April 13, 1937. C. W. KEIVER 2,076,848

MATTRESS DISPLAY DEVICE

Filed Oct. 23, 1935 2 Sheets-Sheet 1

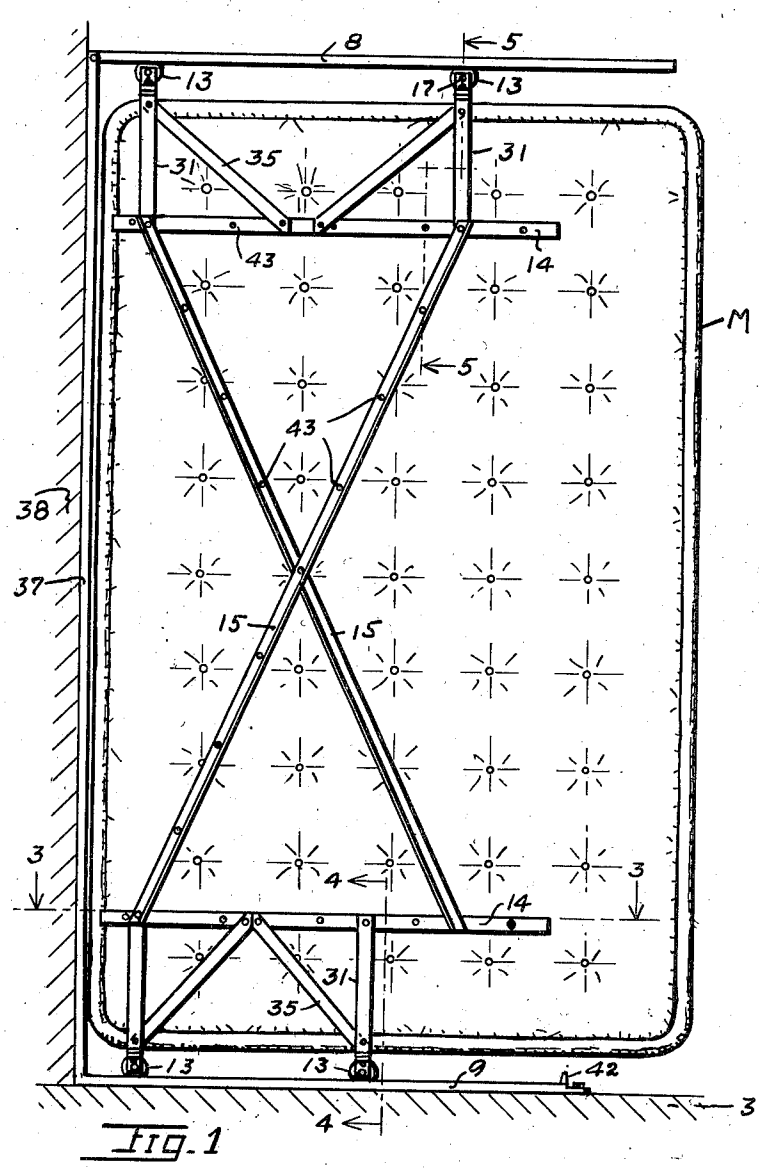


Fig. 1

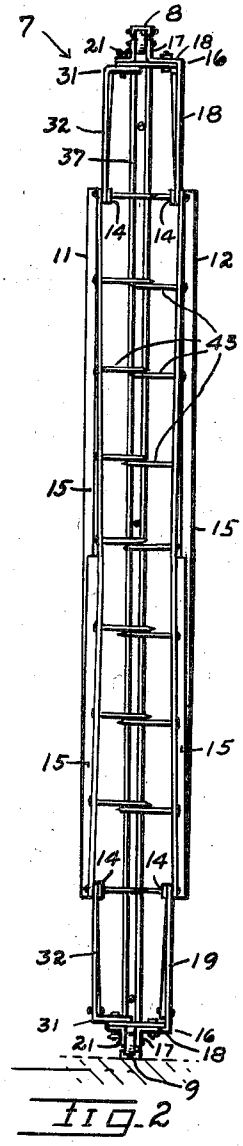


Fig. 2

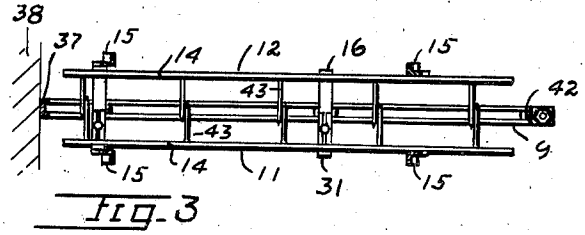


Fig. 3

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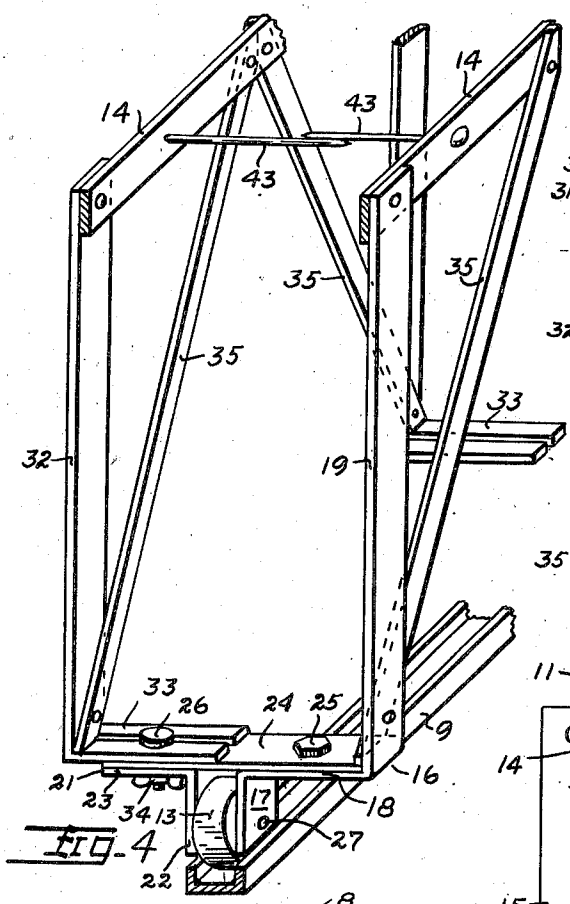


Fig. 4

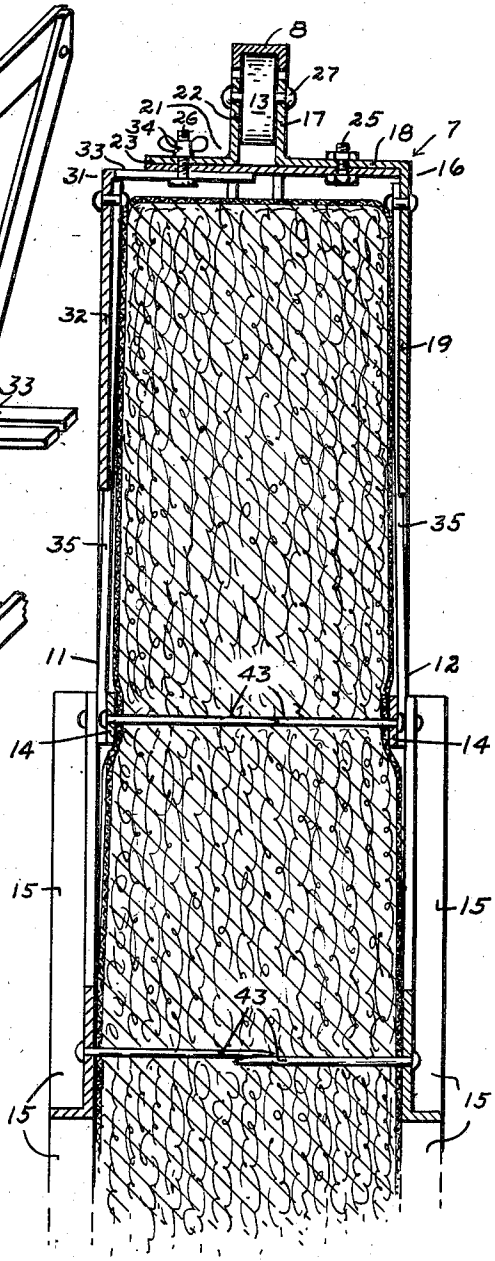


Fig. 5

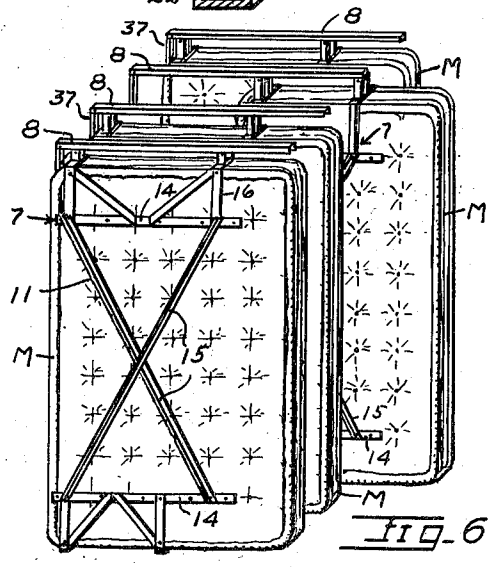


Fig. 6

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UNITED STATES PATENT OFFICE

2,076,848

MATTRESS DISPLAY DEVICE

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Application October 23, 1935, Serial No. 46,302

8 Claims. (Cl. 211—28)

The invention relates to a device which is particularly adapted for the display of a mattress for its ready examination.

An object of the invention is to provide an improved means for supporting a mattress in a vertical plane.

Another object is to provide a support means whereby a mattress engaged thereby is subjected to neither tensional or compressive strains, whereby to avoid any tendency to deform the mattress or give it qualities not normal to the mattress.

A further object is to provide a device of the character described wherein a considerable portion of the mattress is freely exposed for its examination.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth or be apparent in the following description of a typical embodiment of the device, and in the accompanying drawings, in which

Figure 1 is a side elevation of a support unit embodying the present invention and supporting a mattress therein.

Figure 2 is a front edge elevation of the mattress-supporting unit.

Figure 3 is a plan view taken at 3—3 in Figure 1.

Figure 4 is an enlarged fragmentary perspective view taken at the line 4—4 in Figure 1.

Figure 5 is an enlarged fragmentary view taken at the broken line 5—5 in Figure 1.

Figure 6 is a reduced perspective view showing a row of the support units carrying mattresses in mutually parallel relation, one mattress being shown as disposed forwardly in the row for its examination.

As particularly illustrated, the mattress-supporting unit of my invention essentially comprises a frame 7 which is provided with means to supportedly engage a mattress M from the sides thereof and is supported by and between upper and lower tracks 8 and 9. The frame 7 comprises portions 11 and 12 which are detachably connected, and the frame portion 12 mounts rollers 13 at the top and bottom thereof for engagement with the tracks 8 and 9 respectively.

Each of the frame portions 11 and 12 comprises a pair of spaced flat bars 14 disposed in mutually parallel coplanar relation, and suitable elements connecting the bars whereby to provide a structure which is rigid in its plane. Preferably, and as shown, mutually intersecting bars 15 provide the sole connection between the bars 14 whereby an X-shaped frame portion is provided thereat. The bars 18 may be of angle cross-section, as shown, whereby to minimize the weight of the structure thereat while stiffening the same against transverse flexure. It will be noted that the central frame portion now described comprises the major portion of the frame area.

Elements 16 extend transversely from the bars 14 of the frame portion 12, and the elements 16 are formed with portions 17 and 18 and 19 which are so related that the portions 17 and 19 are mutually offset in parallel relation and are connected by the portion 18; as shown, the portion 18 is perpendicular to both of the portions 17 and 19. An element 21 is mounted opposite the portion 17, said element having a portion 22 which corresponds to the portion 17 of the element 16, and a portion 23 which is perpendicular to the portion 22 and lies in coplanar relation to the portion 18 of the element 16. A straight plate member 24 engages against the portions 18 and 21 at the inner faces thereof, said element being fixed to the elements 16 and 21; as particularly shown, bolts 25 and 26 secure the plate 24 to the portions 18 and 21 respectively whereby the portions 17 and 22 may be held in fixedly spaced relation.

It will now be noted that the portions 17 and 22 of the elements 16 and 21 respectively are alike and are provided with aligned perforations adjacent their free extremities whereby they may mount the shaft or axle 27 of a roller 13 disposed between them and outwardly of the plate 24. In the present instance, the rollers 13 have cylindric bearing faces and the tracks 8 and 9 comprise channel members for receiving and guiding the rollers therein. The lower rollers 13 are cooperative to wholly support the frame 7 and the mattress therein from the lower track 9, while the track 8 cooperates with the upper rollers 13 to retain the frame in vertical disposition.

It will be understood that if the treads of the rollers 13 were flanged, the tracks engaged thereby might be of a usual T section. It will be further understood that the portions 17 and 21 may be variably spaced to receive rollers of different widths between them merely by replacing the plates 24 with other plates which have their bolt-receiving perforations differently and appropriately spaced.

Members 31 extend from the bars 14 of the frame member 11 at points opposite the members 16 of the frame section 12. Each member 31 comprises a portion 32 which lies in the plane of the bars 14 and a portion 33 which is perpen-

dicular to the portion 32 and is slotted from its free extremity to receive the bolt 26. Preferably, and as shown, the portions 33 are arranged for simultaneous disposal against the inner faces of the different plates 24 whereby they may each be clamped between the head of the bolt 26 and the opposed plate 24 when the bolt nut 34 is tightened, said nut being conveniently provided with wings for facilitating its manipulation manually. In this manner, the frame sections 11 and 12 are releasably secured together in adjustably spaced relation.

Braces 35 connect the bars 14 with the outer ends of the portions 19 and 32 whereby to secure the elements 16 and 21 respectively in fixed angular relation to the respective bars. The elements 16 and 21 and 24 and 31 may comprise lengths of strap metal of requisite stiffness.

With the present general arrangement of parts in the frame sections, it will be understood that some or all of the portions 19 and 32 of the members 16 and 31 respectively might be provided as integral extensions of the crossed frame bars 15. In the latter case, the braces 35 could be omitted.

As illustrated, the tracks 8 and 9 extend from a channel bar 37 which may be secured to and against a fixed upright structure such as a wall 38, the track 9 being fixed to a floor 39 which extends from the base of the wall 38. The upper track 8 is hingedly fixed to the bar 37 for swinging in a solely vertical plane whereby to facilitate a placement or removal of a frame 7 with respect to the tracks and insure the constant engagement of the track 8 with at least one roller 13 while it guides the roller therein.

A stop block 42 is mounted at the outer end of the channel of the lower track 9 whereby its engagement by the forward roller 28 in the track channel is operative to limit a forward movement of the mounted frame. As shown, the spacing of the front elements 16 from the rear of the frame is less at the bottom of the frame than at the top thereof whereby the track 9 may be shorter than the track 8 and more foot space is permitted at the floor below the forward mattress and frame portions.

Pointed pins 43 are fixedly mounted at spaced points on the bars 14 and 15 of each of the frame sections 11 and 12, said pins extending transversely into the space of the frame, and corresponding pins of the sections being substantially aligned whereby the aligned pins may cooperate to provide a support extending across the frame space; the pins may overlap, as is shown. It will be noted that a mounted mattress is arranged to extend generally forwardly from the frame, and that the central mattress portion is freely exposed forwardly of the bars 15.

It will now be noted that the mounting of a mattress M in the frame 7 may be effected by supporting the section 12 in a prone position and with the pins 43 thereof extending upwardly, the frame section 11 being removed. The mattress is disposed over the space of the section 12 and is pressed down upon the pins thereof to embed the latter therein. The member 11 is now pressed down upon the mattress to embed its pins 43 in the mattress while bringing the slots of the portions 33 into registration with the bolts 26. When the mattress is embraced by and between the frame sections, the wing nuts 34 are tightened to secure the frame sections together, and the frame may now be erected and mounted in the guideway provided by the tracks 8 and 9, it being noted that the frame is operative to maintain the mattress generally flat therein.

It will be understood that when the mattress is in its erect display position, the pins 43 secure the mattress in fixed position in the frame space and against deformation by reason of its weight. Also, the present arrangement avoids any forcible clamping of the mattress which might produce an unduly compressed zone in the mattress. The pins 43 cannot damage the mattress since they do not cut any of the material thereof when they are inserted in their operative positions in the mattress. Also, the support of the mattress solely from its sides and by the pins 43 permits the mounting of different sized mattresses in the frame.

While the elements of the frame members 11 and 12 are particularly shown as being secured together by rivets, or may be welded together in unitary association, it will be understood that bolts might be used throughout as a means for fastening the elements together; in the latter case, the units would comprise knock-down structures.

Since it is usually desirable to display a plurality of mattresses for comparison, a row of the present units may be provided at and along a wall, as is shown in Figure 6. Normally, all of the frames would be pressed back against the supporting wall. When a particular mattress is to be inspected, the same would be pulled forwardly with its frame to expose a full length edge portion for examination, it being understood that one test for a mattress is its softness and resiliency when pressed between a person's hands. The present arrangement is understood to facilitate the independent and free examination of a displayed mattress and to provide units which occupy a minimum of space and may be provided in any desired number in a row thereof.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and the method of use will be understood by those skilled in the art to which the present invention appertains. While I have described the features and the uses of an arrangement which I now consider to be a preferred embodiment of my invention, I desire to have it understood that the showing is primarily illustrative, and that such changes may be made as fall within the scope of the following claims,

1. In a means for supporting a mattress in a vertical plane, a frame enclosing the mattress for maintaining it in planar condition and comprising separable sections for disengagement to provide for the placement or removal of the mattress with respect to the frame, major and central portions of the frame sections each solely comprising pairs of intersecting bar members forming an X-shaped structure thereat whereby to freely expose a maximum portion of the mattress centrally thereof and extending laterally from the structure to an un-enclosed edge portion of the mattress, and means supporting said frame in a vertical plane.

2. In a display means for a mattress, a frame enclosing the mattress and comprising separable sections receiving the mattress between them, rollers carried by said frame at opposite sides thereof and disposed in the general plane of the mattress, and track members engaging said rollers for retaining the frame in an upright plane and

mounted for relatively adjusted positioning in said plane.

3. In a device for supporting a mattress for the display and examination thereof, an open frame embracing the mattress, rollers mounted at opposite ends of said frame and in the general plane thereof, and horizontal and mutually parallel track members defining a vertical plane and engaging said rollers for the guided support of the frame in said vertical plane.

4. In a device for supporting a mattress in a vertical plane for the display and examination thereof, an open frame enclosing the mattress and arranged for vertical disposition, and pin members of uniform and relatively small cross-section extending transversely into the mattress from the frame and operative as the primary support means for the mattress in the frame when the latter is vertically disposed.

5. A structure in accordance with claim 4 characterized by the provision of the pin members in both sides of the frame and for cooperation in pairs, the pin members of a pair being mutually aligned.

6. In a device for supporting a mattress in a vertical plane for the display and examination thereof, an open frame embracing the mattress transversely thereof and comprising transversely separable sections for disengagement to provide for the placement or removal of the mattress with respect to the frame, means to mount said frame in a vertical plane, and pin members of uniform and relatively small cross-section extending from the frame sections into a mattress in the frame space and operative as the primary support means for the mattress when the frame is vertically disposed.

7. In a device for supporting a mattress for the display and manual examination thereof, an open frame embracing the mattress and vertically disposed, rollers mounted at upper and lower ends of said frame and in the general plane thereof, a fixed and horizontal track member engaging beneath the lower said rollers for supporting the frame for the guided movement thereof in its plane, and a generally horizontal track member disposed in the plane and fixedly pivoted at one end thereof for swinging about an horizontal axis and arranged to removably rest upon an upper said roller while providing a guideway for the roller engaged thereby.

8. In a device for supporting a mattress in a vertical plane for the display thereof, an open frame embracing the mattress transversely thereof, means to mount said frame in a vertical plane, and pin members extending from the frame sections into a mattress in the frame space at various levels and distributed points therein and operative as the primary support means for the mattress in the frame when the frame is vertically disposed.

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