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H. E. WOLF

1,963,318

BOXING AND VENTILATING MEANS FOR MATTRESSES AND THE LIKE

Filed March 27, 1933

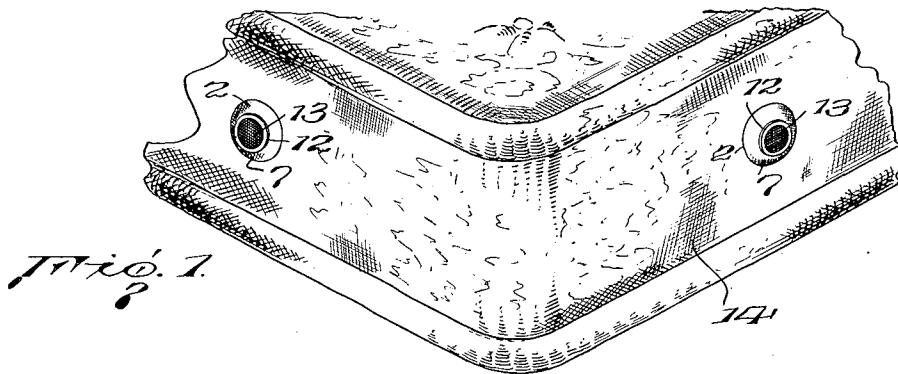


Fig. 1.

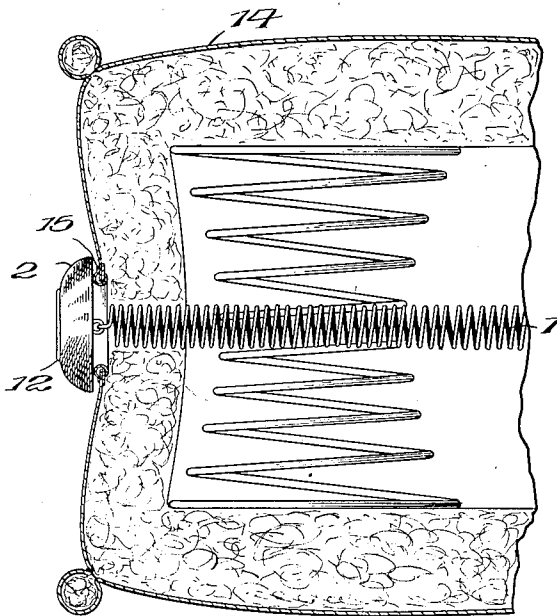


Fig. 2.

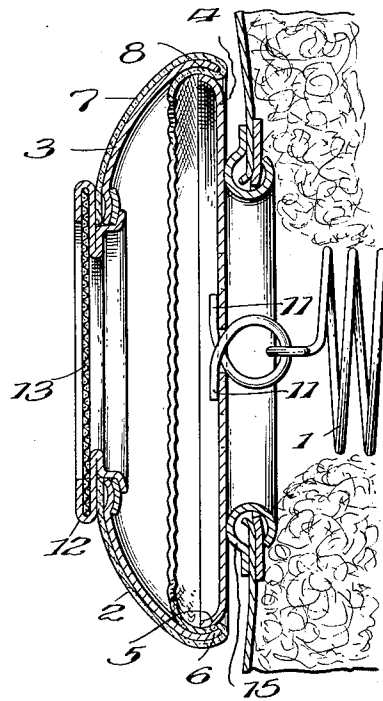


Fig. 3.

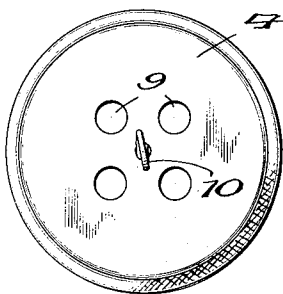


Fig. 4.

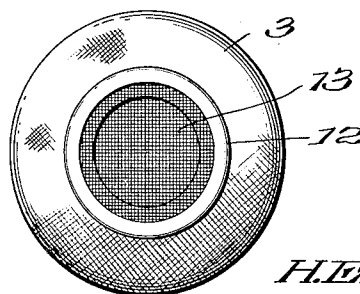


Fig. 5.

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UNITED STATES PATENT OFFICE

1,963,318

BOXING AND VENTILATING MEANS FOR
MATTRESSES AND THE LIKE

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Application March 27, 1933, Serial No. 663,088

6 Claims. (Cl. 5—347)

This invention relates to boxing and ventilating means for mattresses and the like; and comprises a cross tie or stay adapted to be positioned within a mattress to connect opposite walls thereof to support the walls in inwardly distained position to prevent outward bulging of the same; the cross tie being advantageously a small diameter coil spring, the ends of which are connected through grommets in the walls of a mattress to ventilating buttons positioned exteriorly of the mattress, the buttons being adapted for seating upon the grommets by the cross tie and being each provided with a screened opening in its outer face and with perforations in its rear face, the screened openings and the perforations in the buttons permitting ready inflow and outflow of air through the buttons and through the grommets in the mattress walls to provide ventilation for the mattress; all as more fully hereinafter set forth and as claimed.

It is a desideratum in the art to which this invention relates to provide strong, durable and efficient boxing and ventilating means for mattresses and the like. It is an object of my invention to provide such boxing and ventilating means and in accordance with a specific form of the invention I provide a small diameter coil spring cross tie adapted to connect opposite walls of the mattress and resiliently support the walls in inwardly distained position. To support the cross tie in position in the mattress and to provide ventilation for the mattress I provide a ventilating button for each end of the tie. The ventilating button consists of an outer shell or front facing having a screened opening therein and an inner shell or rear facing provided with perforations. The rear shell is also provided with a centrally positioned eyelet for attachment of the button to the end of the cross tie. Connection of the button with the end of the cross tie is made through a grommet in the wall of the mattress. The diameter of this grommet is substantially larger than the diameter of the cross tie; the purpose of the large opening being to permit entry of the tie into an already stuffed mattress through the grommet and to provide ample facilities for air to freely pass in and out of the mattress. The rear face of the button which is of slightly larger diameter than the grommet in the mattress wall is held seated against the grommet by the coil spring cross tie and the perforations in the rear face of the button are held in alignment with the opening in the grommet so that air may pass freely into and out of the mattress through the openings in the buttons and through the grom-

met in the mattress wall. My mattress, provided with ventilating buttons, is particularly useful in warm climates; the free circulation of air makes it a cool mattress.

A further object of my invention is the provision of a single means for supporting boxing members within a mattress and for ventilating the mattress.

A further object of my invention is the provision of boxing and ventilating means which may be applied to a mattress or the like after the mattress is stuffed and the cover sewn; the boxing stay being adapted for introduction into the mattress through grommets in the mattress walls by means of a needle or the like and being removably held in position in the mattress by buttons which are hooked into engagement with the ends of the stay from the outside of the mattress.

These and other objects are accomplished by the special arrangement hereinafter described, it being understood that my invention is not limited to the particular type of fabric covered button shown but is to include all buttons, whether fabric covered or not, which are provided with openings therethrough for passage of air and with means for attachment with a mattress stay for the purpose shown.

In the accompanying drawing wherein for purposes of illustration I have shown one form of a specific embodiment of my invention;

Fig. 1 is a perspective view of a corner of a finished mattress and shows the application of the invention to the side walls;

Fig. 2 is a fragmentary vertical sectional view of a side of an inner spring mattress showing the arrangement of the cross tie in the mattress and its connection with the ventilating button;

Fig. 3 is an enlarged detailed sectional view through the ventilating button and through a portion of the mattress and shows the arrangement of the ventilating button with respect to the opening in the grommet in the wall of the mattress;

Fig. 4 is a rear view of the back of the ventilating button; and

Fig. 5 is a front view of the ventilating button. In the drawing, wherein like reference numerals indicate corresponding parts throughout the several views, 1 represents a cross tie which may advantageously be a small diameter coil spring or other elastic device and 2 indicates the ventilating button. The ventilating button which may be made of stamped metal consists of a curved outer shell or front facing 3 and a

substantially flat inner shell or rear facing 4. The rear shell has an inwardly curved peripheral edge portion 5 adapted to be clamped within the inwardly curved peripheral edged portion 6 of the outer facing. If desired, the outer shell of the button may be covered with fabric as shown at 7 applied during the manufacture of the button, and clamped at the rear of the button between the inner and outer shells as shown at 8. In the rear shell of the button there is provided perforations or openings 9 surrounding fastening eyelet 10. The eyelet consists simply of a loop of heavy wire passed through a central opening in the rear of the button and secured to the button by flaring its ends as shown at 11. Positioned centrally in the outer shell of the button is a grommet 12 screened as at 13. The screened grommet in the front face of the button and the perforations in the rear face of the button provide openings for passage of air while effectively preventing entrance of dust and other foreign matter.

My improved boxing and ventilating means embodied in an inner spring type of mattress is shown in Figs. 1 to 3 inclusive. As shown, the boxing means are applied to a stuffed mattress having a cloth covering or wall 14. The mattress wall is provided with a plurality of grommets 15 as shown. The cross tie 1 is positioned within the mattress as shown. The cross tie may be inserted in place during stuffing of the mattress; or, if desired, it may be threaded into a stuffed mattress, through the grommet 15 in the mattress wall 14, by means of a suitable needle or the like. In either case, after insertion of the cross tie, the ventilating buttons 2 which are of larger size than the opening in the grommet are then secured by means of their eyelets 10 to the ends of the cross tie through the grommet and are held tightly against the grommet by means of the cross tie. The diameter of grommet 15 is substantially larger than the diameter of the cross tie to provide a large opening for air to pass freely into and out of the mattress. Air may pass into and out of the mattress through the grommet 15 in the mattress wall 14 and through the perforations 9 and screened grommet 12 in the ventilating button to ventilate the mattress. At the same time the walls of the mattress are prevented from bulging and the boxing, generally, of the mattress maintained.

The boxing and ventilating means herein described comprises few parts and is extremely simple in construction and efficient in operation. The invention is readily adapted for use with mattresses, cushions, pillows or cushion seats and the like, and its application to such articles greatly improves their appearance as well as simplifies their construction. The construction of the ventilating button with its flat, rear face permits the button to lie flat against the mattress wall while the screened grommet in the face of the button not only allows free passage of air into the mattress, but also prevents entrance of dust into the mattress.

What I claim is:

1. Boxing, restraining and ventilating means for mattresses and the like comprising small diameter coil spring cross ties positioned within a mattress to connect opposite walls thereof, and a ventilating button for each end of said cross tie, said buttons being positioned exteriorly of said mattress and connected to the end of said cross ties through openings in said mattress of substantially greater diameter than the diameter of said ties,

said buttons each comprising an inner shell forming the back of the button and an outer shell forming the front of the button, the back of the button being provided with perforations in registration with the openings in the mattress and with means for attachment to said cross tie, and the front of the button being provided with a screened grommet, the screened grommet and the perforations in the button providing a passageway for air to pass in and out of said mattress through the openings in said mattress, the spring cross ties exerting tension on the bottom to prevent bulging of the walls.

2. In a mattress or the like provided with a top, bottom and walls, and resilient cross ties adapted to prevent bulging of the walls, means for retaining the ends of said cross ties at the walls, through openings in said mattress, comprising detachable buttons of larger size than said openings and each adapted to cover one of said openings, each of said buttons having a front face and a rear face, the front face being provided with a screened grommet, the rear face being provided with perforations and with means for attachment of the button to the ends of the cross ties, the rear face of each of the buttons being adapted to lie flat against the wall of the mattress under tension of the cross ties with the perforations communicating with the openings in the mattress, whereby air may pass through said buttons and into and out of the mattress through the openings in said mattress, while entrance of foreign particles to the interior of the mattress is prevented.

3. A ventilating button for mattresses and the like, comprising a front face provided with a screened opening and a rear face provided with perforations and with means for attachment of the button to the mattress, said perforations being arranged concentrically about the button attaching means and adapted to permit air passing through the screened opening to enter and leave the mattress at points adjacent said button attaching means.

4. In a mattress having openings in its walls, means for ventilating said mattress comprising buttons, each having a front face provided with a screened opening and a rear face provided with perforations and with means for attachment of the buttons to the mattress at said openings, said perforations being arranged concentrically about said button attaching means and adapted to permit air passing through the screened opening to enter and leave the mattress through said opening in the mattress wall.

5. In a mattress having openings in its walls, means for ventilating said mattress comprising hollow 2-part buttons, one part being the front face of the button and the other part being the rear face of the button, said parts held together in clamping engagement with each other about their peripheries, a fabric covering over the front face of the button said covering being held in position on said button at points of engagement of the front face with the rear face a screened opening in the front face of the button and perforations in the rear face, said rear face being arranged to cover the opening in the mattress, said perforations communicating with said opening, and attaching means for said button, said attaching means being positioned centrally of said rear face.

6. An improved mattress comprising a rectangular fabric casing provided with the usual top, bottom, and side and end walls, stuffing in said casing, openings in the walls of said casing, elastic cross ties in said casing and buttons of slightly

greater diameter than said openings positioned on the outside of said casing over said openings, the ends of said elastic cross ties being secured to said buttons through said openings to resiliently hold the walls of said mattress slightly inwardly under sufficient tension to prevent permanent bulging and to hold said buttons firmly against said openings, said buttons being provided with an outer face and an inner face, a screened opening in said outer face and perforations in said inner face, said perforations being adapted to register with the openings in the mattress wall to permit air passing through the screened opening to enter and leave the mattress through the openings in the mattress wall. 80

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15	90
20	95
25	100
30	105
35	110
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45	120
50	125
55	130
60	135
65	140
70	145
75	150