

July 1, 1941.

J. D. DRY

2,247,705

MATTRESS

Filed Dec. 28, 1938

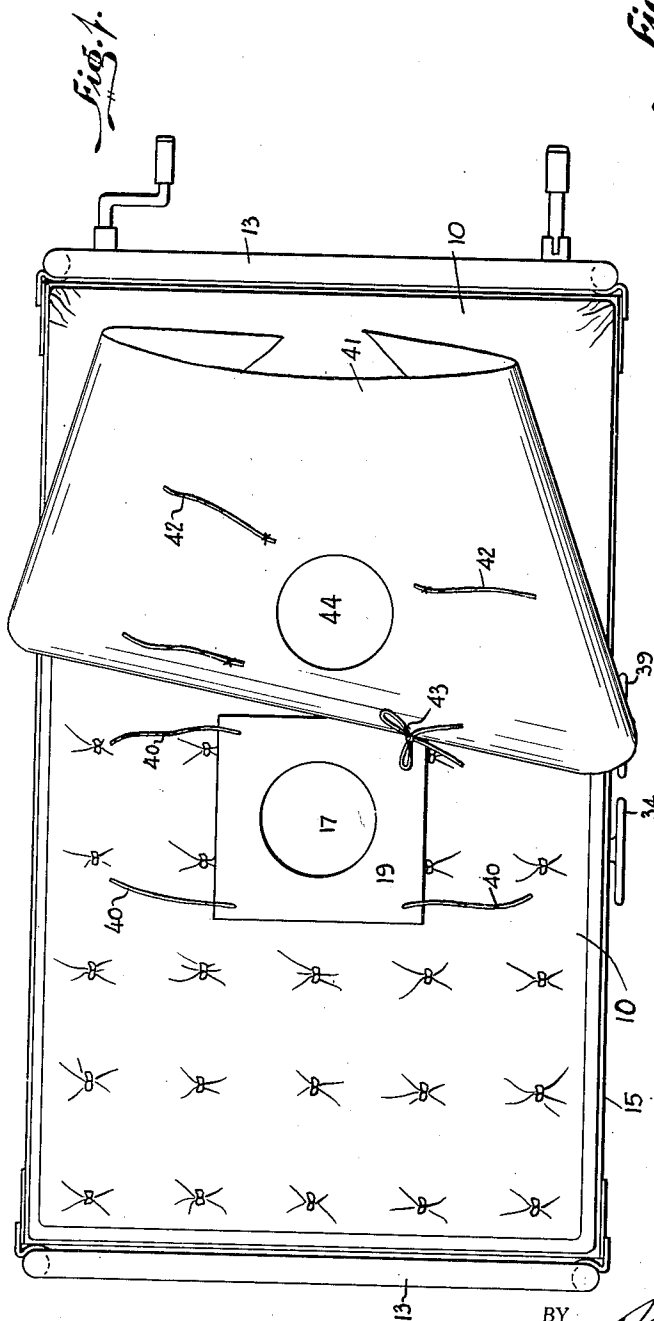
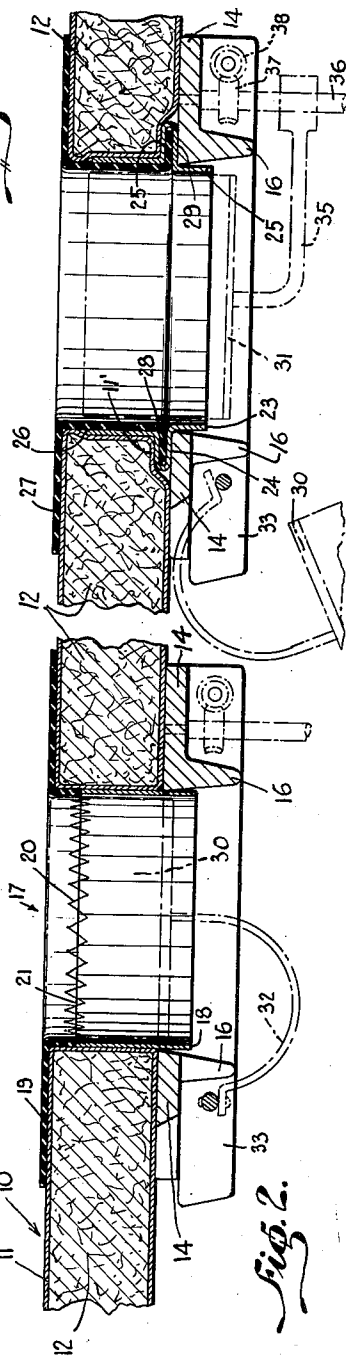


Fig. 3.



INVENTOR.
JOHN D. DRY.

BY

Matthew E. Sparrow
ATTORNEY.

UNITED STATES PATENT OFFICE

2,247,705

MATTRESS

John D. Dry, New York, N. Y.

Application December 28, 1938, Serial No. 248,056

3 Claims. (Cl. 5—91)

This invention relates to improvements in mattresses and has particular reference to mattresses employed for hospital beds such as that described in my copending application executed simultaneously herewith and bearing Serial No. 248,055 and filing date December 28, 1938.

The invention which is a novel mattress having preferably a central opening is used in conjunction with a hospital bed, the latter having a mattress section or cushion to fill the opening and also a bed pan movable to a position within the central opening, the cushion being movable out of the way to make room for the bed pan.

It is an object of the present invention to provide a mattress having a preferably central opening which will efficiently and hygienically receive the said mattress section or bed pan as the case may be, the said mattress being provided with a rigid, preferably metallic, sleeve fitting the opening and extending therebelow, the mattress section or the bed pan being receivable within the sleeve.

Another object of the present invention is to provide in a hospital bed a mattress, the mattress having an opening for removably receiving a member thereof, a rigid lining being provided in such opening and extending short of the top surface of the mattress and forming a slideway for the member, and there being a preferably further provided resilient waterproofed means connected with the lining and extending over the top surface of the mattress.

It is a further object of the present invention to provide an appropriate covering for the mattress.

These and further objects and advantages of the invention will best be understood from a consideration of the following description, taken in connection with the accompanying drawing forming part of this specification, with the further understanding that while the drawing shows two practical forms of the invention, the latter is not confined to any strict conformity with the drawing, but may be changed and modified, so long as the said changes and modifications come within the scope of the appended claims.

In the drawing:

Fig. 1 is a plan view of a mattress embodying the invention and disclosing a cover for the mattress in partially raised position;

Fig. 2 is a longitudinal sectional view of a mattress in the vicinity of the center portion thereof; and

Fig. 3 is a view similar to Fig. 2, but showing the mattress in a modified form;

The drawing shows two examples in which the invention is carried into effect.

The numeral 10 represents a mattress made of conventional material comprising the casing 11 and filling 12.

This mattress is carried by a hospital bed 13 having the conventional accessories. The bed is provided with a plate 14 which is resiliently mounted in the intermediate portion of a bed spring 15. A means of mounting the plate 14 is disclosed in my said copending application. The plate 14 has a downwardly extending annular wall 16 to guide the mattress cushion 30 or bed pan on support 31 into the central opening 17 of the mattress, as desired.

The cushion 30 may be secured to an arm 32 pivotally or swingably attached to projection 33 of plate 14. Swinging movement of mattress cushion 30 into and out of opening 17 is effected through hand wheel 34. The bed pan support 31 is secured to a bracket 35 arranged for vertical movement on threaded shaft 36, the latter having a worm wheel 37 meshing with worm 38. The worm is rotated through instrumentalities (not shown) by hand wheel 39. This construction is more fully described in my said copending application.

According to Figure 2 there is provided a rigid sleeve, lining or ring 18 made of metal or other suitable material which snugly fits within the opening 17 of the mattress, forming a slideway for the cushion 30 or bed pan as the case may be.

It is preferable that this sleeve or ring extend somewhat below the bottom of the mattress 10. Ring or sleeve 18 may be secured within the opening 17 in any suitable manner.

Surrounding the top of the opening 17 and extending therebeyond over the top surface of the mattress is a waterproof and easily cleaned shield or covering 19. The ring 18 and the covering 19 may be laced together as indicated at 20, thereby securing the ring or sleeve 18 within the opening 17. The free edge 21 of the covering 19 abuts against the upper edge of ring 18. When the invalid is reposed on the bed, the mattress will naturally be compressed and this compression will not be interfered with by the ring 18 for the reason that the same will merely project forward within the opening bounded by the guide wall 16.

Since the movement is only vertical, the mattress cushion or bed pan will always register with the opening within the sleeve 18 and extend therewithin.

Fig. 3 shows the mattress in a modified form,

wherein the sleeve 23 has a flange portion 24 formed by bending the material of the sleeve into a U in section and seated on plate 14.

The bottom wall 25 of flange portion 24 of sleeve 23 is aligned with the bottom surface of covering 11' of the mattress. The upper portion of the sleeve 23 extends to a point below the top surface of the mattress as indicated at 26. The covering 27 extends within the sleeve 23 and has its lower end 28 clamped between the flange portions 25 and 29 of the ring 23.

In this construction the sleeve 23 being seated on plate 14 will not move as the mattress is vertically depressed when the bed is occupied, as does the sleeve 23 of the form shown in Fig. 2.

The covering 19 or 27 may be supplied with strings, tapes or the like members 40 and the sheet 41 also may be provided with similar members 42, corresponding members 40, 42 being tied together as indicated at 43. In this way the sheet 41 will not shift or wrinkle around the opening 17. Sheet 41 has an opening 44 which registers with opening 17 of the mattress.

From the foregoing it may be seen a desired device has been provided for the purpose intended. It is also evident that changes may be made to accomplish the indicated results all within the spirit and scope of the invention. Hence, the prior art rather than the present specific disclosure should form the basis of interpretation of the invention as claimed.

Having thus described my invention what I claim as new, and desire to secure by Letters Patent, is:

1. In a hospital bed having a mattress; a guide ring extending beyond the bottom of said mattress and being substantially in alinement with an opening passing through said mattress, a rigid sleeve forming a guide wall in said opening and projecting into said guide ring from within said opening and short of the upper face of said mat-

tress, and a covering provided with a portion resting substantially flush on said upper face of said mattress and extending therefrom into said opening above said sleeve to which said covering is connected, whereby a member may be removably and slidably received through said guide ring for insertion into said sleeve.

2. In a hospital bed having a mattress; a hollow guide ring extending beyond the bottom of said mattress and being substantially in alinement with an opening passing through said mattress, a rigid sleeve forming a guide wall in said opening and projecting within said guide ring from said opening and from short of the upper face of said mattress, and a covering provided with a portion resting substantially flush on said upper face of said mattress and extending therefrom into said opening overlying thereby said sleeve, the end of said covering within said opening being fixedly connected with said sleeve, whereby a member may be removably and slidably received through said guide ring for engagement with said sleeve.

3. In a hospital bed having a mattress; a hollow guide ring extending beyond the bottom of said mattress and being substantially in alinement with an opening passing through said mattress, a rigid sleeve forming a guide wall in said opening and being provided with a flanged portion, said sleeve projecting into said guide ring from said flanged portion and overlying the latter therewith, and flexible covering provided with a portion resting substantially flush on said upper face of said mattress and being fixed in position thereat, said covering extending into said opening above said sleeve and being fixedly connected within said flanged portion, whereby a member may be removably and slidably received through said guide ring for engagement with said sleeve.

JOHN D. DRY,