 17 arranged between the first pivot axis 11 and the pivot connection 15, i.e. the second pivot axis. The hinge 17 defines a third pivot axis 19. The hinge subdivides the first leg 7 into an upper part 7a and a lower part 7b. The upper part 7a is arranged between the ironing board top 3 and is pivotally connected to the hinge 17. The lower part 7b is pivotally connected to the hinge 17 and extends away from the hinge 17 and the upper part 7a. The position of the hinge 17 between the first pivot axis 11 and the third pivot axis 19 is selected so that folding of the first leg and the second leg can be achieved.

[0034] It shall be noted that the ironing board 1 may comprise one or more than one first legs 7. In case of more than one first leg 7, each first leg 7 includes a hinge 17 and each first leg is identical in the structure and function described herein. The ironing board may comprise one or more than one second legs 9.

[0035] With reference to Fig. 2, a detailed view of an example of a hinge 17 is shown. The hinge 17 includes a hinge joint 17a defining the third axis 19, and a structure arranged to prevent the lower part 7b from pivoting in one direction relative to the upper part 7a when the first leg 7 is fully extended and the upper part 7a and the lower part 7b are axially aligned. In this position, the hinge structure however allows the lower part 7b to pivot relative to the upper part 7a in an opposite direction to thereby enable folding of the ironing board 1.

[0036] The hinge 17 is arranged to allow pivoting of approximately 180 degrees between the upper part 7a and the lower part 7b. The upper part 7a and the lower part 7b are essentially aligned and in parallel and thus at about 180 degrees angle when the ironing board 1 is fully unfolded. The upper part 7a and the lower part 7b are essentially at 0 degree angle or close to 0 degrees when the ironing board 1 is fully folded.

[0037] According to the example shown in Fig. 2, the structure includes an upper hinge member 17b and a lower hinge member 17c. The upper hinge member 17b and the lower hinge member 17c are arranged to prevent pivoting in one direction when the first leg 7 is fully extended and thus the upper part 7a and the lower part 7b are axially aligned. The upper hinge member 17b is always arranged in parallel or essentially in parallel with the upper part 7a. The lower hinge member 17c is always arranged in parallel or essentially in parallel with the lower part 7b. The upper hinge member 17b is arranged on a side of the first leg 7 which in a fully extended position faces the second leg 9. The lower hinge member 17c is arranged on a side of the first leg 7 which in a fully extended position faces the second leg 9. The hinge 17 hence defines a mouth that opens and closes in a direction away from the underside of the ironing board top 3.

[0038] The upper hinge member 17b and the lower hinge member 17c are brought towards each other as the first leg 7 is unfolded and the upper leg 7a and the lower leg 7b are being axially aligned. The upper hinge member 17b has a lower portion 21 which is brought towards an upper portion 23 of the lower hinge member 17c in this case. The lower portion 21 and the upper portion 23 may abut or overlap each other when the first leg 7 is fully extended, both of them overlapping a respective portion of the joint member 17a, to prevent pivoting in one direction in this position of the first leg 7.

[0039] Fig 3a shows the ironing board 1 when it is being folded. As can be seen, in this case, the upper part 7a of the first leg 7 is pivoted in a first direction about the first pivot axis 11 while the lower part 7b of the first leg 7 is pivoted in a second direction opposite to the first direction about the third pivot axis 19. This opposite pivoting relation about the first pivot axis 11 and the third pivot axis 19 is maintained also during unfolding of the ironing board 1.

[0040] Fig. 3b shows the ironing board 1 in an almost fully folded state with both the first leg 7 and the second leg 9 extending in the same general direction towards the front end 3a of the ironing board top 3. The foot 25 of the first leg 7 and the foot 27 of the second leg 9 both extend beyond the first short end 3a of the ironing board top 3. This folding position of the first leg 7 and the second leg 9 can be obtained independently of how the legs have been attached to the ironing board top e.g. directly to the ironing board top or to rails mounted on the underside of the ironing board top, and independently of whether the ironing board 1 is provided with some kind of height adjustment or not.

[0041] Fig. 4 shows a top view of the ironing board 1 when fully folded. As can be seen, first legs 7 and first legs 9 only extend beyond the ironing board top 3 at one short end thereof.

[0042] The ironing board may optionally comprise rails extending along the longitudinal direction of the ironing board top. The rails may according to one variation extend from one short end of the ironing board top to the opposite short end of the ironing board top. The rails may thus according to one example extend from the first short end to the second short end of the ironing board top. The rails could however according to one variation extend only along a portion of the longitudinal extension of the ironing board top. The rails could for example extend along only a front portion of the ironing board top, i.e. towards the tip. Preferably, each rail extends on a respective side of the central longitudinal axis of the ironing board top. The rails can thus provide a symmetric support of the ironing board top with respect to the central longitudinal axis.

[0043] The ironing board may include a height adjustment mechanism arranged to enable height adjustment

of the ironing board top. The height adjustment mechanism may for example comprise a lever for adjusting the height of the ironing board top. The height adjustment mechanism may for example be of a type that allows for a number of discrete height settings, or it may be of a type that allows for a continuous range of height settings. In this case, it is advantageous to provide the leg frame with a locking member which prevents the hinge from folding the first leg when the first leg is in the fully extending position. Such a locking member could manually be operated by a user to unlock the hinge in order to enable folding of the ironing board. The locking member could for example be a linearly displaceable annular member loosely arranged around the upper part and which by gravity falls down and sticks around the thicker hinge upon unfolding of the ironing board. This annular member can be slid up and away from the hinge by a user when folding of the ironing board is desired. Other variations of locking members are also envisaged. Locking members are advantageous in that they prevent the ironing board from folding by itself when the ironing board is lifted and placed in an angled position relative to ground. Moreover, during height adjustment the ironing board would be more stable, as there would be essentially no risk that the ironing board would accidentally fold.

[0044] According to one variation an ironing board including a height adjustment mechanism and a hinge as disclosed hereabove could be without a locking member.

[0045] It may also be mentioned that for height adjustable ironing boards with a height adjustment mechanism that includes a lever, i.e. ironing boards of the second type or of the third type, the ironing board 1 would be able to be folded in two different manners. The first way to fold the ironing board in this case would be by utilising the hinge, whereby both legs would fold in the same direction, as shown in Fig. 3b and 4, for example. The second way to is to set the height setting to the minimum height, with the feet of the legs pointing in opposite directions, extending beyond the ironing board top 3 at opposite ends thereof, in the same manner as in the prior art. In this case, the first leg will not be folded by means of the hinge. The first way of folding is especially advantageous during shipment of the ironing board, as an ironing board folded this way will be more compact than when the ironing board is folded according to the second way. In use, the user will be able to select, based on preference, in which manner to fold the ironing board.

[0046] The leg frame 5 may according to one variation be attached directly to the ironing board top 3. In variations that include rails, the leg frame may for example be mounted to the rails or to a support arrangement partly formed by the rails.

[0047] The inventive concept has mainly been described above with reference to a few examples. However, as is readily appreciated by a person skilled in the art, other embodiments than the ones disclosed above are equally possible within the scope of the inventive concept, as defined by the appended claims.

Claims

1. An ironing board (1) comprising:

   an ironing board top (3), and
   a leg frame (5) arranged to support the ironing board top (3),
   wherein the leg frame (5) includes a first leg (7) and a second leg (9), each being pivotable relative to the ironing board top (3),
   which first leg (7) is pivotable relative to the ironing board top (3) about a first pivot axis (11),
   which first leg (7) and second leg (9) are connected via a pivot connection (15) forming a second pivot axis, and
   which first leg (7) has a hinge (17) arranged between the first pivot axis (11) and the second pivot axis, thereby allowing folding of the first leg (7).

2. The ironing board (1) as claimed in claim 1, wherein the hinge (17) defines a third pivot axis (19) which together with the first pivot axis (11) and the second pivot axis allows manoeuvring of the first leg (7) between a folded position relative to the ironing board top (3) and an unfolded position relative to the ironing board top (3).

3. The ironing board (1) as claimed in claim 2, wherein the first leg (7) has an upper part (7a) and a lower part (7b) pivotally connected via the hinge (17), wherein the upper part (7a) is pivotable about the first pivot axis (11) in a first direction and concurrently the lower part (7b) is pivotable about the third pivot axis (19) in a second direction opposite to the first direction.

4. The ironing board (1) as claimed in claim 3, wherein the hinge (17) is arranged to prevent the lower part (7b) from pivoting in one direction relative to the upper part (7a) when the first leg (7) is fully extended and the upper part (7a) and the lower part (7b) are axially aligned.

5. The ironing board (1) as claimed in claim 4, wherein the hinge (17) comprises a structure (17b, 17c) arranged to prevent the lower part (7b) from pivoting in said one direction relative to the upper part (7a) when the first leg (7) is fully extended and the upper part (7a) and the lower part (7b) are axially aligned.

6. The ironing board (1) as claimed in any of the preceding claims, wherein the second leg (9) is pivotable relative to the ironing board top about a fourth pivot axis (13), wherein the ironing board top (3) has a first short end (3a) and a second short end (3b), and wherein the distance between the fourth pivot axis (13) and the second short end (3b) is less than

the distance between the first pivot axis (11) and the first short end (3a).

7. The ironing board (1) as claimed in any of the preceding claims, comprising a height adjustment mechanism arranged to enable height adjustment of the ironing board top (3).

8. The ironing board (1) as claimed in claim 7, wherein the height adjustment mechanism comprises a lever for adjusting the height of the ironing board top (3).

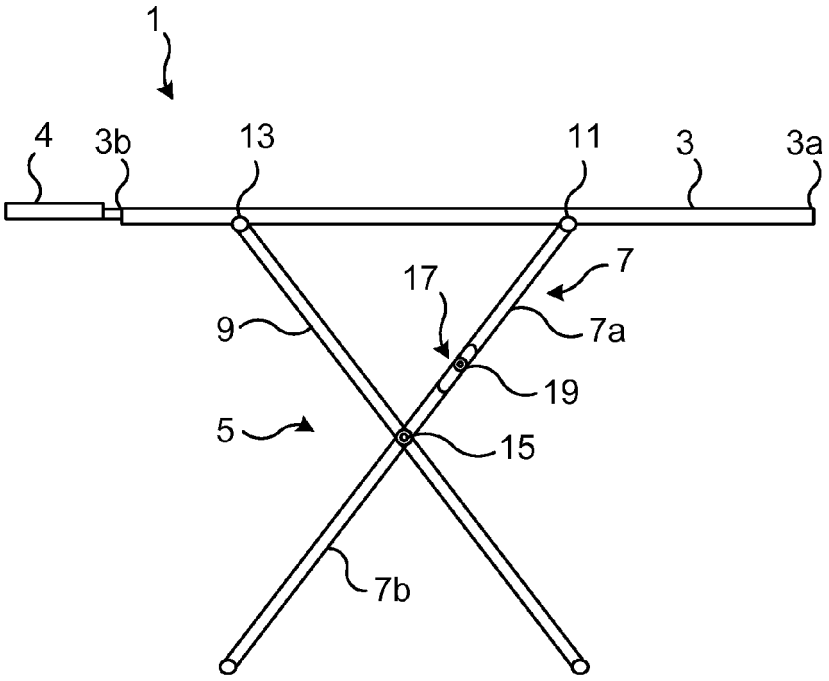


Fig. 1a

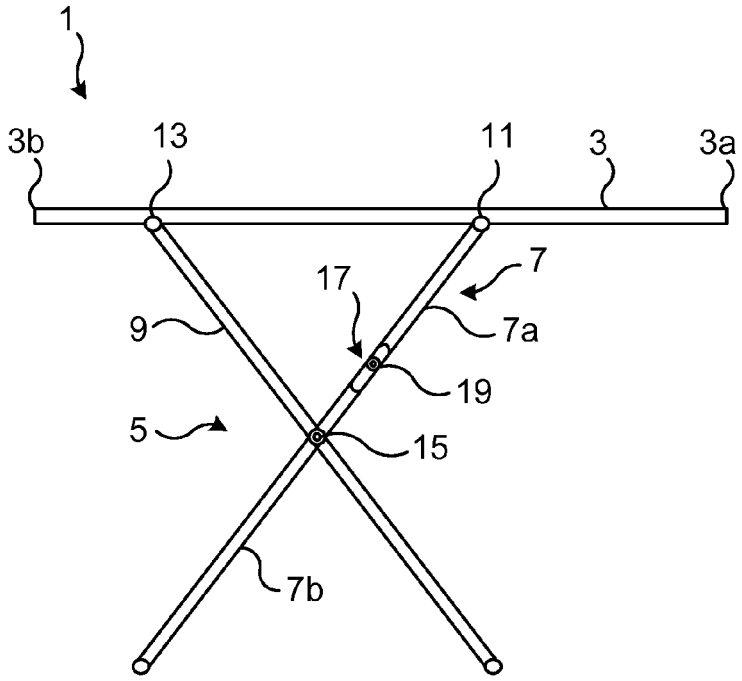


Fig. 1b

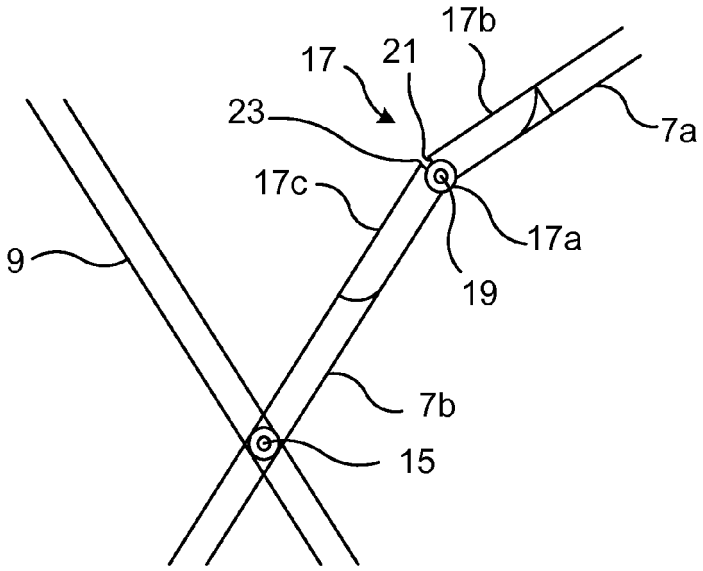


Fig. 2

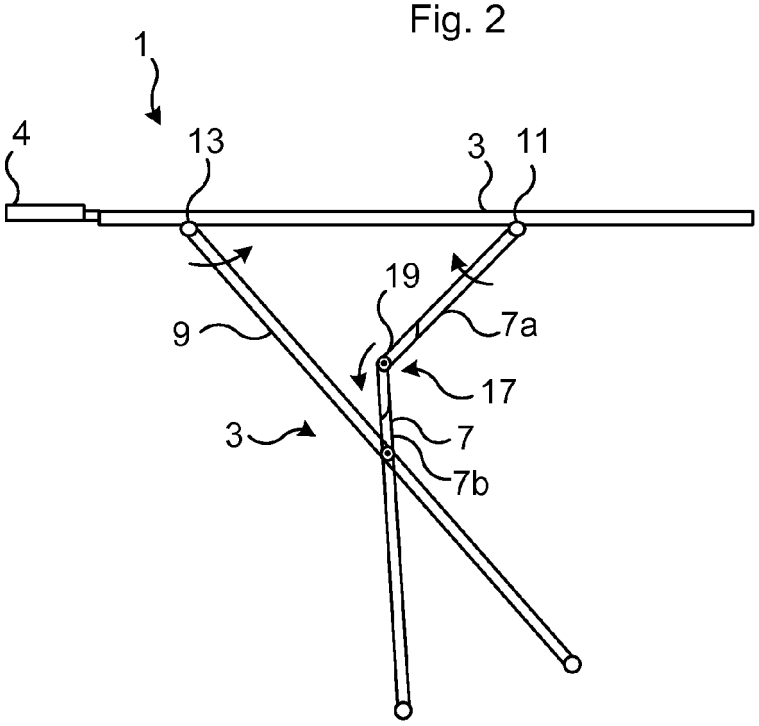


Fig. 3a

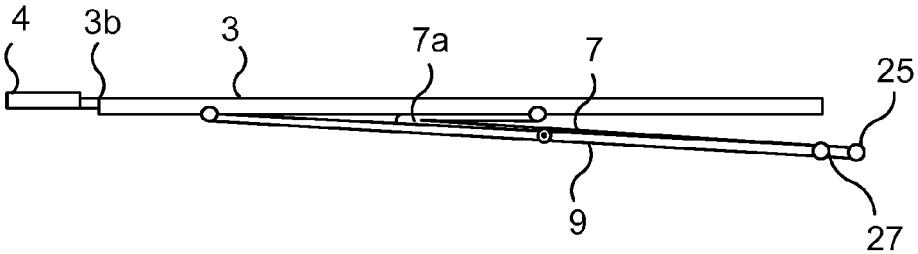


Fig. 3b

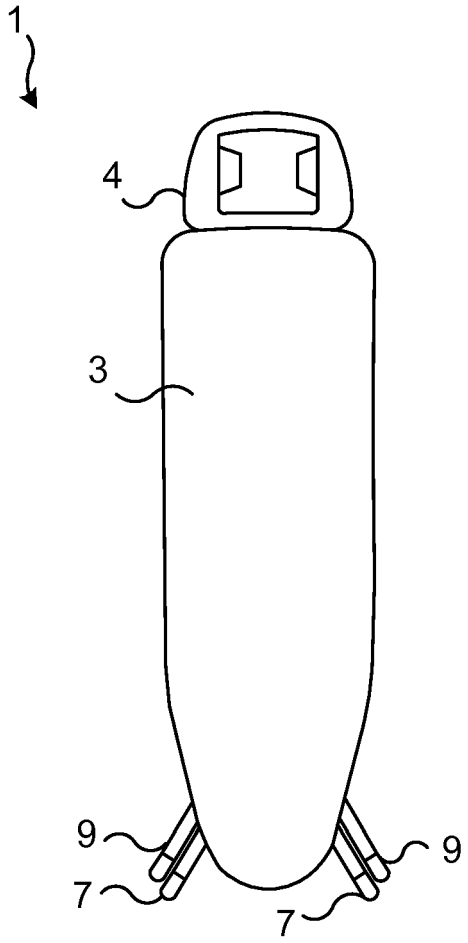


Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 15 19 6300

DOCUMENTS CONSIDERED TO BE RELEVANT

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TECHNICAL FIELDS SEARCHED (IPC)
D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	16 March 2016	Prosig, Christina

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 15 19 6300

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