April 6, 1937. R. B. BAKER 2,075,796

COLLAPSIBLE BED

Filed March 9, 1935 2 Sheets-Sheet 1

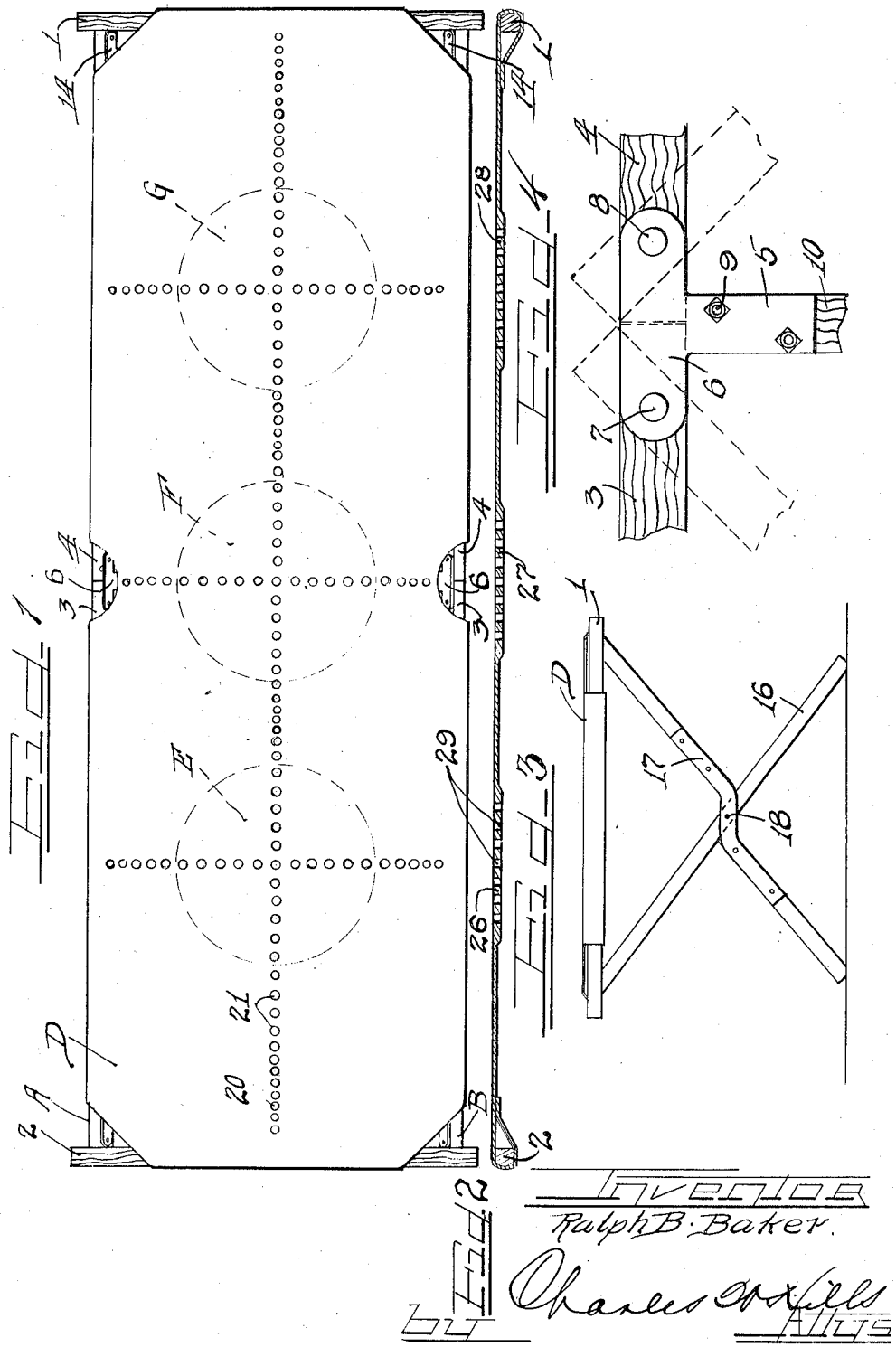


Fig. 1

Fig. 3

Fig. 4

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Fig. 2

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Fig. 5

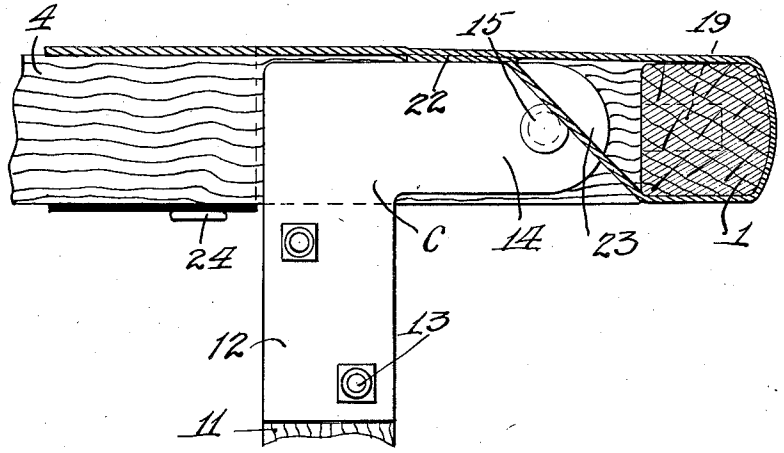


Fig. 6

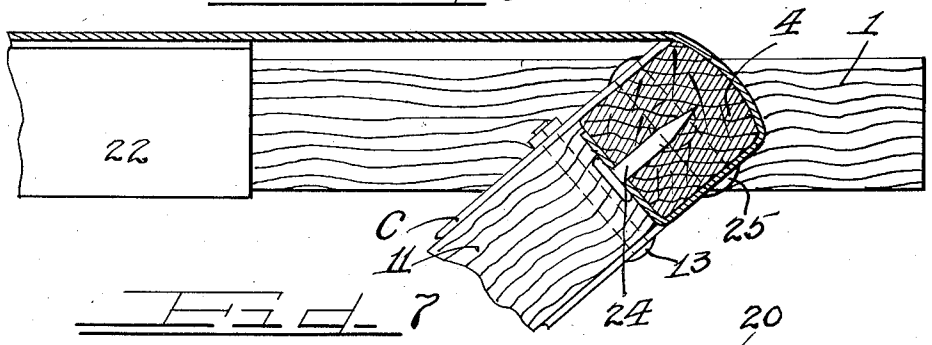
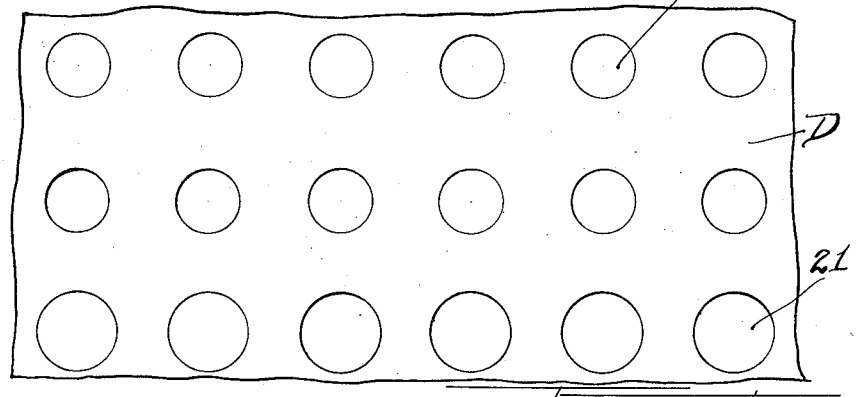


Fig. 7



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UNITED STATES PATENT OFFICE

2,075,796

COLLAPSIBLE BED

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3 Claims. (Cl. 5—186)

The present invention relates to a collapsible bed, and more particularly to a novel bed bottom for cots and the like.

Heretofore, it has been customary to construct folding cots with the bed bottoms of canvas or like inelastic materials.

It has been found that such canvas bottoms are uncomfortable, prevent air circulation therethrough, and soil readily.

It is an object of the present invention to provide a one piece bed bottom for a cot or collapsible bed having inherent elastic characteristics.

Another object of the present invention is to provide a one piece bed bottom for a cot, or like collapsible bed, having a perforated area for the purposes of elasticity.

A further object of the present invention is to provide a one piece bed bottom for a cot, or like collapsible bed, consisting of a sheet of water impervious, elastic material.

A still further object of the present invention is to provide a bed bottom for a cot, or like collapsible bed, having a multiplicity of perforations in it for ventilation, and also for affording a stretch to the bottom to conform to the form of an occupant.

Another and still further object of the present invention is to provide a bed bottom for a cot, or other collapsible bed, of material which is inherently elastic, and which is provided with a multiplicity of apertures to afford an area of greater elasticity.

A still further object of the invention is to provide a bed bottom of sheet material having portions thereof of relatively different elastic characteristics.

Generally speaking, the present invention contemplates a one piece bed bottom of elastic material, provided with a multiplicity of apertures or holes, so arranged and disposed in the bottom that at least one area therein is of greater elasticity than the balance thereof, by reason of the provision of such perforations or holes.

The above, other and further objects of the present invention will be apparent from the following description, accompanying drawings, and appended claims.

An embodiment of the present invention is illustrated in the accompanying drawings, and the views thereof are as follows:

Figure 1 is a top plan view of a collapsible bed, extended for use, constructed in accordance with the principles of the present invention.

Figure 2 is a longitudinal vertical section through another form of bed bottom, constructed in accordance with the principles of the present invention.

Figure 3 is an end view of the bed of Figure 1.

Figure 4 is an enlarged fragmental view of the middle joint construction of one of the sides of the bed.

Figure 5 is an enlarged fragmental view, partially in elevation and partially in section, illustrating one manner of attaching an end of the bed bottom of the present invention to an end bar of the bed.

Figure 6 is an enlarged fragmental view, partially in elevation and partially in section, through one of the side rails of the bed and looking towards one of the end bars, showing one manner of attaching the bottom to a side rail of the bed.

Figure 7 is a plan view of a fragmental portion of the bed bottom, showing a multiplicity of apertures or holes of different sizes made in the bottom.

The drawings will now be explained.

The frame structure of the bed, as herein illustrated, is of a well-known type and comprises two side rails, designated generally as A and B, and two end bars 1 and 2. Each of the side rails is made of two sections 3 and 4, hingedly connected at substantially the mid-length of the bed, for folding purposes.

Figure 4 illustrates the manner of forming the middle joint of a side rail of the bed and includes a T-shaped plate 5 having a head 6 which is connected by pivot pins 7 and 8 to the sections 3 and 4, of the side rail, adjacent the joint between such sections. The T-shaped member is secured as by bolts 9 to a leg 10. Figure 4 illustrates the sections 3 and 4 in extended or set up position, in full lines, and in dotted lines, the relative positions of these sections when the bed is partially collapsed.

There are usually three pair of legs for such a collapsible bed or cot, constructed as shown in Figure 3. Every pair of legs includes one member 11 which is secured at its upper end to a section 4 of a side rail, by means of a metallic connector, such as that illustrated in Figure 5. The connector C there illustrated includes a portion 12 which is secured by bolts 13, or like fastening means, to the leg member 11. Part of the element C has parallel ears 14 extending along each side of the adjacent section of the side rail, and secured thereto by suitable attaching means, such as a rivet 15. The other member of a pair of legs is connected at its upper

end to a section of the opposite side rail of the bed in the same manner as is described with reference to the member 11.

The member 11 is illustrated as having an intermediate portion 17 which in plan has one extremity offset with respect to the other, and which is pivoted at 18 to the member 16 of the pair. This construction is well known, and readily permits collapsing and extending of the legs. The middle pair is constructed as described with reference to the members 11 and 16, but these are attached to the side rails as shown in Figure 3, and as heretofore described. The leg 10, of the middle pair, corresponds to the leg 11 of the end pair, heretofore described.

The ends of the side rail sections 3 and 4, remote from the hinged connection therebetween, are provided with tenons 19 adapted to enter suitably disposed mortises in the end bars 1 and 2, as is usual construction.

The bed bottom D, of the present invention, is fashioned in one piece and from a sheet of material having elastic characteristics. The material used is preferably rubber or rubber composition.

The bed bottom D, because of the fact that it is made from rubber or rubber composition, is water impervious, is elastic, and is much more comfortable for an occupant than the heretofore used canvas or like material. In order to increase elasticity of certain areas or zones of the bed bottom D, a multiplicity of perforations are formed in the sheet.

These perforations or apertures are so disposed in the sheet as to afford areas or zones of greater elasticity than present in other parts of the bottom. The arrangement of the apertures or holes has herein been illustrated as so disposed as to form zones indicated at E, F and G, of greater elasticity, preferably so disposed in the bottom as to underlie the hips and shoulders of an occupant, and thus "give" to a greater extent when the bed is occupied, to more readily conform to the form of the occupant, thereby affording greater comfort and enhancing rest.

For attaching the bed bottom D to the end bars 1 and 2, the sheet is made of such a length as to have end pieces 22 which may be vulcanized to the under side sheet, thus affording pockets 23 at the ends of the sheets, for receiving the end bars (Figure 4).

The lateral margins of the sheet, when applied to the frame of the bed, are passed about the top and outer side margins of the side rails and brought underneath such side rails and secured in position by nails 24 driven into the side rails from the lower surfaces thereof, and in addition rivets 25 may be provided, extending through the side rails from side to side of the same.

The sheet D may be perforated in other fashions than illustrated in Figure 1. If desired, the entire sheet might be provided with a plurality of perforations or apertures through it, of different sizes and arrangement, to afford areas or zones of greater elasticity than that afforded by the inherent elastic qualities of the material of which the sheet is made.

It will be observed that a bed bottom constructed in accordance with the present invention is elastic, and, being provided with areas or zones of greater elasticity, readily conforms to the form of the occupant of the bed, thereby assuring greater comfort to such occupant. Such a bed bottom, at the same time, is water impervious, thereby enabling its use in damp or wet climates without deterioration. Furthermore, the provision of the multiplicity of perforations enables ready ventilation through the bed bottom. Furthermore, the bed bottom, being made of rubber or rubber composition material, may be readily cleaned, when soiled, so as to at all times present a sightly appearance.

The form of bed bottom illustrated in Figure 2 has a plurality of thickened sections, such as 26, 27 and 28, disposed in the length of the sheet at such zones or areas as will, when the bed is occupied, tend to stretch or sag to a greater extent than other portions. Preferably, such thickened sections are formed in the bottom at approximately where the shoulders and hips of an average adult would rest. Such portions 26, 27 and 28 are perforated at 29, for increasing the elasticity thereof in use.

The provision of the thickened portions 26, 27 and 28 affords additional material in the bed bottom for lengthening the life of the same.

A bed bottom may be constructed of an apertured sheet of uniform thickness, or of one of varying thickness, as well as one including a combination of both.

The thickened section may extend the full width of the sheet, or may be localized, if desired.

The invention has been described herein more or less precisely as to details, but it is to be understood that the invention is not to be limited thereby, as changes may be made in the arrangement and proportion of parts, and equivalents may be substituted, without departing from the spirit and scope of the invention.

The invention is claimed as follows:

1. A one-piece bed bottom for a cot, said bed bottom consisting of an elongated and substantially continuous and imperforate sheet of elastic rubber, or the like material, provided with a centrally disposed and longitudinally extending row of holes, and a transversely extending row of holes intersecting said longitudinally extending row and positioned in the zone usually occupied by the hips of a person lying prone on the cot.

2. A one-piece bed bottom for a cot, said bed bottom consisting of an elongated and substantially continuous and imperforate sheet of elastic rubber, or the like material, provided with a centrally disposed and longitudinally extending row of holes, a first transversely extending row of holes, a second transversely extending row of holes, and a third transversely extending row of holes, said first, second and third transversely extending rows of holes intersecting said central row and being longitudinally spaced to occur in the zones usually occupied by the shoulders, hips and knees of a person lying prone on the cot, respectively.

3. A one-piece bed bottom for a cot, said bed bottom consisting of an elongated sheet of elastic rubber, or the like material, provided with a centrally disposed and longitudinally extending row of holes, a transversely extending row of holes intersecting said longitudinally extending row and positioned in the zone usually occupied by the hips of a person lying prone on the cot, said sheet being thickened over an area including the point of intersection of said rows to selectively affect yielding of the material in the neighborhood of the portion of the sheet underlying the hips of the user of the cot.

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