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(71) Applicant: **Norton, Clare
Llannon
Llanelli
SA14 8JJ (GB)**

(10) comprises a frame (11) that is arranged to receive an edge of a mattress, and at least one clamping arm (12) that is arranged to clamp the duvet and duvet cover.



Description

[0001] The present invention relates to a clamp and particularly, but not exclusively, to a clamp for clamping a duvet to enable a duvet to be positioned within a duvet cover.

[0002] When replacing a duvet cover upon a duvet, it is often difficult to suitably arrange the duvet within the cover, so that the corners of the duvet extend to the respective corners within the duvet cover. This task is particularly difficult to perform singlehandedly and for the elderly.

[0003] It is known to position a pair of clamps at the top of a door for clamping a duvet and cover thereto. The clamps hold the duvet and cover in place at one end thereof while allowing a person to manipulate the opposite free end of the duvet and cover and thus suitably position the cover upon the duvet. However, it can often be difficult to reach near the top of a door to clamp a duvet. Moreover, it is found to be a strenuous task, particularly for the elderly, to hold the duvet and cover near the top of a door, while simultaneously attempting to clamp the cover and duvet thereto.

[0004] Additionally, duvets for double and even single beds are generally wider than the width of a door, and so it can be difficult to suitably arrange the clamps, such that the duvet extends unfolded.

[0005] I have now devised a duvet clamp and clamping arrangement which alleviates the above-mentioned problems.

[0006] In accordance with the present invention as seen from a first aspect, there is provided a duvet clamp, the clamp comprising a frame that is arranged to receive an edge of a mattress, the clamp further comprising at least one clamping arm that is arranged to clamp a duvet and duvet cover.

[0007] By positioning a pair of duvet clamps at a spaced apart location along a side edge of a mattress and clamping a duvet and duvet cover thereto, it is thus possible to readily arrange the duvet cover over the duvet. Since the clamps are arranged upon the bed, then there is no requirement to substantially lift the duvet. Moreover, the width a duvet is generally less than the length of a bed, and so by positioning the duvet clamps along a long side edge of the mattress, the duvet and duvet cover can extend unfolded over the bed.

[0008] Preferably, the frame comprises a base and a support that are held in spaced relation by a leg, such that the base, support and leg form a substantially C-shape. The base and support may preferably be hingedly coupled to the leg so that the clamp can be folded for storage.

[0009] The length of the leg is preferably adjustable to vary the separation of the base from the support to substantially match the thickness of the mattress. Preferably, the leg is telescopic.

[0010] Preferably, the base of the frame is arranged to pass under a mattress and the support is arranged to

pass over the mattress.

[0011] The at least one clamping arm is preferably pivotally coupled to the support such that the arm can pivot with respect to the support to clamp a duvet and duvet cover between the arm and the support.

[0012] Preferably, the at least one arm comprises a handle section and a clamping section. The arm is preferably arranged to pivot with respect to the support about a pivot point that is disposed at a position along the arm that is intermediate the handle section and clamping section. Preferably, the arm is resiliently biased to pivot about the pivot point to bias the clamping section onto the support. The arm is preferably resiliently biased to rotate about the pivot point by a torsion spring.

[0013] Preferably, the clamping section comprises a gripper for gripping the duvet and duvet cover. The gripper preferably comprises a serrated rubber section.

[0014] In accordance with the present invention as seen from a second aspect, there is provided a duvet clamping arrangement for fitting a duvet within a duvet cover, the arrangement comprising at least two duvet clamps of the first aspect.

[0015] Embodiments of the present invention will now be described by way of example only and with reference to the accompanying drawings, in which:

Figure 1 is a side view of the duvet clamp according to the present invention; and,

Figure 2 is a rear view of the duvet clamp of figure 1 as viewed along the direction of arrow A shown in figure 1; and,

Figure 3 is a plan view of the clamping arrangement according to the present invention.

[0016] Referring to the Figures 1 and 2 of the drawings, there is shown a duvet clamp 10 according to an embodiment of the present invention. The clamp 10 comprises a frame 11 and a clamping arm 12 disposed upon of the frame 11.

[0017] The frame comprises a base 13 and a clamp support 14 which extend in substantially parallel planes, with the clamp support 14 being arranged substantially above the base 13. The base 13 and clamp support 14 are held in spaced relation by a leg 15 which may comprise adjustment means 15a which permit the length of the leg to be extended and retracted to vary the separation of the clamp support from the base.

[0018] The leg 15 extends between a proximal end of the base 13 and a proximal end of the clamp support 14, such that the base 13, leg 15 and clamp support 14 form a substantially C-shape. The base 13, leg 15 and clamp support 14 may be formed as an integral unit or may be formed separately and fastened together using fastening means (not shown). In the embodiment illustrated in Figures 1 and 2 of the drawings, the base 13 and clamp support 14 are hingedly coupled to the leg 15 about pivot

points 15b, 15c respectively, disposed upon the leg 15 such that the base 13 and clamp support 14 can fold upon the leg 15 for storage for example. The base 13 and clamp support 14 each comprise a flange 13a, 14a respectively, which extend substantially transverse to the respective base 13 and clamp support 14, from the proximal end of the base 13 and clamp support 14, respectively. Each flange 13a, 14a is arranged to extend along the leg 15 to couple with the leg 15 at the respective pivot point 15b, 15c.

[0019] The pivot point 15b is disposed at a distance from the base of the leg 15 which substantially corresponds to the thickness of the leg 15 and the pivot point 15c is disposed at a distance from the top of the leg 15 which substantially corresponds to the combined thickness of the base 13 and leg 15, such that the frame 11 can be folded in a flattened configuration in which the base 13, clamp support 14 and leg 15 extend in a substantially parallel arrangement.

[0020] The clamping arm 12 comprises a handle section 12a and a clamping section 12b disposed at opposite sides of a pivot point 16 arranged upon the arm 12. The pivot point 16 comprises an aperture (not shown) that extends through the arm 12. The upper surface 14a of the clamp support 14 comprises a bracket 17, which may be formed integrally therewith that extends upwardly from the clamp support 14, and which comprises a first and second bracket wall 17a, 17b formed with an aperture (not shown) therein. The arm 12 is pivotally coupled to the bracket 17 by aligning the aperture (not shown) in the arm 12 between the apertures (not shown) formed within the bracket walls 17a, 17b and passing a bolt 18 or rod or similar between the aligned apertures. The bolt 18 or similar is then secured in place by screwing a nut (not shown), for example, upon the bolt 18.

[0021] The arm 12 is resiliently biased to clamp the clamping section 12b against the clamp support 14 by a torsion spring (not shown) that is positioned around the bolt 18 or similar. Accordingly, upon pushing the handle section 12a downwardly toward the clamp support 14, the clamping section 12b is caused to move in an anti-clockwise direction to lift the clamping section 12b away from the clamp support 14. Upon releasing the handle section 12a however, the bias on the torsion spring (not shown) causes the arm 12 to rotate in a clockwise direction, as viewed in figure 1, to cause the clamping section 12b to clamp against the upper surface 14a of the clamp support 14.

[0022] The clamping section 12b comprises a gripper 19 in the form of a rubber block, for example, that is bonded or otherwise secured to the part of the clamping section 12b that faces the upper surface 14a of the clamp support 14. The gripper 19 comprises a series of teeth of serrations (not shown) which serve to securely grip a duvet 20 and duvet cover 21. To further facilitate the clamping of the duvet 20 and cover 21, it is envisaged that the section of the upper surface 14a of the clamp support 14 against which the clamping section 12b is

arranged to abut, also comprises a gripper 19.

[0023] Referring to figure 2 of the drawings, in use the frame 11 of a first duvet clamp 10a is positioned along a long side edge 22 of a mattress 23, such that the base 13 of the frame 11 extends under the mattress 23 and the clamp support 14 extends over the top of the mattress 23. The frame leg 15 is then suitably adjusted using the adjustment means 15a so that the length of the leg 15 substantially matches the thickness of the mattress. This ensures that the clamp support 14 extends in close proximity over an upper surface of the mattress 23.

[0024] A second duvet clamp 10b is then similarly positioned at a position along the long side edge 22 of the mattress 23, at a position that is spaced from the first clamp 10a by a distance that substantially corresponds to the width of the duvet 20.

[0025] A duvet cover 21 is then laid upon the mattress 23 and the corners of the duvet cover 21 that are opposite an open side edge 21a of the cover 21 are then separately clamped within the first 10a and second clamp 10b. This is achieved by first pushing down on the handle section 12a of the respective clamp arm 12 to open the clamp, positioning the corner of the cover 21 between the clamping section 12b of the respective arm 12 and the respective clamp support 14, and then releasing the handle section 12a to cause the arm 12 to rotate under the bias of the torsion spring (not shown) to close the clamp and thus clamp the cover 21 in place. The cover 21 is then folded back toward the long side edge 22 of the mattress 23.

[0026] A duvet 20 is then laid upon the mattress 23 such that the corners of the duvet 20 that are arranged either side of one short edge of the duvet 20, are separately arranged adjacent the first 10a and second clamps 10b. The first clamp 10a is then opened by pushing down on the handle 12a and the corner of the duvet 20 that is arranged adjacent the first duvet clamp 10a is then positioned within the respective corner of the duvet cover 21 within the clamp 10a. The handle 12a is then released to clamp the duvet 20 and cover 21 to the clamp support 14. The corner of the duvet 20 that is arranged adjacent the second clamp 10b is then similarly clamped within the duvet cover 21 to the clamp support 14 of the second clamp 10b.

[0027] The open side edge 21a of the cover 21 can then be pulled along the duvet 20 to enclose the duvet 20 therein. The clamps 10a, 10b are held in place by their intimate fit around the side edge 22 of the mattress 23. The C-shaped frame 11 of the first and second clamps 10a, 10b thus serve to hold the clamps in place and thus hold one side edge of the duvet 20 and cover 21 to enable the open side edge 21a of the cover 21 to be pulled along the duvet 20 without the duvet 20 folding within the cover 21.

[0028] Once the cover 21 has been fitted over the duvet 20, the cover 21 and duvet 20 can be released from the clamps 10a, 10b and the frame 11 of each clamp 10a, 10b can be folded so that the clamps 10a, 10b can be

stored easily within a drawer (not shown), for example.

[0029] From the foregoing therefore, it is evident that the duvet clamp and clamping arrangement provide a simple yet effective means of positioning a duvet cover upon a duvet.

Claims

1. A duvet clamp, the clamp comprising a frame that is arranged to receive an edge of a mattress, the clamp further comprising at least one clamping arm that is arranged to clamp a duvet and duvet cover. 10
2. A duvet clamp according to claim 1, wherein the frame comprises a base and a support that are held in spaced relation by a leg, such that the base, support and leg form a substantially C-shape. 15
3. A duvet clamp according to claim 2, wherein the base and support are hingedly coupled to the leg so that the clamp can be folded for storage. 20
4. A duvet clamp according to claim 2 or 3, wherein the length of the leg is adjustable to vary the separation of the base from the support to substantially match the thickness of the mattress. 25
5. A duvet clamp according to any of claims 2 to 4, wherein the leg is telescopic. 30
6. A duvet clamp according to any of claims 2 to 5, wherein the base of the frame is arranged to pass under the mattress and the support is arranged to pass over the mattress. 35
7. A duvet clamp according to any of claims 2 to 6, wherein the at least one clamping arm is pivotally coupled to the support such that the arm can pivot with respect to the support to clamp a duvet and duvet cover between the arm and the support. 40
8. A duvet clamp according to any claim of claim 2 to 7 wherein the at least one arm comprises a handle section and a clamping section. 45
9. A duvet clamp according to claim 8, wherein the arm is arranged to pivot with respect to the support about a pivot point that is disposed at a position along the arm that is intermediate the handle section and clamping section. 50
10. A duvet clamp according to claim 9, wherein the arm is resiliently biased to pivot about the pivot point to bias the clamping section onto the support. 55
11. A duvet clamp according to claim 9 or 10, wherein the arm is resiliently biased to rotate about the pivot

point by a torsion spring.

12. A duvet clamp according to any preceding claim, wherein the clamping section comprises a gripper for gripping the duvet and duvet cover. 5
13. A duvet clamp according to claim 12, wherein the gripper comprises a serrated rubber section.
14. A duvet clamping arrangement for fitting a duvet within a duvet cover, the arrangement comprising at least two duvet clamps of the first aspect.

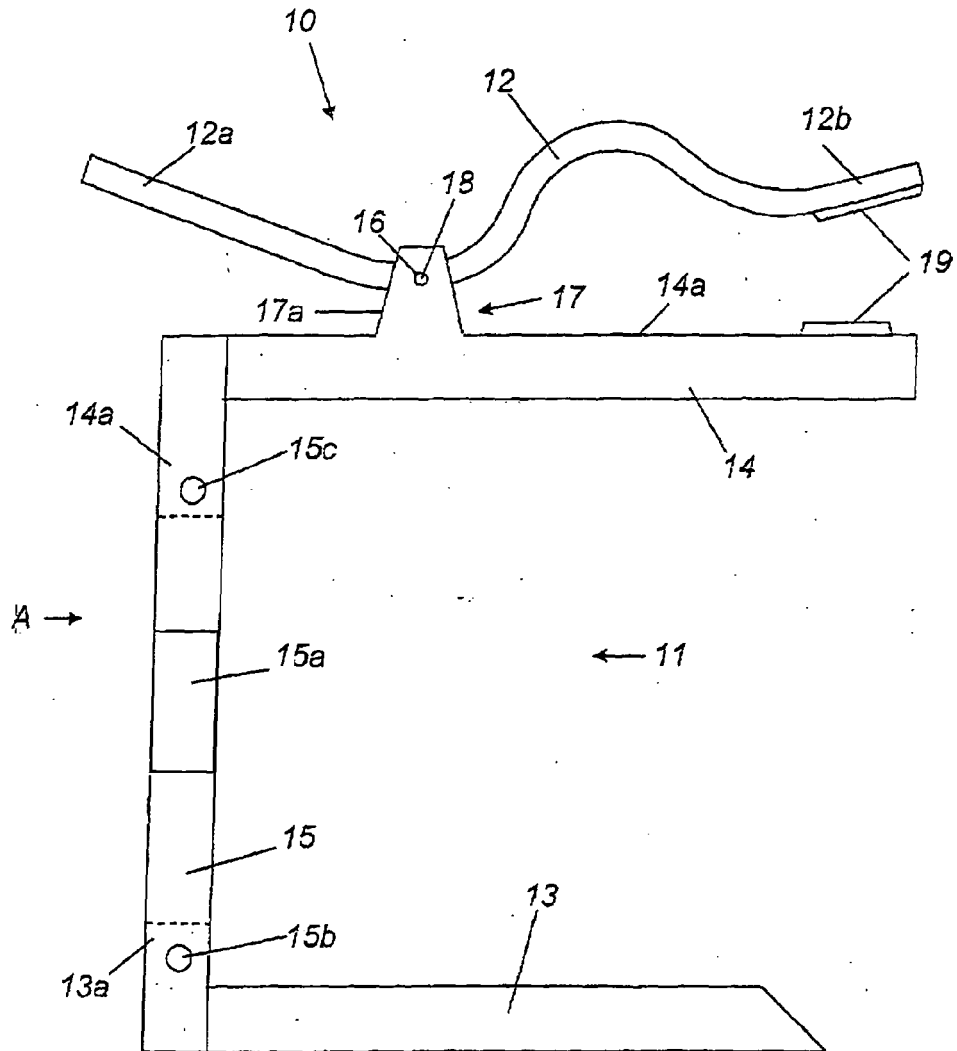


Figure 1

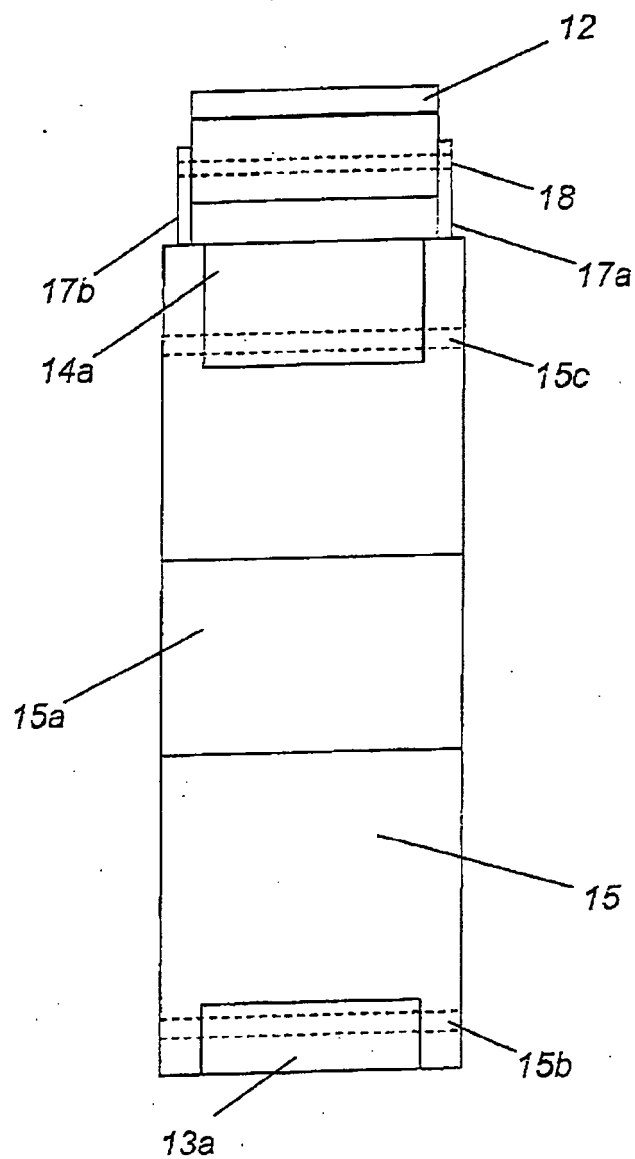


Figure 2

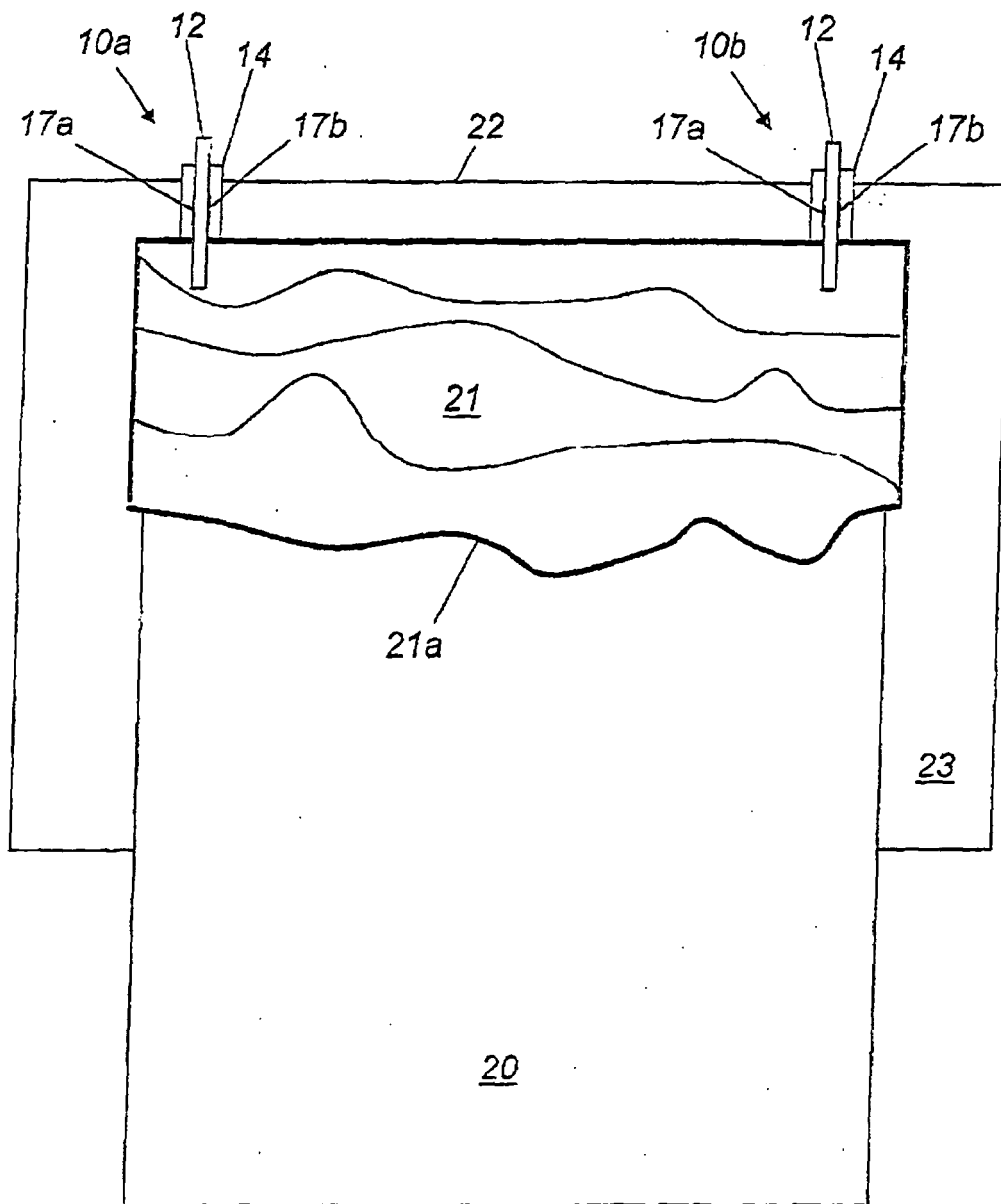


Figure 3



EUROPEAN SEARCH REPORT

Application Number
EP 09 01 4101

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	----- US 2 701 883 A (DE FAZIO JOSEPH) 15 February 1955 (1955-02-15) * column 1, line 66 - column 2, line 31; figures 1,2 *	1-2,4-8	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 22 March 2010	Examiner Kus, Slawomir
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 09 01 4101

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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22-03-2010

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