No. 722,135. PATENTED MAR. 3, 1903.

J. F. NUNAN.

BED, MATTRESS, OR CUSHION.

APPLICATION FILED DEC. 23, 1897.

NO MODEL. 2 SHEETS—SHEET 1.

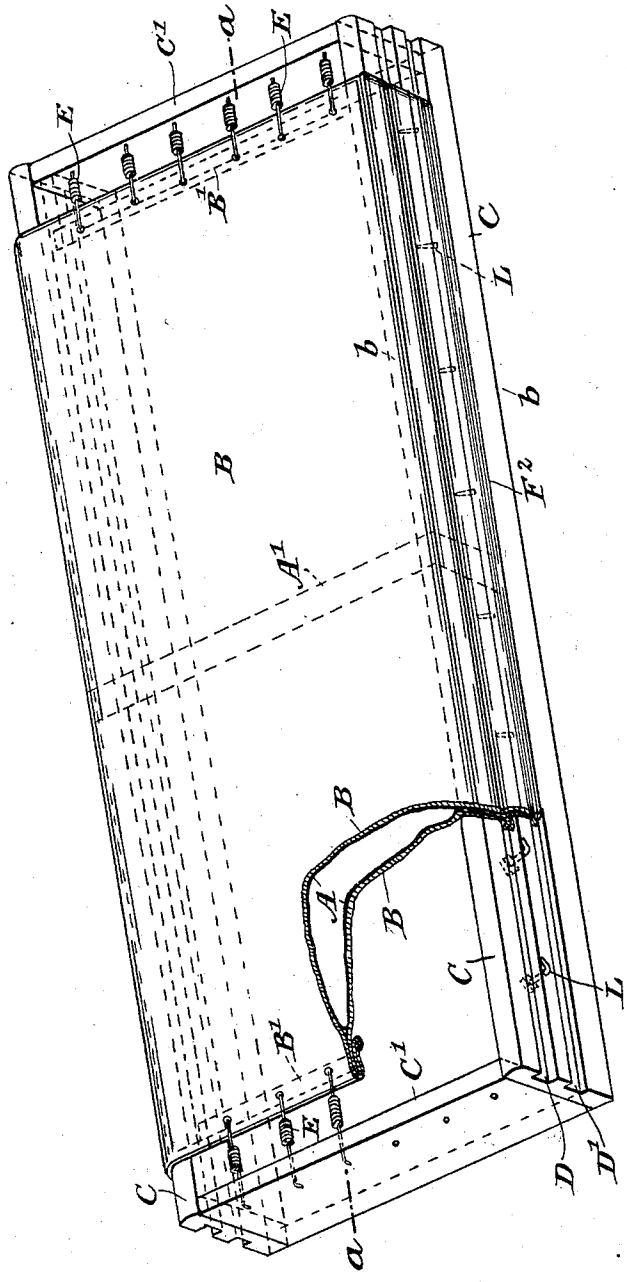


Fig. 1.

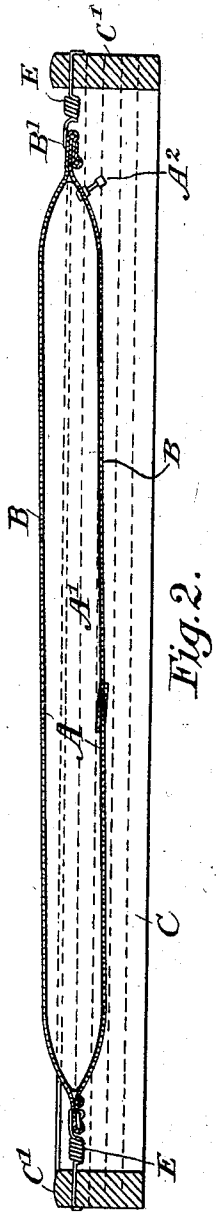


Fig. 2.

Witnesses:
E. B. Bolton
O. Munn

Inventor:
John Francis Nunan
By Richards & R
his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 722,135. PATENTED MAR. 3, 1903.

J. F. NUNAN.

BED, MATTRESS, OR CUSHION.

APPLICATION FILED DEC. 23, 1897.

NO MODEL. 2 SHEETS—SHEET 2.

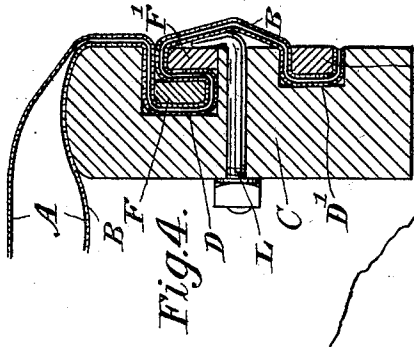


Fig. 4.

Fig. 3.

Fig. 5.

Witnesses:
E. B. Bolton
O. D. Munn

Inventor:
John Francis Nunan
By Richards & Geo
his Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN FRANCIS NUNAN, OF MELBOURNE, VICTORIA, AUSTRALIA.

BED, MATTRESS, OR CUSHION.

SPECIFICATION forming part of Letters Patent No. 722,135, dated March 3, 1903.

Application filed December 23, 1897. Serial No. 663,242. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANCIS NUNAN, furniture warehouseman, a subject of the Queen of Great Britain and Ireland, and a resident of Nos. 248 to 258 Swanston street, Melbourne, in the British Colony of Victoria, have invented a certain new and useful Improved Bed, Mattress, or Cushion, of which the following is a specification.

My invention consists in the features and combinations and arrangements of parts hereinafter described, and particularly pointed out in the claims.

In order that my invention may be well understood, I will now describe it, aided by a reference to the accompanying sheets of drawings, in which—

Figure 1 is a perspective view of an air-mattress as made for a single bed and supported in a wooden frame, one corner of the mattress being broken away in order to show it in section; Fig. 2, a central longitudinal section on line *a a*, Fig. 1; Fig. 3, a perspective view of the end part of a double-bed air-mattress and showing the method of securing the combined rubber and canvas sheeting to both the side and end bars of its supporting-frame. In this figure also one corner of the mattress is broken away. Fig. 4 is an enlarged cross-section of the side bar of the mattress-frame at *b b* and *c c* in Figs. 1 and 3; Fig. 5, an enlarged cross-section of the end bar of the double-bed mattress-frame at *c c*, Fig. 3.

In constructing a single or three-foot air-bed or air-mattress of the type shown in Figs. 1, 2, and 4 I take a sheet of thin rubber A and fold it upon itself lengthwise and lap and cement a width of about four inches at its ends together, as shown at A′, Fig. 2. I also cement about three inches of each side margin together, with the exception that at one side I leave a length of about two feet uncemented, and thus the rubber sheeting is formed into a casing or bag having a mouth or opening. Said mouth or opening is provided to enable a patch to be readily secured on the inside should the rubber be punctured. I now take a sheet of strong canvas B and double it upon itself, bringing the free edges at the sides and the two ends together. At the uncut or looped end I run two lines of stitches about one and a half inches from the end and, say, one-quarter of an inch apart, said stitches having a strip of leather or canvas, say, half an inch wide, laid on before beginning to stitch, in order to strengthen the seam. I now insert in the hem or loop a half-inch round iron rod, say, two feet eight inches long or a bar of light flat iron B′ of the same length, in which are bored several small holes to receive coiled springs E. The opposite or cut end is stitched together in a similar manner and strengthened with an extra piece of canvas. Also within its hem or loop a similar rod or bar is inserted to receive the end springs E. The rubber casing or bag A is now placed inside the canvas covering B, and an inflating nozzle and valve A^2 at one end of the casing A pass out through a small hole in the canvas covering, and said combined rubber casing and canvas covering is now in readiness for being secured within its supporting-frame. The frame is constructed either of wood or metal, the side bars C, Figs. 1 and 4, of which have two grooves D and D′ formed in them, while the end or head and foot bars C′ are firmly secured to the side bars and made flush therewith along their top edge. Along the whole length of the side bars C at about eight inches apart and close to the bottom of the uppermost and deep groove D, I bore holes to receive clamp-bolts, (marked L,) while near the top edge of the head and foot bars C′, I bore several small holes to receive the ends of coiled springs E or other fastening devices. The combined rubber and canvas sheets or casing and covering A B are now placed and stretched evenly over the frame C C′, each side being equalized and having, say, six inches of surplus rubber beyond the width of frame and about nine inches of surplus canvas. Said surplus width at the sides is then pressed into the upper grooves D D and a cleat or bar F placed in each upper groove upon it. The material at each side is now lifted upward over the cleat F and a second cleat or bar F′ placed in each groove upon it. The material now in the groove D being between the two bars or cleats F and F′, the clamp-bolts L are placed in position and screwed up so that their finger-heads will press the cleats and material within the groove firmly together and make the sides of the combined casing and cover-

ing air-tight. The remaining surplus material is now brought down over the bolts and pressed into the second groove D′ and secured therein by a wooden cleat F^2, which may be screwed or otherwise secured in position. The one end of coiled springs E are now fastened in holes in the light iron rod B′, (secured in the hem at ends of the canvas covering,) while the other ends of said springs are passed through and secured in the holes in the head and foot bars C′. The bed or mattress is now ready for inflation, and when inflated the rubber casing or bag fills it out to about the form shown in Figs. 1 and 2, the purpose of said springs being to assist in retaining the bed taut.

A double bed or mattress having a wood frame, as shown in Fig. 3, has the rubber and canvas sheeting A B secured together and held in the side bars C in exactly the same manner as that described with reference to Figs. 1, 2, and 4; but when a bed of extra strength is required the head and foot bars are made thus: Each end or head and foot bar C^2 is secured to the side bars C in such a manner that the tops of both are flush or level, and in the top surface of each end bar C^2 a deep groove D^2 and a shallow groove D^3 are formed at the positions shown in Figs. 3 and 5, while groove D^2 is of such a depth that it descends to a position flush with the lower side of groove D. In this type of bed or mattress the canvas instead of being cut, as in a single bed, to about the length between the head and foot bars is cut about eight inches longer at each end, and the spread rubber A may be extended as far as the canvas and be pressed with it into the grooves D^2 and D^3 and kept in position by cleats F, F′, and F^2, and bolts L, as shown in Fig. 5, in exactly the same manner as described with reference to Figs. 1 and 4 for securing the sides of the bed or mattress. The head and foot bars C^2 are shallower than the side bars C in order to leave a clearance-space on the under side of the mattress-frame for the nuts of bolts L, as shown in Fig. 3.

In constructing a large bed and in order to reduce the amount of rubber therein I arrange a strip of rubber either at the side or sides or down the center of the mattress and cement it to a sheet of air-tight sheeting or other material and then secure each top and bottom sheet at its edges within a frame, as before described, or, further, the bottom of the mattress or cushion may be made of strong air-proof material and the thin rubber at top be provided, as before, with a canvas cover and each secured along its edges, as before described, and thus no second covering for the bottom side is used.

In a modified form of air bed or mattress the separate inner rubber casing can be dispensed with and the outer covering, as A, only used. In such a case it is made of rubber-coated canvas or other suitable air-tight material and secured and held in position within its frame or upon a bedstead in exactly the same manner as that hereinbefore described for the combined rubber and canvas bed or mattress.

I claim—

1. A bed or mattress consisting of a combination of the inner rubber sheets A, canvas-covered sheets B, having a bar B′ at each end, inflating-nozzle A^2, rectangular frame C, C′, spring-supports E between bars B′ and end frame-pieces C′, the side frame-pieces with grooves D and D′, cleats F F′ and F^2 fitting in said grooves, bolts L for clamping the cleats within the groove and so securing the edge parts of the rubber and canvas material, substantially as described and shown.

2. In combination, the frame-pieces having a plurality of grooves, mattress material in the said grooves, cleats fitting in the grooves and bolts L passing through the frame and pressing the material of the mattress to secure a clamping effect, the end of said bolt lying between the grooves and being covered by the material of the mattress, substantially as described.

3. In combination, the frame having a groove therein, a plurality of cleats in said groove about which the material of the mattress extends and a bolt having a bent end engaging the outermost of the cleats, as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN FRANCIS NUNAN.

Witnesses:

W. STOKES,

BEDLINGTON BODYCOMB.