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HEAT BAG

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Fig. 1.

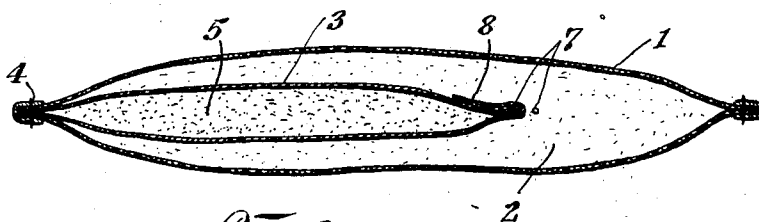
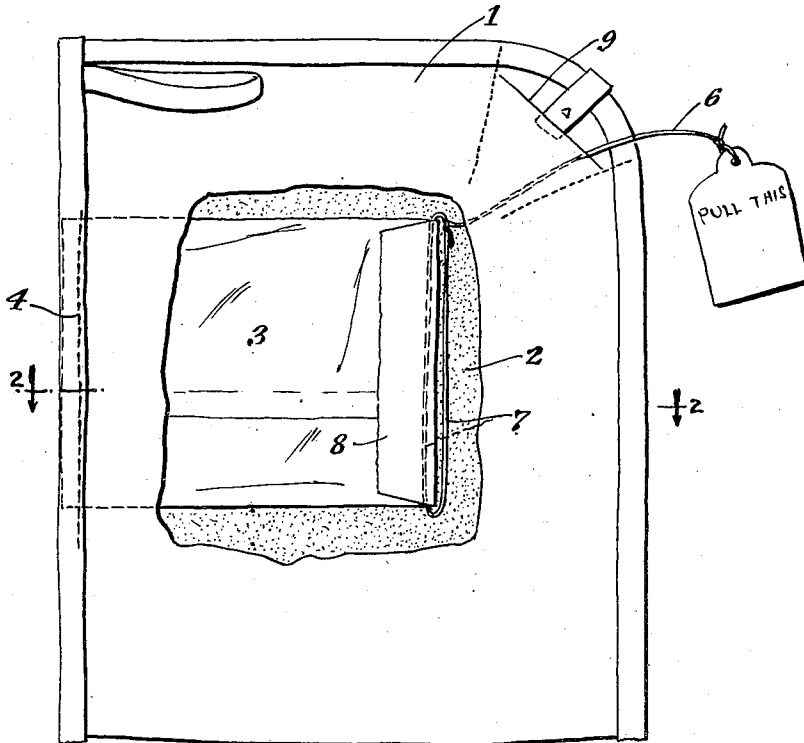


Fig. 2.

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HEAT BAG

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3 Claims. (Cl. 126—204)

The invention relates to heat bags of the type wherein the heat is produced by chemical reaction between compounds contained within the bag, and has for its primary object to provide a bag construction which will avoid deterioration of the chemical constituents, or reaction there-
between prior to the time that the heat bag is put into service, such bag construction however being capable of ready manipulation and adjustment to enable the heat producing reaction to be instituted whenever desired.

Heat bags of the general type under discussion have been made for many years wherein the heat was produced by reaction between alkali chlorides such as ammonium chloride or potassium chloride with iron filings upon the addition of a small amount of water, the chemicals being mixed dry and packed in a bag of canvas or like fabric, and the water being poured in when the bag was put in service. In accordance with the present invention the bag is constructed to provide separate compartments in which the chemicals are separately contained so that they do not come into contact with each other prior to the time when the bag is put into service; and the bag is so constructed that the partition between the two compartments may be readily broken by the user whenever he wishes to put the bag into service. At this time the bag may be kneaded to mix the chemicals thoroughly and water added or such other steps taken as will promote the institution of the heat producing reaction, depending upon the particular chemicals used. Thus premature inter-action and consequent deterioration of the chemicals may be avoided, without interfering to any substantial extent with the ready and convenient use of the bag when desired. In the annexed specification taken in conjunction with the accompanying drawing, I have described and illustrated a preferred construction of heat bag adapted to operate in accordance with this invention, but it should be understood that the disclosed bag is only illustrative of the principles of the invention in its broader aspects. In the drawing—

Fig. 1 is a side view, with certain parts cut away, of a heat bag constructed in accordance with the present invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1 looking in the direction of the arrows.

In the illustrated form of the invention, one of the compartments above mentioned is constituted by a flexible bag 1 of canvas or similar material and which contains one of the constituents

entering into the chemical reaction—for example iron filings 2, which are granular in form.

The other constituent of the heat producing chemical mixture—for example potassium chloride or ammonium chloride, either of which is readily obtainable in crystalline or granular form—is separately stored in another compartment which is so constructed and related to the first mentioned compartment that the partition or division wall between the two compartments may be readily destroyed by the user. In the specific form of the invention which is illustrated, this second compartment is constituted by an inner bag 3 of readily frangible material such as glaccine paper, the mouth of the inner bag 3 being shown as caught under a row of stitching 4 extending along one edge of the bag 1. The chemicals contained within the inner bag 3 are designated by numeral 5 in Fig. 2 and it is possible for the user to destroy the partition between the two compartments and thus enable the constituents to be mixed, merely by pinching the material of bag 1 so as to grasp the bag 3 and tear it open, without breaking or otherwise injuring the bag 1, the material of bag 3 which defines the partition wall between the two compartments, being weaker than the canvas or the like of which bag 1 is constructed. But in a more specific aspect of the invention I prefer to provide a bag opening or tearing member for the second mentioned compartment which is directly accessible and operable from the exterior of bag 1. In the illustrated form of the invention this last mentioned compartment opening member takes the form of a cord or like strand 6 which has a loop 7 encircling a side flap 8 on one edge of the bag 3, one end of the strand 6 extending outwardly through a filling slit or opening 9 in the bag 1 through which water may be poured when desired. Thus by pulling on the strand 6, the bag 3 will be torn open and the bag 1 may then be kneaded to mix the constituents thoroughly and promote chemical interaction between them.

While the bag is in storage and prior to use, the chemical constituents are thus effectively segregated from each other so that no premature chemical interaction takes place between them, bag 3 being preferably of impervious material such as glaccine paper above mentioned, which effectively seals off its contents, but the division wall between the two compartments may be readily destroyed, and the ingredients mixed by the user without breaking or otherwise impairing the efficacy of the outer bag 1.

Heat bags of the above described character will

usually be sold as complete articles of manufacture, suitable for use as refills in separate larger envelopes, and will also be sold in conjunction with such larger envelopes, a fresh heat bag such as is above described being substituted as needed.

5 While a specific embodiment of the invention has been disclosed it should be understood that from the standpoint of the invention in its broader aspects, many changes may be made therein
10 without departing from the invention, within the scope of the appended claims.

I claim:

1. A heat bag of the character described including an envelope of canvas or the like having
15 therein a compartment containing one ingredient of a heat productive chemical mixture in granular form, and a bag of paper or the like contained within said envelope, said bag containing
20 another ingredient of such a heat productive mixture in granular form, and said bag being constructed and arranged to be readily frangible by the user to enable said ingredients to be mixed within said envelope.

2. A heat bag of the character described including an envelope of flexible fabric having
25 therein separate flexible walled compartments, one of said compartments containing one ingre-

dient of a heat productive chemical mixture in granular form, and the other compartment containing another ingredient of such a heat productive mixture in granular form, said heat bag including a flexible partition between said compartments which is constructed and arranged to be readily frangible by the user, said partition being constructed and arranged to afford communication between said compartments when broken, and thereby enable said ingredients to be mixed within the flexible envelope.

3. A heat bag of the character described including an envelope of canvas or the like having therein a compartment containing one ingredient of a heat productive chemical mixture in granular form, and a bag of paper or the like contained within said envelope, said bag containing another ingredient of such a heat productive mixture in granular form, and said bag being constructed and arranged to be readily frangible by the user to enable said ingredients to be mixed within said envelope, said envelope having a filling opening therein communicating with said first mentioned compartment, and a tearing member engaging said bag and extending outwardly through said filling opening.

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