April 8, 1930. R. C. WASHBURN 1,753,813

HEAT INSULATING JACKET

Filed Oct. 25, 1926

Fig. 1.

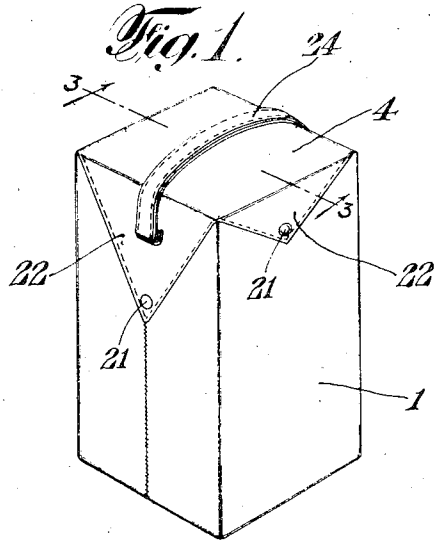


Fig. 2.

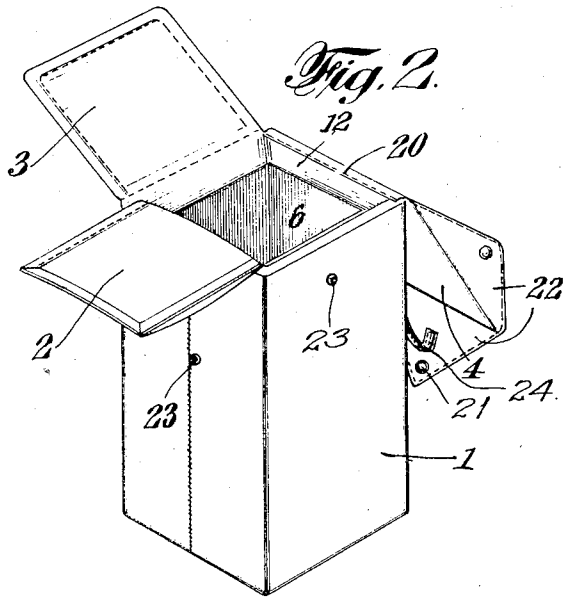
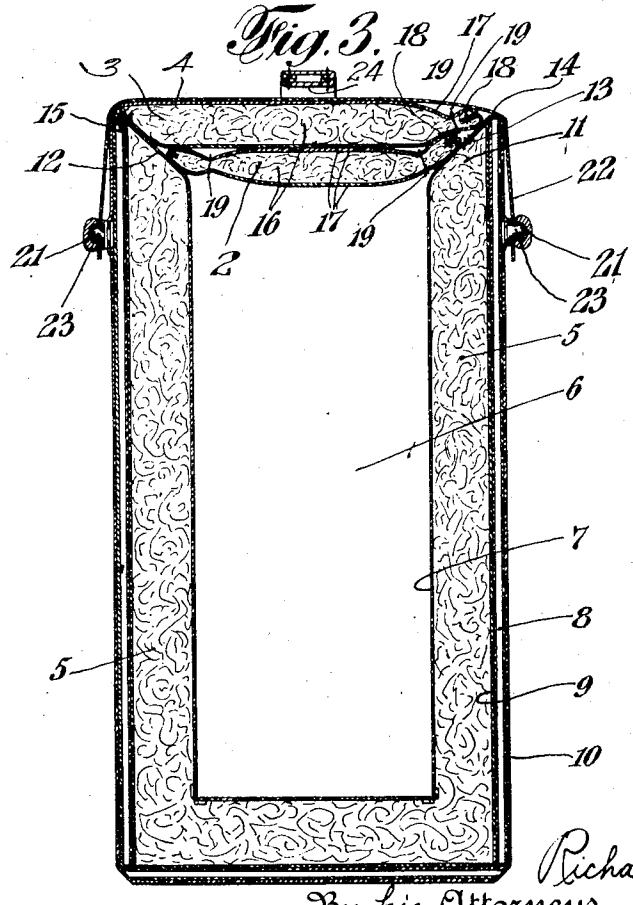


Fig. 3.



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UNITED STATES PATENT OFFICE

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HEAT-INSULATING JACKET

Application filed October 25, 1926. Serial No. 143,919.

This invention relates to a heat insulating jacket of the type adapted to receive a container holding either hot or cold materials and to prevent the escape or entrance of heat from or to the interior of the jacket.

One of the objects of the invention is a jacket of the above type having such means for closing it as will provide an effective seal.

Other objects and features of the invention will more fully appear from the following description and the accompanying drawings and will be particularly pointed out in the claims.

The drawings illustrate both in elevation and section a preferred form of the jacket and embody the broad principles of the invention.

In the drawings,

Fig. 1 is an elevation of the jacket as it appears when closed.

Fig. 2 is an elevation of the jacket as it appears when opened to receive a container.

Fig. 3 is an enlarged section on line 3—3 of Fig. 1.

The jacket includes the body 1, the inner closure 2, the outer closure 3 and the cap 4.

The body of the jacket, in the form illustrated in the drawings, is designed to be as nearly heat insulating as is possible. Heat insulating packing 5, such as hair or asbestos wool or other heat insulating material, is so positioned as to form a cavity 6 to provide an interior space for receiving a container of suitable dimensions, which is not shown in the drawings, for holding the hot or cold material which is to be maintained at the desired temperature. A rather large amount of the packing is preferably used so as to give a thick wall. A covering 7 of flexible water proof material, such as oil cloth or other water proof fabric, forms the lining of the cavity 6. This inner covering is resistant to the passage of heat and thereby renders the jacket more heat insulating than it would otherwise be. The covering also serves to hold the heat insulating material 5 in place and provides an interior for the jacket which may easily be washed or otherwise cleaned.

The wall of the jacket is stiffened and rendered more resistant to the passage of heat, by the reinforcing elements 8, which may be and preferably are pieces of heat insulating board, such as asbestos board, fiber board or corrugated paste board. An intermediate facing 9 may be used between the covering 7 and the reinforcing elements 8. Such intermediate facing is preferably of heat insulating water proof fabric. An outer covering 10, preferably of a heat insulating water proof fabric of some suitable color surrounds the entire body of the jacket.

In making the jacket the heat insulating packing is tapered at the upper part 11 thereof and the inner covering 7 follows the same general form by which arrangement the wall presents a beveled top 12 sloping from the upper edge of the body downwardly toward the inside thereof. This beveled top is soft and yieldable due to the fact that it comprises the flexible material of the inner covering 7 backed by the soft heat insulating material 5. The upper part of the inner covering is held in place by being fastened, preferably by stitches 13 to the outer covering 10 which, at 14, extends over the tops of the elements 8 on the three sides of the rectangular form of the jacket shown in the drawings. On the fourth side of the rectangular jacket shown in the drawings the inner covering 7 and the outer covering 10 are fastened together at 15 in such a manner that the outer closure 3 may also be fastened to the jacket.

The closures 2 and 3 are intended firmly to contact with the beveled top 12 of the wall over quite an extended area in order to prevent the movement of air into and out of the interior of the jacket. For this purpose the inner and outer closures 2 and 3 are so made that their edges are beveled to correspond to the bevel on the beveled top 12 of the wall and the edges of the closures which contact with the beveled top 12 of the wall are yieldable so that a snug contact is obtained. Two closures are used so that independent areas of contact may be obtained and the inner closure 2 is of such a size that it seats on the lower parts of the beveled top 12 while the outer closure is of such a size that it seats on the upper parts of said beveled top. Both of the closures are heat insulating in or-

der that as small an amount of heat as possible will pass through them. The closures may conveniently be made by enclosing soft heat insulating material 16, which may be the same as the heat insulating material 5 used in the body of the jacket, between facings 17 which are preferably flexible water proof material such as is used for the coverings 7 and 10. The closures may be made by sewing together, as indicated at 18, the two facings intended to form the inner and outer closures respectively and then placing the heat insulating material 16 between the facings. After the heat insulating material is in place the closures are preferably sewn as indicated at 19 by stitches which are placed a suitable distance from the edges of the respective closures in order to hold the heat insulating material in the edges of the closures. In this way the closures are always of the proper size and the edges of the closures are stiffened because the heat insulating material adjacent the edges of the closures cannot work back toward the center of the closures. The stitches 19 also serve to keep the facings of the respective closures in their proper positions and thus maintain the bevel on the edges of the closures. Both inner and outer closures are preferably swingably fastened along one of their edges to the corresponding edge of the jacket. One way of swingably fastening the closures to the jacket is illustrated in Fig. 3 where, at 15, the free parts of the facing material 17 are caught and sewn in between the ends of the inner covering 7 and outer covering 10 with the result that the closure is hinged to the jacket and a very strong line of connection is formed due to the quadruple thickness of the materials which are sewn together. The inner closure may be fastened to another edge of the jacket in the same manner.

The end of the jacket is covered and the closures securely held in place by the cap 4 which also effectively seals off the end of the jacket to further prevent the movement of air into and out of the interior of the jacket. The cap is preferably made of the flexible water proof heat insulating material of which the coverings 7 and 10 are made and may be fastened to the jacket in any suitable manner. As illustrated the cap may be permanently fastened to the jacket along one side by a line of stitching 20 and is removably fastened to the walls of the jacket in any suitable manner, for instance, by the snap fasteners, the outer parts 21 of which are on the flaps 22 of the cap and the inner parts 23 of which are permanently fastened in the wall of the jacket. The inner parts 23 of the snap fasteners are so positioned on the jacket that the flaps of the cap have to be stretched fairly tightly in order to permit the outer parts 21 of the fasteners to snap onto the inner parts. As a result of this the top of the cap is stretched quite tightly which causes the edges of the top of the cap to bear against the upper edges 14 of the body and also forces the closures downwardly. When the closures are pressed downwardly the edges of the closures are wedged against the beveled top 12 of the wall so that, due to the wedging action, an exceptionally close contact is obtained between the edges of the closure and the top of the wall. This close contact is facilitated by the fact that both the edges of the closures and the top of the wall are yieldable and movement of air into and out of the interior of the jacket is prevented. As a further measure to prevent the movement of air the inner closure, the outer closure, and the cap are, in the preferred form of the invention, attached to the body on different sides and thus in addition to preventing the movement of air by the engagement of the various contacting surfaces there is, on each of the three sides of the top of the jacket, a continuous strip of material joining the side of the jacket to a closure or to the cap.

A handle 24 may conveniently be fastened to the cap 4 in order to permit the jacket easily to be carried.

Although a particular and preferred form of the invention has been described, it is recognized that modifications may be made and it is to be understood that the invention is to be construed as broadly as the limitations of the claims, taken in conjunction with the prior art, may allow.

I claim:

1. A heat insulating jacket including a body having a heat insulating wall presenting a yieldable beveled top, an inner closure having a yieldable portion beveled to correspond to the bevel on said bevelled top, and an outer closure having a yieldable portion beveled to correspond to the bevel on said bevelled top, said inner and outer closures being movable relative to each other and of such a size that the beveled portions of the inner closure will seat on the lower parts of said beveled top and the beveled portions of the outer closure will seat on the upper parts of said beveled top.

2. A heat insulating jacket including a body having a heat insulating yieldable wall presenting a beveled top, an inner closure movable relative to said body and having a yieldable portion for contact with said bevelled top, an outer closure movable relative to said body and having a yieldable portion for contact with said bevelled top, and means to firmly press together the contacting surfaces of said closures and top to prevent the movement of air into and out of the interior of the jacket.

3. A heat insulating jacket including a body having a heat insulating yieldable wall presenting a beveled top sloping from the edge of the body toward the center thereof,

an inner closure movable relative to said body and having a yieldable portion for contact with said bevelled top, an outer closure movable relative to said body and having a yieldable portion for contact with said bevelled top, and means to firmly press together the contacting surfaces of said closures and top to prevent movement of air into and out of the interior of the jacket.

4. A heat insulating jacket including a body having a heat insulating yieldable wall presenting a beveled top sloping from the upper edge of the body downwardly toward the inside thereof, an inner closure having a yieldable portion for contact with said bevelled top and swingably fastened to one part of said wall, an outer closure having a yieldable portion for contact with said bevelled top and swingably fastened to another part of said wall, and means to firmly press together the contacting surfaces of said closures and top to prevent movement of air into and out of the interior of the jacket.

5. A heat insulating jacket including a body having a heat insulating yieldable wall presenting a beveled top sloping from the edge of the body toward the center thereof, an inner closure having a yieldable portion for contact with said bevelled top, an outer closure having a yieldable portion for contact with said bevelled top, a cap to fit over the end of said body, and releasable means to fasten down said cap to firmly press together the contacting surfaces of said closures and top to prevent movement of air into and out of the interior of the jacket.

6. A heat insulating jacket including a body having heat insulating reinforcing elements, a covering over said elements, an insulating packing between said elements and covering, said covering and packing being so arranged as to present a thick wall having a beveled top; an inner closure having a yieldable portion for contact with said bevelled top; and an outer closure having a yieldable portion for contact with said bevelled top.

7. A heat insulating jacket including a body having heat insulating reinforcing wall elements, a covering over said elements, an insulating packing between said elements and said cover, said packing and covering being so arranged as to present a thick wall having a beveled top sloping from the upper edge of the body downwardly toward the inside thereof; an inner closure having a yieldable portion for contact with said bevelled top, an outer closure having a yieldable portion for contact with said bevelled top, and means to firmly press together the contacting surfaces of said closures and top to prevent the movement of air into and out of the interior of the jacket.

8. A heat insulating jacket including a body having reinforcing elements, a heat insulating water-proof covering over said elements, a heat insulating packing between said elements and said covering, said packing and covering being so arranged as to present a thick wall having a beveled top sloping from the upper edge of the body downwardly toward the inside thereof; an inner closure having a yieldable portion for contact with said bevelled top and swingably fastened to one part of said wall, an outer closure having a yieldable portion for contact with said bevelled top and swingably fastened to another part of said wall, and means to firmly press together the contacting surfaces of said closures and top to prevent movement of air into and out of the interior of the jacket.

9. A heat insulating jacket including a body having heat insulating reinforcing wall elements, a flexible heat insulating water-proof covering over said elements, and soft heat insulating packing between said elements and covering, said covering and packing being so arranged as to present a thick wall having a yieldable beveled top sloping from the upper edge of the body downwardly toward the center thereof; an inner closure having a yieldable portion for contact with said bevelled top; an outer closure having a yieldable portion for contact with said bevelled top, a cap to fit over the end of said body; and means to fasten down said cap to firmly press together the contacting surfaces of said closures and top to prevent the movement of air into and out of the interior of the jacket.

In testimony that I claim the foregoing, I have hereunto set my hand this 15th day of October, 1926.

RICHARD C. WASHBURN.