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FOLDING BED COVER CLAMP

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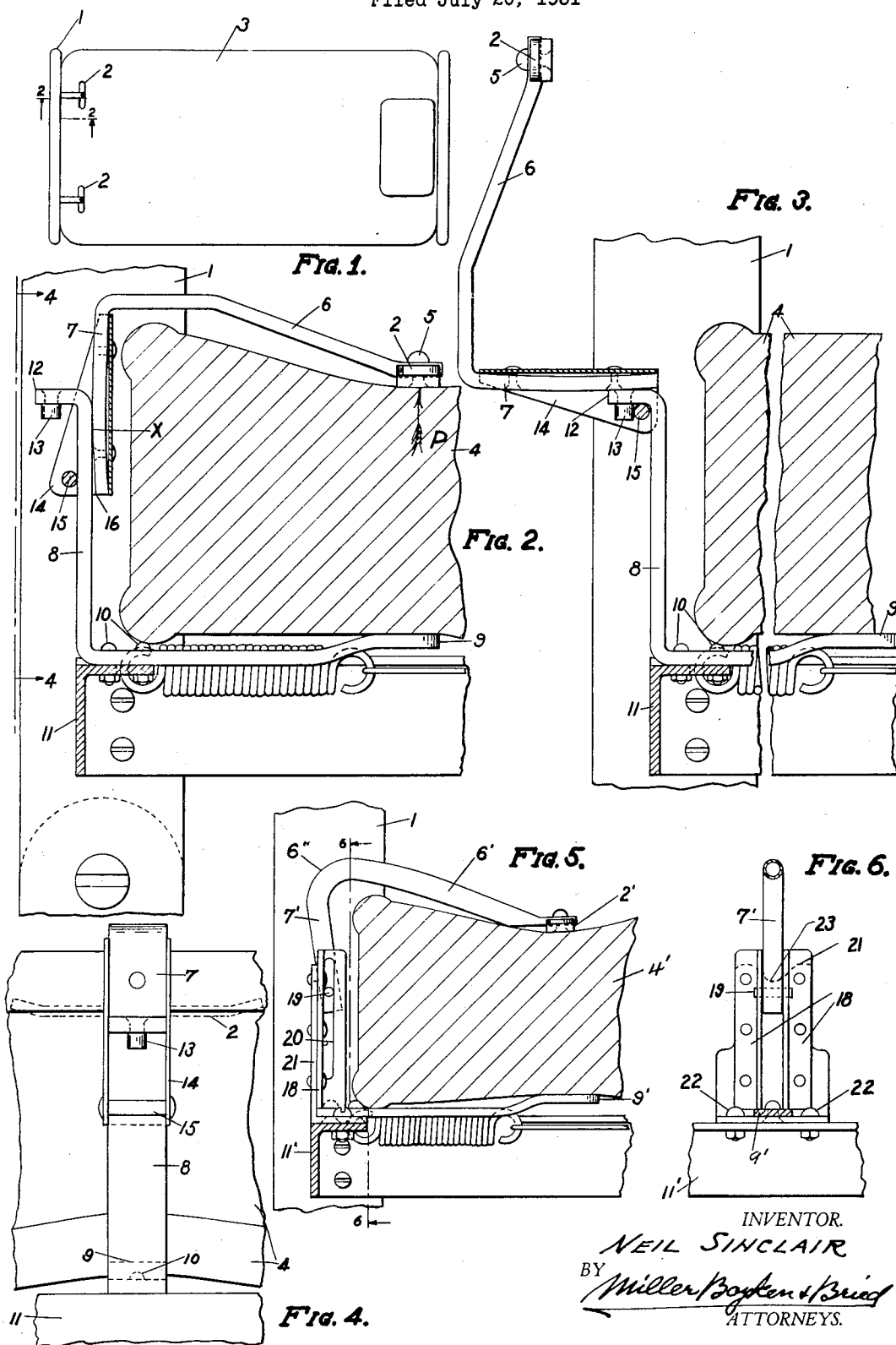


Fig. 3.

Fig. 1.

Fig. 2.

Fig. 5.

Fig. 6.

Fig. 4.

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FOLDING BED COVER CLAMP

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6 Claims. (Cl. 24—72.5)

This invention relates to clamps as used at the foot of folding beds to hold the covers and mattress in place against sliding down when the bed is up-ended.

5 The objects of the invention are to provide a simple effective clamp for the above purpose, one which may be easily and quickly released and one which when released will stay out of the way.

10 In the drawing accompanying this application Fig. 1 is a plan view of a bed showing two of my clamps at the front of the bed clamping the covers and mattress in place.

15 Fig. 2 is an enlarged vertical section of a portion of the bed as seen from the line 2—2 of Fig. 1.

Fig. 3 is a view similar to that of Fig. 2 but showing the clamp released and swung back out of the way.

20 Fig. 4 is a rear elevation of the clamp as seen from the line 4—4 of Fig. 2.

Fig. 5 is a view similar to that of Fig. 2 but showing a modified form of my invention.

25 Fig. 6 is a sectional view of Fig. 5 as seen from the line 6—6 of Fig. 5.

30 In Fig. 1 the foot frame of the bed is indicated at 1 and the clamps at 2 clamping the bed covers 3 against the mattress so as to hold the covers and mattress securely against shifting when the bed is folded to vertical position with the foot frame uppermost.

35 In Figs. 2, 3 and 4 the bed covers are omitted from the mattress 4 to promote clarity in the drawing. In these figures the clamp 2 is seen to be securely fastened at 5 to a laterally extending arm 6 which has a vertically extending portion 7 slidably mounted on a vertical portion 8 of a lower clamping member 9 which extends under the mattress and is rigidly secured at 10 to the spring frame 11.

The construction thus far recited is common to clamps of this kind, and it is in the peculiar construction of the sliding joint between parts 7 and 8 that my invention lies.

45 In the design of Figs. 2 to 4 the lower clamp member 8, 9 is a heavy piece of strap iron bent to form a right angle and with the upper end of the vertical part 8 again bent to extend backward as at 12 and provided with a downwardly extending rivet 13 so as to form a downwardly directed hook-like upper end to the post-like lower clamp member or fixed bracket.

50 The rear portion 7 of the clamp arm which slides up and down on the fixed or post-like member 8 is provided with sheet metal side pieces

14 (one side being broken away in Fig. 2) which extend rearwardly along opposite edges of member 8 and are held from coming off by a pin 15 which extends between the two side pieces 14 just in back of member 8.

60 From Fig. 2 it will be noted that member 7 is, at its lower end at 16, relieved from contact with member 8, in fact it is best to have the rearward surface of member 7 arched slightly so that when an upward pressure is exerted under the clamp portion 2, as per large arrow P, the points of contact of the slidable member 7 on post or guide 8 will be the pin 15 in back of member 8 and at a point about X in front of the member so as to produce a pinching action on member 8 of considerable intensity, depending on how close point X is to pin 15.

70 A clamp as described will readily fall by gravity to hold the bed clothes in place, or may be pushed down to firmly grip the mattress, and if its extreme end 2 is tipped in a downward direction it will release the grip of the slidable portion on member 8 so that it may be freely raised to any desired point.

80 When raised to the limit, pin 15 will strike under the hook-like portion 12 and the clamping arm may then be swung over rearwardly to occupy the released position shown in Fig. 3 and in which position it is perfectly stable and will permit free adjustment of bed clothes or mattress until swung forwardly by hand and again pressed down to clamping position as shown in Fig. 2.

85 It is evident from Fig. 2 that fixed portion 9 of the clamp may be any fixed portion of the bed which will cooperate with upper clamp portion 2. It will also be evident that instead of rivet 13 to prevent the sliding portion from coming off, the extreme end of 12 may be simply turned down.

90 In the design of Figs. 5 and 6 the clamp 2' is carried on an arm 6' preferably of a round bar bent at 6'' to form a downwardly extending leg 7'. This leg 7' slides up and down between confronting sides of short pieces of angle bar 18, and carries a transversely extending pin 19 slidably engaging slots 20 in the angle bar. The two angle bars 18 are joined together at the rear by a plate 21 which is bent forward at its lower end and carries the forwardly extending lower clamp 9', the whole lower assemblage being held securely in place on the spring frame 11' of the bed by bolts as at 22.

100 Rear plate 21 terminates below bar 18 and is further notched as at 23 so that when the clamping arm is released and elevated, it may simply be thrown back to a position like the arm 6 of

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Fig. 3, as the upper ends of slots 20 function to stop the pin 19 as the hook-like portion 12 does in the first design.

Having thus described my invention I claim:—

1. A folding bed clamp comprising an upright guide, a clamping arm extending laterally from said guide adapted for clamping the bed covers at its forward end, means mounting the rearward end of the clamping arm for sliding movement up and down on said guide, and pinching action thereagainst when the clamping arm is tilted, means adapting said arm to be swung vertically rearwardly over said guide, and means holding said arm in upward projection when swung rearwardly over said guide.

2. A folding bed clamp comprising an upright guide, a clamping arm extending laterally from said guide and provided with a portion slidable up and down on said guide, a pin on said portion holding it in slidable relation to said guide, and a stop at the upper end of the guide for said pin, the arrangement being such that when said pin is against said stop the arm will pivot on the pin to swing over said guide.

3. A folding bed clamp comprising an upright guide, a clamping arm extending laterally from said guide and provided with a portion slidable up and down on said guide, a pin on said portion holding in it slidable relation to said guide, and a stop at the upper end of the guide for said pin, the arrangement being such that said guide will be pinched between said pin and said portion

when the free end of said arm is tilted upwardly.

4. A folding bed clamp comprising an upright guide, a clamping arm extending laterally from said guide and provided with a portion substantially aligned with the guide and slidable thereagainst, means secured to said portion slidably engaging the sides of the guide, and a device carried by said portion engaging the back of said guide, said portion and device combined forming means for pinching said guide when the free end of said arm is tilted upwardly, and released therefrom when tilted downwardly.

5. In a construction as specified in claim 4 the upper end of said guide extending rearwardly and limiting the upward sliding movement of said arm.

6. A folding bed clamp comprising an upright guide, a clamping arm extending laterally from said guide and provided with a portion substantially aligned with the guide and slidable thereagainst, means secured to said portion slidably engaging the sides of the guide, and a pin carried by said portion engaging the back of said guide, said portion and pin combined forming means for pinching said guide when the free end of said arm is tilted upwardly, and releasing therefrom when tilted downwardly, and the upper end of said guide extending rearwardly forming a stop for said pin and a support for said arm when swung backward on the pin as an axis.

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