

[54] MATTRESSES

[76] Inventor: **Harry M. Adler**, 133 Herkimer St.,  
Apt. PH, Hamilton, Ontario, Canada

[22] Filed: **Jan. 7, 1972**

[21] Appl. No.: **216,103**

[52] U.S. Cl. .... **5/351, 5/357**

[51] Int. Cl. .... **A47c 23/00**

[58] Field of Search..... 5/345, 347, 357,  
5/353, 351

[56] **References Cited**

**UNITED STATES PATENTS**

3,083,380	4/1963	Adler .....	5/345 R
3,534,417	10/1970	Boyles .....	5/345 R

*Primary Examiner*—Francis K. Zugel

*Assistant Examiner*—Andrew M. Calvert

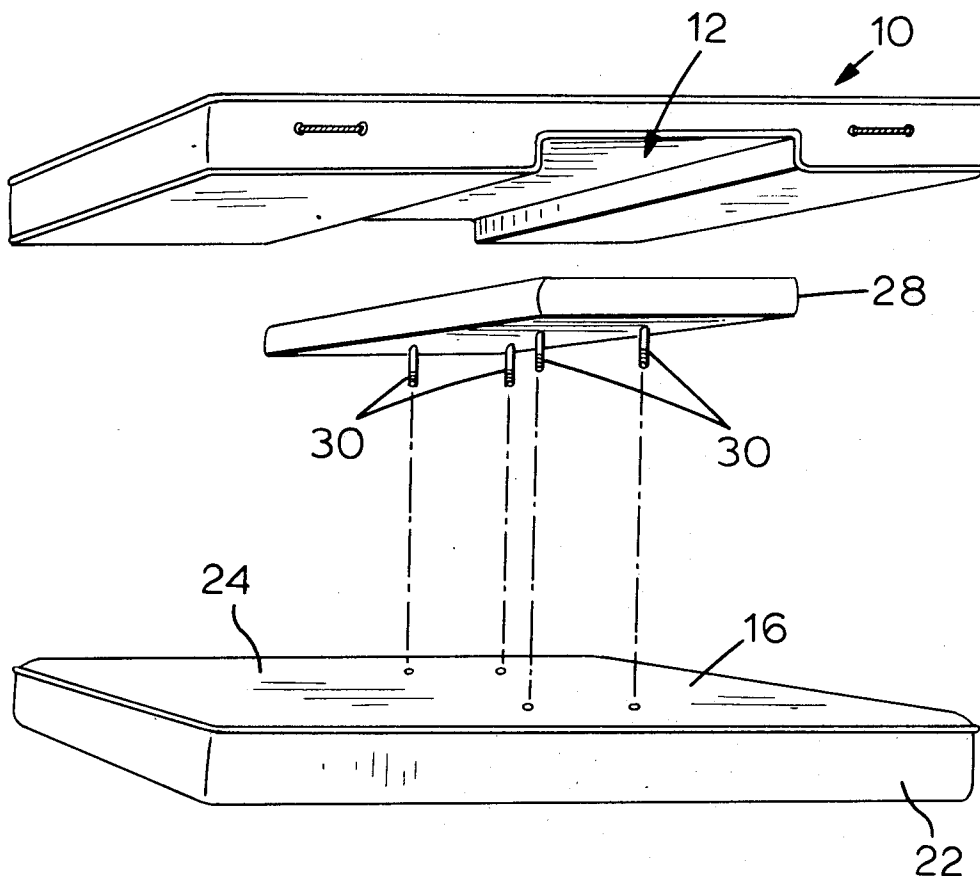
*Attorney*—Stanley J. Rogers

[57]

**ABSTRACT**

A mattress has a recess in the bottom face thereof and is used in combination with a base member having a rib insert protruding from the top thereof into the said recess; springs in at least the end portions of the base member underlie and are aligned with springs in the corresponding end portions of the mattress. The rib insert is separable from the base member and connected thereto with some free upward movement permitted by the connection.

**4 Claims, 3 Drawing Figures**



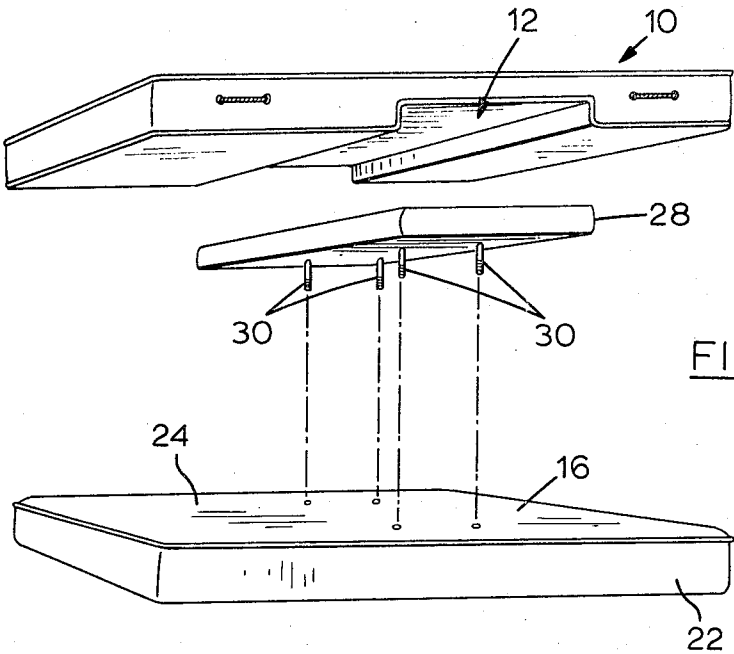


FIG. 1

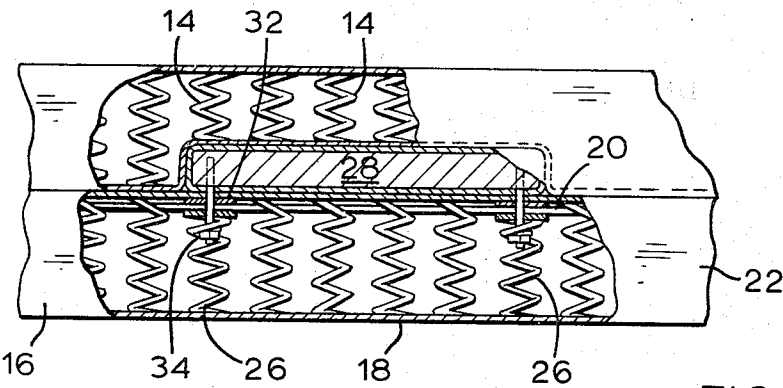


FIG. 2

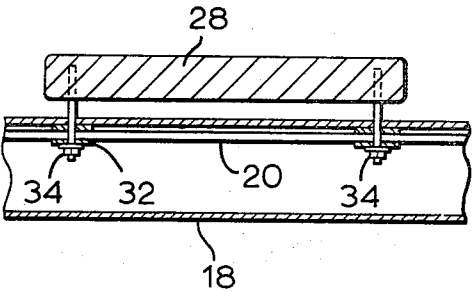


FIG. 3

## MATTRESSES

## IMPROVEMENTS IN MATTRESSES

## Field of the Invention

This invention relates to mattresses of the kind comprising a base on which rests a superstructure which is the mattress proper, the medial zone of this superstructure being recessed to receive a rigid insert which is located to support the trunk of a person recumbent thereon, while the head and limbs are supported by less rigid zones.

## REVIEW OF THE PRIOR ART

It has been supposed that the base has no function other than to constitute a plinth for the mattress proper, and that it can therefore be rigid, that is to say without "give." Experience has caused this belief to be doubted, and it is the object of this invention to provide a base which has advantages over a rigid base. Reference may be made to my prior U.S. Pat. No: 3,083,380 dated 2nd April 1963.

## DEFINITION OF THE INVENTION

In accordance with the present invention there is provided a resilient mattress for support of a person lying thereon, the mattress being of uniform thickness at its end portions for support of the head and lower limbs of the body of the said person, a recess in the bottom face of the mattress located intermediate of the length of the mattress and forming a reduced thickness portion for support of the area between the shoulders and hips of the said person, a rigid flat top supporting base member of substantially the same area as the mattress and upon which the mattress rests, and a separable rigid flat top rib insert protruding from the top of the supporting base member and connected thereto by a movement-permitting connection for reception within the recess, the rib insert being of the same dimensions as the recess and supporting the reduced thickness portion of the mattress above the recess and the said movement-permitting connection permitting free upward movement of the rib insert relative to the base member within predetermined limits to permit the insertion of a mattress covering sheet between the rib insert and the base member.

Preferably the said mattress comprises a plurality of springs disposed interiorly thereof for resilient support of the said person thereon, while the said base support comprises another plurality of springs which underlie and are aligned with springs of the mattress at least at the said end portions thereof.

The springs in the base member may be somewhat stiffer than are the springs of the mattress proper.

## DESCRIPTION OF THE DRAWINGS

An embodiment of the invention will now be described by way of example, with reference to the accompanying drawings, in which

FIG. 1 is an exploded view of a complete assembly comprising a base, mattress and separable rigid insert.

FIG. 2 is a side elevation with parts of the side wall shown broken away to reveal the interior, and

FIG. 3 is a fragmentary sectional elevation through the insert and the adjacent part of the base.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

In the embodiment shown in the drawings a superstructure 10 is of the rectangular prismatic shape of the conventional mattress, except that it is formed with a rectangular recess 12 in its lower face. The superstructure is provided with a series of internal coil springs 14 arranged in parallel rows.

The base 16 which cooperates with the superstructure is a box defined by a base plate 18, a peripheral bead 20 of stiff wire, and fabric walls and a top 22 and 24 respectively. Inside the cavity of the box a series of coil springs 26 are arranged, which springs are somewhat stiffer in characteristic than the springs 14 of the superstructure. The springs 26 are so located that each of the springs 14 is underlain by, and aligned with, a spring 26.

A rib-like insert 28 is shaped to fit snugly within the recess 12, and is held in position upon the base 16 by means of a movement permitting connection comprising four studs 30 projecting downwardly from it and passing through holes in two cross beams 32 in the base, secured to the bead 20. The studs carry nuts 34 constituting stop members which are normally disposed below and spaced from the beams, but the threading on the studs is so limited that the insert is permitted some free upward movement relatively to the base within a predetermined limit. The principal purpose of this construction is that, when the bed is being made, it is possible to tuck the edge of the mattress covering sheet between the insert and the base.

The effect of the sprung base is that the superstructure is in what may be termed a "floating" condition on the base. The base springs underlying the insert press collectively against the rigid underface of the insert, so that the firmness of the mattress in the medial zone is well maintained; while the resiliency of the mattress in the end zones is somewhat increased by reason of the springiness of the base, a springiness which is nonetheless not spongy because of the coincidence of the springs of the base and superstructure.

I claim:

1. A resilient mattress for support of a person lying thereon, the mattress being of uniform thickness at its end portions for support of the head and lower limbs of the body of the said person, a recess in the bottom face of the mattress located intermediate of the length of the mattress and forming a reduced thickness portion for support of the area between the shoulders and hips of the said person, the said mattress comprising a plurality of springs disposed interiorly thereof for resilient support of the said person thereon, a rigid flat top supporting base member of substantially the same area as the mattress and upon which the mattress rests, the said base support comprising another plurality of springs which underlie and are aligned with springs of the mattress at least at the said end portions thereof, and a rigid flat top rib insert protruding from the top of the supporting base member for reception within the recess, the rib insert being of the same dimensions as the recess and supporting the reduced thickness portion of the mattress above the recess, the rib insert being separable from and connected by a movement-permitting connection to the top of the supporting base member, the said movement-permitting connection permitting free upward movement of the rib insert relative to the base

3

member within predetermined limits to permit the insertion of a mattress covering sheet between the rib insert and the base member.

2. The invention as claimed in claim 1, wherein the said movement-permitting connection comprises a plurality of studs projecting downwardly from the rib insert into corresponding holes in beams in the base member and stop members on the studs disposed below and spaced from the said beams.

3. A resilient mattress for support of a person lying thereon, the mattress being of uniform thickness at its end portions for support of the head and lower limbs of the body of the said person, a recess in the bottom face of the mattress located intermediate of the length of the mattress and forming a reduced thickness portion for support of the area between the shoulders and hips of the said person, a rigid flat top supporting base member of substantially the same area as the mattress and upon which the mattress rests, and a separable rigid flat top

4

rib insert protruding from the top of the supporting base member and connected thereto by a movement-permitting connection for reception within the recess, the rib insert being of the same dimensions as the recess and supporting the reduced thickness portion of the mattress above the recess and the said movement-permitting connection permitting free upward movement of the rib insert relative to the base member within predetermined limits to permit the insertion of a mattress covering sheet between the rib insert and the base member.

4. The invention as claimed in claim 3, wherein the said movement-permitting connection comprises a plurality of studs projecting downwardly from the rib insert into corresponding holes in beams in the base member and stop members on the studs disposed below and spaced from the said beams.

\* \* \* \* \*

20

25

30

35

40

45

50

55

60

65