March 12, 1946. E. A. AWISZUS 2,396,550

FOLDING BED STRUCTURE

Filed Dec. 7, 1942 2 Sheets-Sheet 1

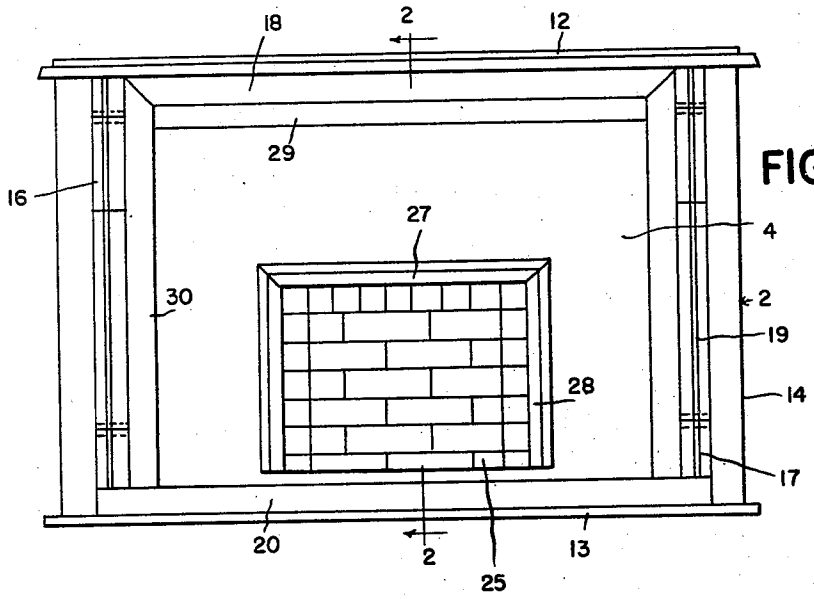


FIG.1.

FIG.2.

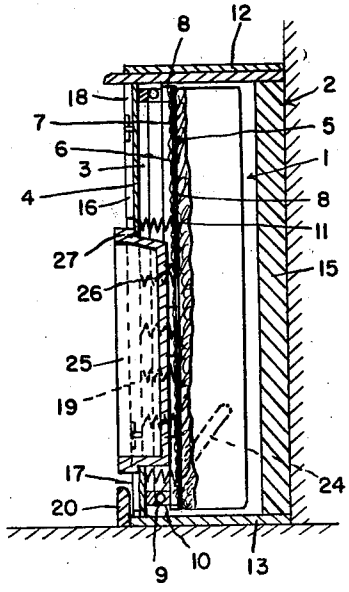
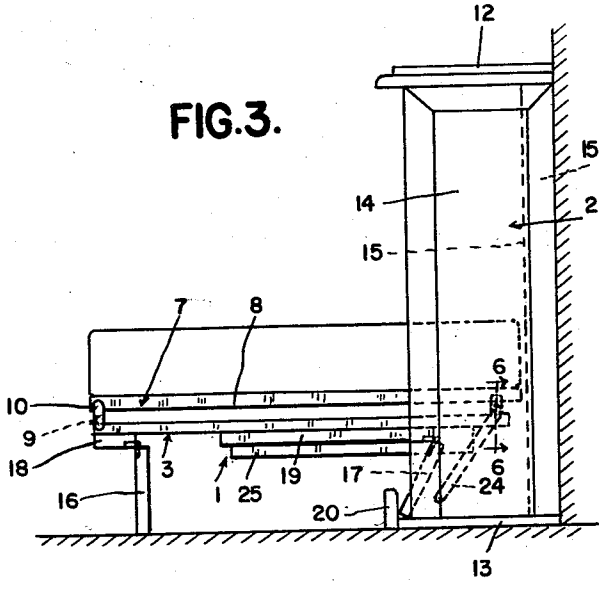


FIG.3.



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Filed Dec. 7, 1942 2 Sheets-Sheet 2

FIG.4.

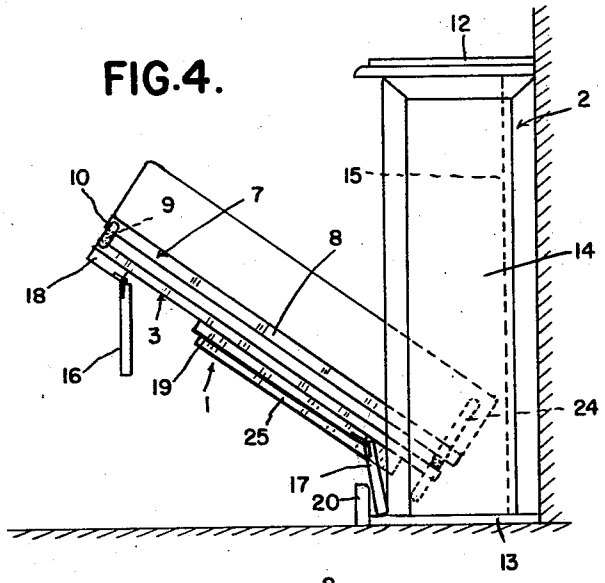
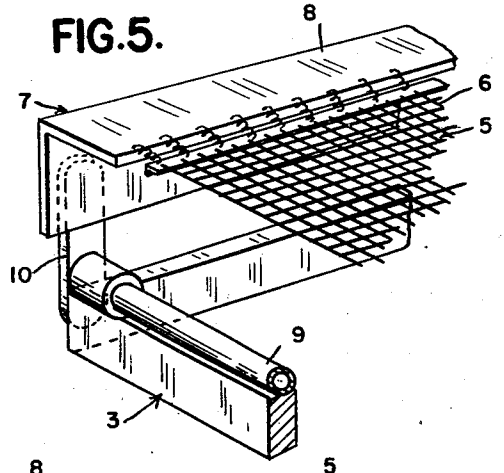


FIG.5.



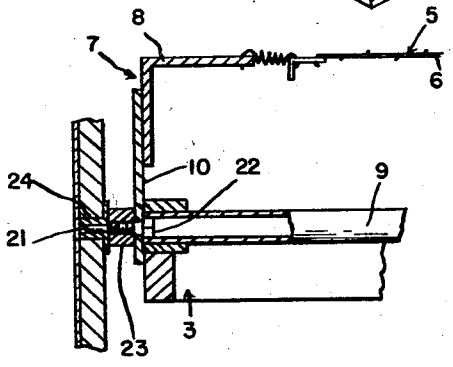


FIG.6.

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FOLDING BED STRUCTURE

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Application December 7, 1942, Serial No. 468,145

4 Claims. (Cl. 5—1)

The invention relates to folding bed structures and refers more particularly to folding bed structures of that type in which a bed forms a unit with a case for receiving the bed.

The invention has for one of its objects to provide an improved folding bed structure which is so constructed that it may be easily moved to folded or extended positions.

The invention has for other objects to provide a simple construction for guiding the bed relative to the case during the angular movement of the bed to folded or extended positions; to utilize the guiding construction to limit the angular movement of the bed to extended position; and to provide legs on the bed for supporting the bed during the greater part of its angular movement to thereby decrease the effort required in angularly moving the bed.

The invention has for further objects to construct the bed and case to simulate a fireplace and mantel; to so construct the bed and case that the former is moved angularly about one side so that when in folded position the height of the case is that required to accommodate the width of the bed; to provide legs for supporting the bed so arranged that they serve as trim when the bed is in folded position; and to provide the bed with a box simulating a fireplace and carried in a manner such that it does not objectionably interfere with the operation of the spring element of the bed and occupies the desired position when the bed is in folded position.

With these, as well as other objects in view, the invention resides in the novel features of construction and combinations and arrangements of parts as more fully hereinafter set forth. In the drawings:

Figure 1 is a front elevation of a folding bed structure embodying the invention;

Figure 2 is a cross section on the line 2—2 of Figure 1;

Figure 3 is an end view showing the bed in extended position;

Figure 4 is a similar view showing the bed in one position of angular movement;

Figure 5 is a perspective view of a portion of the bed; and

Figure 6 is a cross section on the line 6—6 of Figure 3.

The folding bed structure comprises the bed 1 and the case 2 for receiving the bed when in folded position. The bed has the rectangular frame 3, the paneling 4 extending across the frame at one side and the spring element 5 extending across the frame at the other side. The paneling is at the lower side of the bed when in extended position and at the front or exterior side of the bed when in folded position. The spring element 5, as shown, comprises the spring mat 6 of interwoven wire supported by the frame 7 which is secured to the frame 3. The spring frame 7 is formed of the angle bars 8 at the head and foot of the bed and the tubes 9 at the ends of the bed and fitting in brackets 10 secured to the ends of the angle bars. Suitable means, such as bolts and nuts, extend through the tubes 9 and adjacent side bars of the frame 3 secure the spring frame to the bed frame and in effect form a unit of the two frames. The spring element 5 also preferably comprises the coil springs 11 between the paneling 4 and the spring mat 6. The case 2 has the top and bottom walls 12 and 13, respectively, the end walls 14 and the back wall 15 and is formed with an opening in its front side for the bed.

To support the bed the pairs of legs 16 and 17 are provided at the head and foot of the bed, the legs 16 being near the front side of the bed and the legs 17 between the front and rear sides when the bed is in extended position. The legs 16 are pivotally connected to the frame 3 by being hinged to the trim bars 18 which are fixedly secured to the paneling 4. The legs 17 are pivotally connected to the frame 3 by being hinged to the trim bars 19 which are fixedly secured to the paneling 4. The legs 16 when the bed is in extended position are adapted to rest on the floor, while the legs 17 are adapted to rest on the bottom wall 13 of the case 2 and are located in rear of or behind the base strip 20 which is secured to the bottom wall 13 and extends across the opening of the case. The construction is such that the trim bars 18 and 19 and the legs 16 and 17 form a continuous vertical trim lying closely adjacent the end walls 14 of the case when the bed is in folded position.

To guide the bed during its angular movement into and out of the case, I have provided the axially aligned pins 21 extending in opposite directions from the bed frame at the head and foot of the bed and located at the rear side of the bed frame. More in detail, the pins are secured directly to the spring frame and are in the nature of extensions on bolts which extend through the brackets 10 and have heads 22 located in the tubes 9 and clamped against the brackets by the nuts 23 threaded on the bolts. I have also provided the tracks 24 on the end walls 14 of the case for receiving the pins. These tracks are preferably formed by slots in the end walls and

they are inclined upwardly and rearwardly and terminate at their upper ends in shoulders engageable with the pins 21 to limit the angular movement of the bed to its extended position so that, if desired, the bed can be supported when in extended position by the legs 17. The tracks 24 terminate at their lower ends in shoulders engageable with the pins 21 to limit the angular movement of the bed to folded position and to support the bed when in this position. It will be noted that during the angular movement of the bed the legs 17 serve as fulcrums for supporting the bed between its sides thereby decreasing the effort required in angularly moving the bed between the position shown in Figure 4 and the extended position shown in Figure 3. Therefore, the legs serve as fulcrums through the greater part of the angular movement so that the angular movement may be very easily carried out.

The folding bed structure is constructed to simulate a fireplace and mantel. By making the bed angularly movable about one of its sides, the height of the case may be that required to accommodate the width of the bed with the result that the case may be very easily made to simulate a mantel. The simulation of a fireplace is further carried out by forming an opening in the paneling 4 of the bed to receive the imitation fire box 25 which in the folded position of the bed extends behind or in rear of the base strip 20 and in the extended position of the bed is free to move downwardly with the portion of the spring element to which the box is fastened so as to avoid objectionable interference with the operation of the spring element. In detail, the back of the box is fastened by suitable means 26, such as staples, to the spring mat 6. The simulation is additionally carried out by the trim 27 which is secured to the paneling 4 and preferably extends at the top of the box 25 and by the trim 28 which is secured to the paneling 4 and extends at the sides of the box in flush relation to the trim 27 when the bed is in folded position. In addition, the paneling 4 preferably provided with the trim 29 and the trim 30 to produce the desired mantel appearance.

What I claim as my invention is:

1. A folding bed structure comprising a case, a bed connected to and angularly movable into and out of said case respectively into folded and extended positions, said bed having a frame, a spring element secured to and extending across said frame and a box extending freely through said frame and secured to and carried by said spring element, said box opening outwardly when said bed is in folded position and being movable with said spring when said bed is in extended position.

2. A folding bed structure comprising a case, a bed connected to and angularly movable into and out of said case respectively into folded and extended positions, said bed having paneling on the side which is exterior when said bed is in folded position, trim bars secured to the side of said paneling which is exterior when said bed is in folded position, said trim bars including portions fixed to said paneling and portions pivoted to said fixed portions adjacent the ends of the respective trim bars, said pivoted portions swinging outwardly substantially at right angles to said fixed portions and serving as inner and outer legs for supporting said bed in extended position with the inner legs also supporting said bed during angular movement thereof, and a pin and cooperating track, the one on said bed and the other on said case for guiding said angular movement.

3. A folding bed structure comprising a case simulating a fireplace mantel, said case having an opening at the front side, a bed connected to and angularly movable into and out of said case respectively into folded and extended positions, said bed having a frame, paneling on the side which is exterior when said bed is in folded position and trim bars secured to the side of said paneling which is exterior when said bed is in folded position, said trim bars including portions fixed to said paneling and portions pivoted to said fixed portions, said pivoted portions swinging outwardly substantially at right angles to said fixed portions and serving as legs for supporting said bed in extended position, said pivoted portions extending in substantial alignment and cooperating with said fixed portions to form a continuous vertical trim when said bed is in folded position, a spring element extending across said frame, a box simulating a fireplace extending through said frame and secured to and carried by said spring element, said box opening outwardly when said bed is in folded position and being movable with said spring element when said bed is in extended position.

4. A folding bed structure comprising a case, a bed connected to and angularly movable into and out of said case respectively into folded and extended positions, said bed having paneling on the side which is exterior when said bed is in folded position and trim bars secured to the side of said paneling which is exterior when said bed is in folded position, said trim bars including portions fixed to said paneling and portions pivoted to said fixed portions adjacent the head and foot of said bed, said pivoted portions swinging outwardly substantially at right angles to said fixed portions and serving as legs for supporting said bed in extended position, said pivoted portions extending in substantial alignment with said fixed portions when said bed is in folded position.

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