June 24, 1941. M. BECHIK 2,246,831

MATTRESS HANDLE

Filed May 20, 1940

Fig. 1

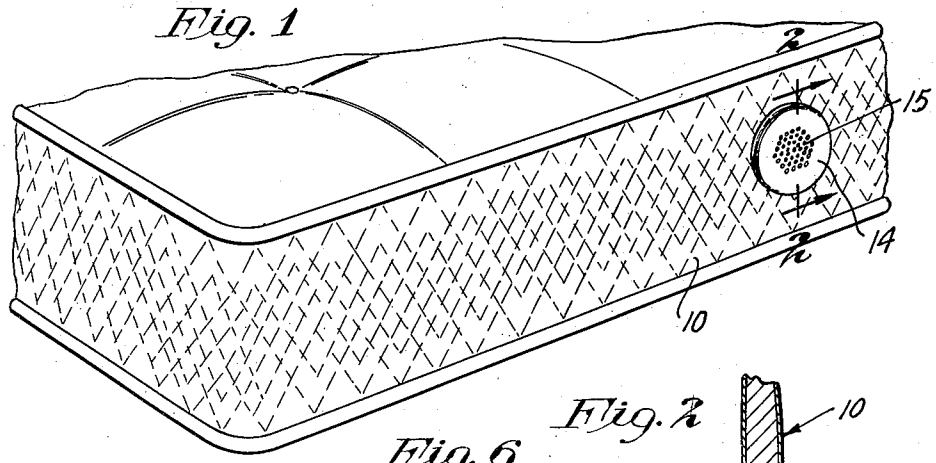


Fig. 6

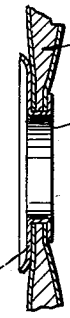


Fig. 2

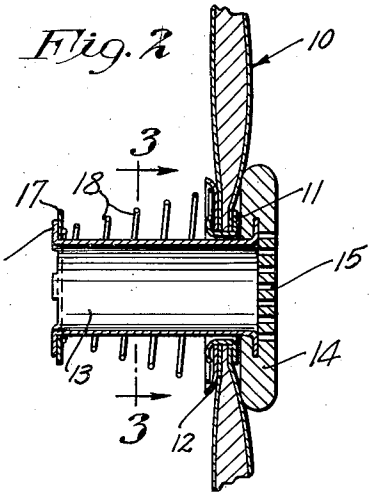


Fig. 3

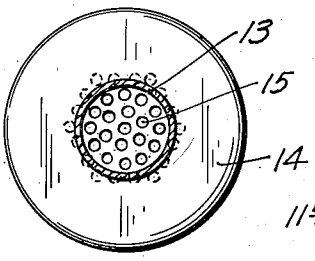


Fig. 4

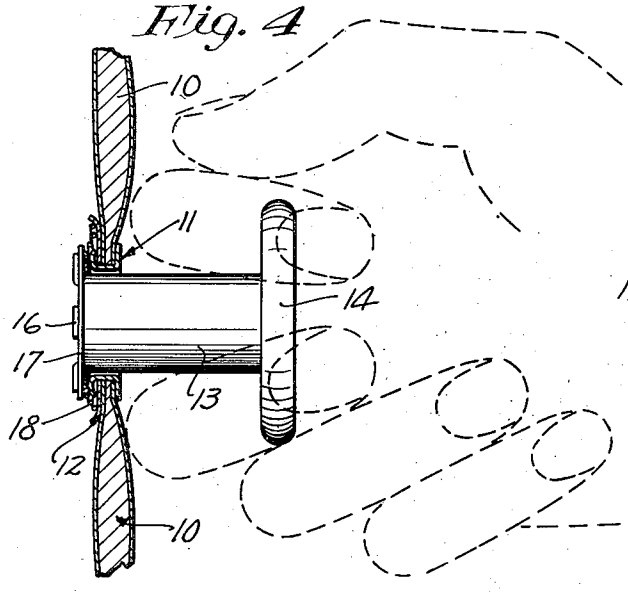
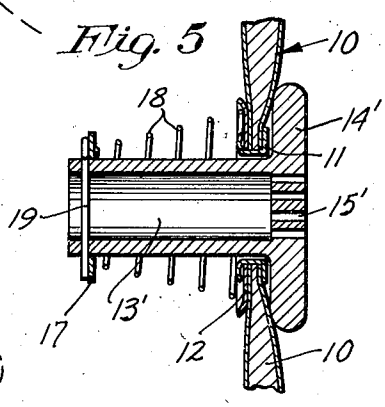


Fig. 5



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2,246,831

MATTRESS HANDLE

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Application May 20, 1940, Serial No. 336,102

3 Claims. (Cl. 5—345)

My present invention provides an extremely simple and highly efficient handle especially adapted for application to bed mattresses, but capable of being applied to other articles; and, generally stated, the invention consists of the novel devices, combinations of devices and arrangement of parts hereinafter described and defined in the claims.

The desirability of efficient handles applied to the covers or casings of mattresses is too well known to require comments other than to state that such handles should be convenient for use and applied in such a way that the casing or cover will not be torn in the lifting and handling of the mattress.

It is customary to apply two handles to each side of the mattress. In the earlier practice flexible handles were sewed or stitched to the mattress casing; but in general practice this kind of handle has been extensively or quite universally discarded. As an advance step, substantially U-shaped handles each involving two eyelets or grommets were provided; and in the use of such handles, applied two to each side of the mattress, it requires eight eyelets or four eyelets on each side of the mattress.

My present invention provides a simpler form of handle which, in itself, involves but one eyelet and one plunger-acting handle member combined with resilient means for retracting the plunger within the eyelet. As an additional and important novel feature the plunger-acting member is made tubular with an air passage or passages extending through the same so that the mattress will be air ventilated.

The elements above enumerated, as involved in an individual handle assembly, may take various forms, several of which are illustrated in the accompanying drawing wherein like characters indicate like parts throughout the several views.

Referring to the drawing:

Fig. 1 is a fragmentary view in perspective showing a portion of a mattress with one of the improved handles applied thereto;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is a section taken through the stem of a handle member looking in the direction of its annular extending, button-like head;

Fig. 4 is a view corresponding to Fig. 2 but with the plunger or handle element projected from the mattress and shown in full elevation;

Fig. 5 is a view corresponding to Fig. 2 but illustrating a somewhat modified form of the handle-forming plunger; and

Fig. 6 is a diametrical section taken through an eyelet in which the inner flange thereof is extended or expanded to greater diameter than the outside flange of said eyelet.

The mattress casing or cover is illustrated as of the conventional form being a flexible padded structure indicated as an entirety by the numeral 10, and made up of spaced sheets and interposed padding. The eyelet or grommet 11 is an externally channel-shaped annular metallic element, the flanges of which are clinched and clamped firmly against the inner and outer walls of the casing. An annular metallic disc or washer 12 is clamped against the inner wall of the mattress casing by the inner flange of the eyelet. This annular disc or washer 12 extends radially outward of the inner flange of the eyelet to give increased bearing surface against the casing and, in effect, constitutes an extension of the inner flange of said eyelet. In some instances this flange 12 may be formed integral with the inner flange of the eyelet but may commercially be best accomplished as a separate element and is advisably formed with an inwardly bent rim that prevents cutting of the mattress casing.

In the structure illustrated in Figs. 1 to 4 inclusive the plunger-acting element involves a tubular metallic stem 13 that quite closely fits but works freely through the eyelet. At its outer end this tubular stem is shown as provided with an out-bent flange onto which is cast or molded a button-like head or knob 14 that may be of various different materials such, for example, as the material known as Bakelite which is a baked plastic. In the zone of the tubular stem 13 the head 14 is formed with a plurality of air passages 15 that not only function as air passages, but give a button-like appearance to the head of the plunger.

At its inner end, the tubular stem 13 has outwardly bent circumferentially spaced lugs 16 that hold in place a washer 17. Surrounding the tubular stem 13 and reacting against the washer 17 and the flange 12, is a coiled spring 18 that preferably is of a helical type of such taper that the spring may be compressed into a common plane or into a flattened formation, as shown in Fig. 4. The lugs 16, in practice, will be outwardly bent after the plunger has been inserted through the eyelet and the spring 18 and washer 17 applied on the stem. While the form of spring illustrated and described is very desirable because of its extreme resilience and ability to be compressed into a small space, still various other resilient means may be employed for normally holding the

plunger with its head against the outer wall of the mattress casing.

In Fig. 5 the eyelet 11—12, the spring 18 and the washer 17 are the identical structures shown in the other views. However, in the structure illustrated in Fig. 5 the tubular stem 13' and plunger head 14' are cast, molded or otherwise integrally formed, and the head 14' is provided with air passages 15'. Also in this structure the washer 17 is held in position by and pressed against a cotter or pin 19 passed through perforations in the inner end of the stem 13'.

In the modified form of eyelet shown in Fig. 6 the eyelet 11*a* is provided with a dished inside flange 11*b* that is of considerably greater diameter than the outer end flange of said eyelet. This form of eyelet is capable of use with the plunger or handle-acting elements illustrated in the other views or with the other modified form of said plunger element.

From the foregoing it is evident that the improved handle or handle assembly is capable of various modifications within the scope of the invention claimed.

The plunger, consisting of the stem and head, may be made integrally from baked plastic, metal, or combinations of materials, and the yielding element, which is preferably the tapered helical spring, may take various other forms as long as it is applied to and operates to normally hold the plunger retracted with its head against the exterior of the mattress wall. The head of the plunger is preferably made much in the shape or design of a large button which normally is pressed against the exterior of the mattress wall and has an ornamental appearance not especially suggestive of a handle. The head of this plunger may be colored or of a colored material that will either match the color of the mattress or will stand out and properly blend therewith. As already indicated, the tubular stem with an axial air passage or passages serve to ventilate the interior of the mattress and are important.

In assembling the device, such as best illustrated in Fig. 2, the eyelet, of course, will be first applied, then the stem will be inserted through the eyelet, the spring and the washer will be applied on the stem, and then the lugs or ears 16 will be bent outwardly. In assembling the device illustrated in Fig. 5, the operation is the same except that the pin or cotter 19 will be the last applied or assembled element.

Fig. 4 illustrates the manner in which the plunger can be moved out to form a lifting handle.

What I claim is:

1. The combination with a flexible mattress wall, of a complete handle assembly comprising, a tubular eyelet applied through said wall and having annular end flanges clamped against the inner and outer sides of said wall, a closure for the outer end of said eyelet comprising a single finger embracing plunger having a headed outer end, said plunger working telescopically through said eyelet and having at its inner end stop means limiting the outward movement of said plunger, the head on said plunger being disc-shaped to cooperate with the material of said wall to normally enclose and obscure said eyelet and flange when limiting the inward movement of said plunger, and a spring applied around said plunger and compressed directly against said stop means and the inner side flange of said eyelet.

2. The structure defined in claim 1 in which said plunger is tubular and the head thereof is perforated for the circulation of air inward and outward through said plunger and head.

3. The structure defined in claim 1 in which said spring is a helical tapered spring, the large end of which is directly engaged with the inner flange of said eyelet and which spring is capable of being compressed into a flattened formation within a common plane.

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