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KIT FOR CONTROLLING MATTRESS FIRES

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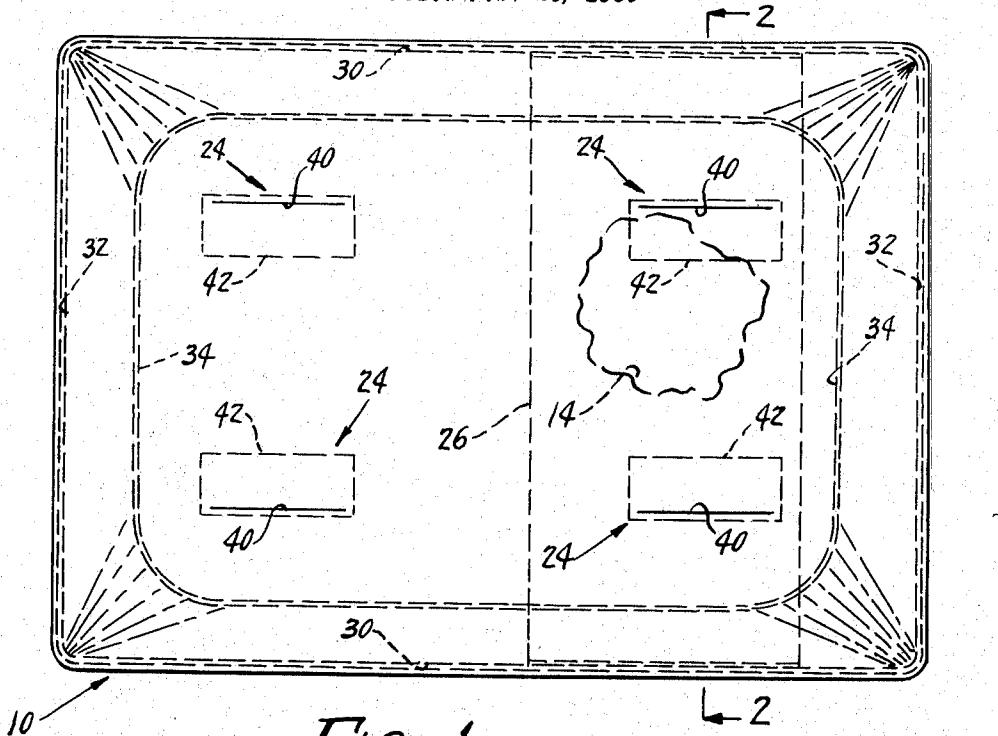


FIG. 1

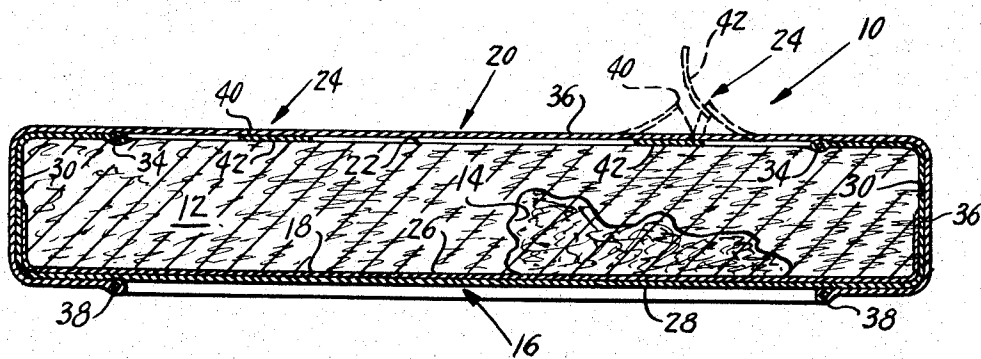


FIG. 2

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KIT FOR CONTROLLING MATTRESS FIRES

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ABSTRACT OF THE DISCLOSURE

Mattress encapsulating apparatus to isolate a burning mattress from the ambient atmosphere, the invention involving a method for sequentially superimposing a fire resistant shield across the burning area of one face of the mattress, enveloping the shield and sides of the mattress and a marginal edge portion of the second or opposed face of the mattress in an air impervious and fire resistant first cover, applying a second cover across the second or opposed face of the mattress, the second cover having a portion thereof extendable across the sides of the mattress and a peripheral marginal edge of the first cover in superimposed relation relative thereto, and inserting a fire suppressant material in the encapsulated area through a slit formed in the second cover.

This invention relates to a kit for controlling mattress fires, and more particularly to such a device which is particularly adapted for use in hotels, motels and other places where a large number of beds are located, although its use is not so limited.

It is well known that individuals often inadvertently set mattresses on fire by dropping a burning object thereon, such as a cigaret, cigar, match or the like. At present there are several means of combatting mattress fires which include dousing the mattress and room in which it is located with water, exposing the burning mattress to a fire suppressant fluid, such as carbon dioxide, foamite, carbon tetrachloride or the like, and physically moving the burning mattress from the room in which it is located to a site out of doors where the fire may be battled more conveniently.

It is quite apparent that each of these methods of fighting fire has its disadvantages. For example, the use of water in the room in which the burning mattress is located results in water damage to furniture and rugs contained therein. The use of fire suppressant fluids may necessitate the evacuation of nearby guest quarters as well as creating the possibility of furniture damage therefrom. Besides the obvious fire and smoke hazards, the removal of a burning mattress from the room in which it is located creates a certain amount of curiosity and panic among the guests of the hotel or motel thus creating a general feeling of insecurity which must necessarily be overcome by the management.

It is accordingly an object of the instant invention to provide a kit for controlling mattress fires in which the mattress may be encapsulated in the room in which it is located for smothering the fire and for allowing removal thereof without disturbing guests.

Another object of the instant invention is to provide a kit for controlling mattress fires in which the mattress is encapsulated with a fire suppressant fluid being injected into the encapsulated space to assist in extinguishment of the fire.

Still another object of the instant invention is to provide a kit for controlling mattress fires which may be re-used whenever an emergency exists.

A further object of the instant invention is to provide a kit of the character described which is inexpensive to manufacture, which may be re-used when the situation

demands, and which may be stored in a space of minimal proportions.

A more specific object of the instant invention is to provide a kit and method for controlling mattress fires in which a fire resistant blanket is juxtaposed to the burning area followed by the encapsulation of the mattress in a substantially air impervious envelope which is provided with at least one closable opening through which a fire suppressant fluid may be injected.

Other objects and advantages of the instant invention reside in the combinations of elements, arrangements of parts and features of construction and utilization, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawing wherein there is shown a preferred embodiment of this inventive concept.

In the drawing:

FIGURE 1 is a top plan view of a mattress encapsulated with the kit of the instant invention; and

FIGURE 2 is an enlarged transverse cross-sectional view of the instant invention taken substantially along line 2-2 of FIGURE 1 as viewed in the direction of the arrows, illustrating in dotted lines the openable closure through which a fire suppressant fluid may be injected.

Referring now to the drawing in detail, wherein like reference characters designate like elements throughout the several views thereof, there is shown generally at 10 a burning mattress encapsulated by the components of the kit of the instant invention in which a mattress 12, which may be of the sponge rubber, cotton or any other conventional variety has been ignited and has produced a burning area 14. The kit of the instant invention includes a heat-resistant shield shown generally at 16 juxtaposed to burning area 14 and first face 18 of mattress 12. The kit of the instant invention also includes a first cover shown generally at 20 overlying a second face 22 of mattress 12 opposite from first face 18 and burning area 14.

As will be pointed out more fully hereinafter, upon the discovery of the fire, heat-resistant shield 16 will be juxtaposed to burning area 14 with first cover 20 cooperating therewith to encapsulate mattress 12. One of a plurality of openable closures will be opened such that a fire suppressant fluid, such as carbon dioxide, foamite, carbon tetrachloride or the like, may be injected there-through into the space encapsulated by heat-resistant shield 16 and first cover 20.

As may be seen most clearly in FIGURE 2, heat-resistant shield 16 includes a fire resistant blanket 26, made of a non-flammable substantially impervious material, such as asbestos or the like, and a second cover 28 underlying substantially the entire extent of first face 18, extending around lateral side walls 30 and end walls 32, to overlie a portion of second face 22 of mattress 12. As may be seen best in FIGURE 2, the ends of fire resistant blanket 26 preferably extend along a portion of side walls 30 of mattress 12 although such is not imperative. As may also be seen best in FIGURE 2, second cover 28, which is preferably made of a non-flammable substantially impervious material, such as rubber, a rubberized fire resistant fabric or the like, is provided with a releasable fastening means 34 illustrated as an elastic strip for securing second cover 28 to mattress 12.

First cover 20 is made of a sheet 36 of material similar to that of cover 28 overlying the entirety of second surface 22 and extending downwardly around side walls 30 and end walls 32 to underlie a portion of first face 18. A releasable fastening means 38 illustrated as a continuous elastic band is used to secure first cover 20 to mattress 12 thereby insuring an overlapping relation with second cover 28 to encapsulate mattress 12. Closable opening 24 includes an elongate slit 40 formed in sheet 36

with a flap 42 being secured to sheet 36 adjacent slit 40. Flap 42 is arranged to underlie slit 40 and to be sandwiched between second face 22 of mattress 12 and sheet 36 to provide a substantially air-tight closure.

In the use of the kit of the instant invention, mattress 12 will be removed from the bed on which it is positioned with burning area 14 facing upwardly. Asbestos blanket 26 will be placed over burning area 14 with second cover 28 being secured about mattress 12 as indicated in FIGURE 2. Mattress 12 will then be turned over with first cover 20 being secured thereabout also as shown in FIGURE 2. It will be apparent that the encapsulation of mattress 12 will act to retard the fire in burning area 14 by removing the source of oxygen. It will also be noted that the encapsulation of mattress 12 will act to preclude the discharge of combustion products from mattress 12 thereby diminishing the possibility of panic among guests of the facility and thereby preventing these guests from becoming insecure.

Although mattress 12 may be transported in its encapsulated condition from the room in which it is located to further combat the fire therein, it is preferable to open closure 24 and immediately inject a quantity of fire suppressant fluid therethrough to further retard the combustion of mattress 12. This may be readily accomplished by a suitable carbon dioxide cartridge or other similar conventional fire fighting equipment. As soon as the desired quantity of fire suppressant fluid is injected into the encapsulated space, closure 24 may be manipulated to provide a substantially air-tight compartment. Mattress 12 and the assembled fire fighting kit may then be transported to any convenient disposal area where mattress 12 may be discarded.

It is now seen that there is herein provided an improved kit for controlling mattress fires which accomplishes all of the objects of the instant invention and other, including many advantages of great practical utility and commercial importance.

Since many embodiments may be made of the instant inventive concept, and since many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that the foregoing is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. A kit for controlling fires in mattresses having op-

posed first and second faces, side and end walls, said kit comprising: a fire and heat resistant blanket for placement over a burning area on the first face of said mattress, a first cover juxtaposed against and entirely covering said blanket, said first face, and said side and end walls, and at least partially covering said second face, means releasably connecting said first cover on said mattress, and a second cover imposed over the entire second face of said mattress and the side and end walls thereof and cooperating with said first cover to completely encapsulate said mattress, means releasably connecting said second cover on said mattress, said second cover having at least one closable opening formed therein for passing a fire suppressant fluid into the encapsulated space, said opening comprising at least one slit formed in said second cover.

2. A kit as defined in claim 1 wherein said first and second covers are formed of an air impervious material.

3. A kit as defined in claim 1 wherein said first and second covers are formed of a fire resistant material.

4. The method of extinguishing mattress fires comprising the steps of:

placing a fire resistant blanket adjacent the burning area;

encapsulating the mattress in a pair of overlapping cover members forming a substantially air impervious envelope; and

injecting a fire suppressing fluid into the envelope.

5. The method of claim 4 wherein the steps are performed in the stated sequence.

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