J. A. BRENT.

MEANS FOR SUPPORTING BED CLOTHING.

APPLICATION FILED JAN. 24, 1913.

1,200,462. Patented Oct. 10, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

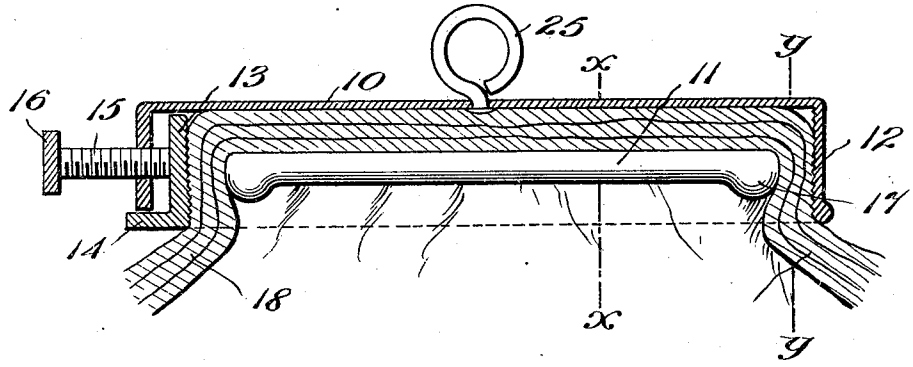


Fig. 2.

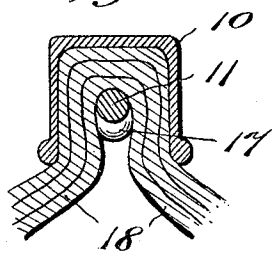


Fig. 3.

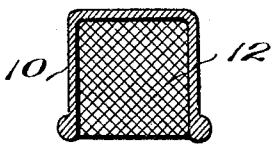
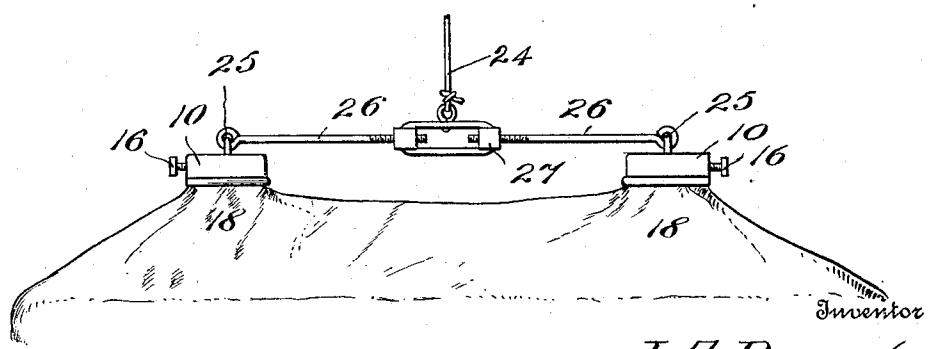


Fig. 4.



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Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

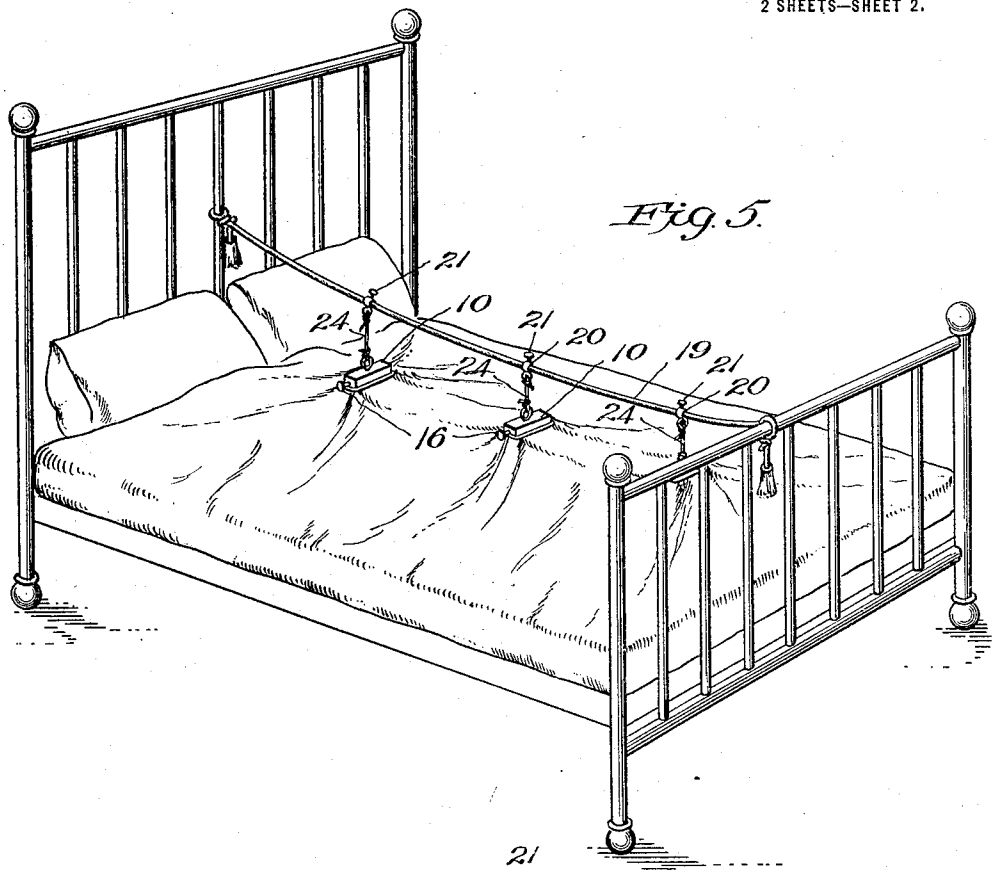


Fig. 6.

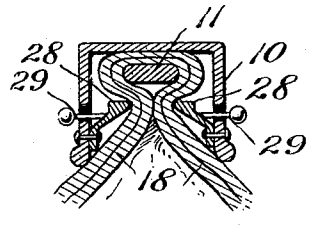
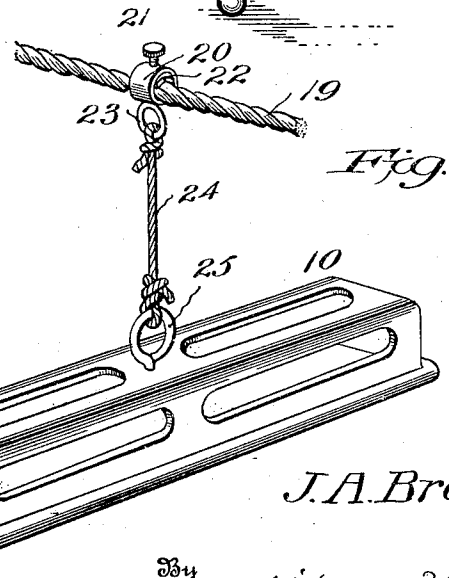


Fig. 7.



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UNITED STATES PATENT OFFICE.

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MEANS FOR SUPPORTING BED-CLOTHING.

1,200,462. Specification of Letters Patent. Patented Oct. 10, 1916.

Application filed January 24, 1913. Serial No. 743,961.

To all whom it may concern:

Be it known that I, JAMES A. BRENT, a citizen of the United States, residing at New York, in the State of New York, have invented certain new and useful Improvements in Means for Supporting Bed-Clothing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improved device for firmly gripping and supporting fabrics in general; and more particularly to the provision of means for conveniently raising and supporting bed clothing.

It is well known that, whether for the sick or the well, there are marked advantages in using the bed coverings so that the sleeper is not subjected to their weight. In the first place, for simple efficiency, blankets which are held away from the body are superior to those which are wrapped close, because the layer of confined air between the body and the blankets acts as a most efficient heat insulator. Secondly, it is more restful to sleep free from the weight of many thick coverings; and, now that so many sleep habitually in the open air, the necessary weight of blankets and "comforts" is very considerable. During sleep the heart action and other bodily functions are very greatly reduced, and this emphasizes the unconscious fatigue resulting from the weight of thick coverings. Furthermore, by relieving the sleeper of this weight, much of the restlessness which induces insomnia is avoided, and, even where tossing about does occur, it cannot result in untucking the blankets and exposing the sleeper, as it often does where the coverings rest upon the body. Thirdly, there is found to be a distinct hygienic advantage in permitting access to the body during sleep of a relatively large volume of air, which serves to assist the action of the skin.

The advantages of this system in cases of illness are too numerous and obvious to require comment.

Various changes have been proposed for relieving sleepers of the weight of the bed clothing, but hitherto these have involved the employment either of devices specially and permanently applied to the coverings or of means which are either more or less injurious to the blankets or productive of risk of harm to the sleeper.

It is the principal object of this invention to supply means for conveniently and cheaply gripping and supporting all sorts of fabrics without piercing or otherwise injuring the same, and more particularly to adapt the same to be applied readily to the support of bed clothing without, on the one hand, resorting to any special permanent construction of covering; or, on the other hand, employing any means which might accidentally prick or injure the sleeper.

My improved device may be carried in a hand grip and applied in a few moments to any ordinary hotel bed, without any injury to either the bed or the coverings; and can be just as quickly removed and packed when a guest leaves the hotel.

I have shown the present invention in certain preferred embodiments in the accompanying drawings, wherein—

Figure 1 is a longitudinal section of the fabric supporter in use, Fig. 2 is a cross section of the same on the line x—x in Fig. 1, Fig. 3 is a similar view on the line y—y in Fig. 1 with blankets removed, Fig. 4 is an elevation of a modified form particularly useful on double beds, Fig. 5 is a perspective view showing, the preferred application of the fabric supporter to a bed, Fig. 6 is a cross section of a modified form, and Fig. 7 is a perspective view of a modified form of fabric supporter.

In the preferred form shown, the fabric supporter comprises a frame 10, preferably of metal, open on the under side, as shown, an inner core 11, and means for exerting mutual pressure between the frame and its contents. As shown in Fig. 7, the frame may be made of openwork.

In the specific form of the invention illustrated, the frame is a trough-shaped box, having ends sloping slightly inward to form a narrowed opening. As shown in Fig. 3, I prefer to roughen or corrugate one end 12 to prevent slipping. At the opposite end is shown a movable roughened plate 13 provided with a guiding lip 14 adapted to slide between the side edges of the box 10. A screw 15 is fastened to the plate 13 so that its end can turn in said plate, and this screw is threaded into the end wall of the box 10. A milled head 16 provides means for con-

veniently turning the screw, for moving the plate in or out, and changing the pressure exerted upon the core.

The core may take a variety of forms within the spirit of the invention, depending somewhat upon the particular form and dimensions of the box 10. In Figs. 1 and 2 this core comprises a bar 11 of wood, metal or other suitable material, provided with enlarged and rounded heads 17.

The mode of applying my improved fabric support to the material to be lifted is clearly shown in Figs. 1 and 2. A number of bed coverings are indicated at 18, and these are secured by pushing them upward into the box 10, with the core 11 under them, so that folds of covering are formed within the box which bulge outward into the space near the upper wall of the box. This having been accomplished while the pressure plate 13 is drawn back, the whole is finally made secure by turning the screw 15 so as to exert a strong pressure upon the ends of the core 11, through the folds of covering.

It will be seen that the elements so far described provide means whereby a firm grip may be applied to fabric without piercing or punching the same, and without any special construction or adaptation of the fabric itself. At the same time, the supporter can be instantly removed by merely reversing the screw 15, and pulling out the fabric.

These devices are cheap and light, and a number of them can be easily carried about by a traveler and quickly applied to hotel bed coverings. They lend themselves to a variety of uses, and in Fig. 5 I have shown one very effective, handy and cheap means for applying the same to a bed. A main cord 19 is fastened at its ends to the head board and footboard respectively, directly over the line along which the clothing is to be lifted. Upon this main cord are strung a suitable number of rings 20 (three should suffice) and each ring is supplied with a thumb screw 21, acting through a pressure plate 22 to clamp the ring on the main cord. Each ring 20 carries a suspension ring 23, through which runs an adjusting cord 24, whose lower end is fastened to a ring 25 on the box 10. By means of a simple knot, as shown, or otherwise, the cord 24 may be readily fastened in any desired position, so as to determine at once the height of the supporter 10 which it carries.

In use, as shown in Fig. 5, the blankets are tucked under the mattress at foot and sides, and come close around the neck, thus inclosing the air beneath the raised portions thereof. The sheet is preferably allowed to rest on the sleeper, although this may, of course, be lifted, if desired; or, indeed, one or more blankets may be left to rest on the sleeper. It is an advantage of this arrangement that, by loosening the clamps on the rings 20, these may be slipped back toward the foot of the bed, the blankets having first been thrown over the cord 19. This supplies a convenient mode of disposing of the blankets for airing the bed, or, in case of illness, gives convenient access to the patient.

In Fig. 4 is shown a convenient arrangement for double beds. Here the adjusting cord 24 is used to support a cross bar or bars 26, to the ends of which the fabric supporters 10 are fastened in any desired position. As shown in Fig. 4, the bar 26 may be made in two sections whose meeting ends are provided with right and left threads respectively, threaded into opposite ends of the joining member 27, whereby a turn-buckle is provided. By this means the blankets 18 may be stretched as tightly as may be desired between the supporters 10.

The form of pressure-exerting means shown in Fig. 1 is not the only one which can be employed. In Fig. 6 I have shown an illustrative example of the possible modifications which come within the scope of my invention. Here inwardly sloping springs 28 are attached within the box 10 at the outer side edges, the same being preferably shaped substantially as shown, with approximately flat faces to receive the pressure of the fabric 18 and the core 11. A modified form of core is also shown here. In using this modification of my fabric support, the core is tucked under the fabric and is then pushed up into the position shown, until the bulging fabric is forced beyond the springs, which return by their own resiliency into the position shown, where they resist any tendency of the core and fabric to pull out. In removing the supporter, the springs are drawn apart by the stems 29 which project through the openings in the side walls of the box, thereby releasing the core and fabric.

Various changes may be made in this device, without departing from the spirit and scope of my invention, and I do not limit myself to the details herein shown and described.

What I claim is—

1. Means for lifting bedclothing comprising in combination a frame open on its under side, a core capable of complete separation from said frame but adapted to enter the same, means movable with respect to said frame for exerting mutual pressure between the frame and its contents, and means for suspending said frame and core over a bed, substantially as described.

2. Means for lifting the bedclothing comprising in combination a frame open on its under side, a core and means at one end of the frame for exerting pressure against the ends of said core, and means for suspending

said frame and core over a bed substantially as described.

3. Means for lifting the bedclothing comprising in combination a frame open on its under side, means for suspending the same over a bed, a core, a sliding plate at one end of said frame, and means for adjusting the position of said plate, substantially as described.

4. Means for lifting bedclothing comprising in combination a trough shaped box, means for suspending the same over a bed, a bar having expanded ends fitting loosely within said box, and means for exerting mutual pressure between said box and said bar when placed in said box with bedclothes over it, substantially as described.

5. Means for lifting the bedclothing comprising in combination a trough shaped box, means for suspending the same over a bed, a bar with expanded ends, and means at one end of the box for exerting pressure upon the ends of said bar, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

JAMES A. BRENT.

Witnesses:
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Katharine C. Mead.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."