March 18, 1924. 1,487,114

W. H. McINTYRE

HOT PACK

Filed April 10, 1922

Fig. 1.

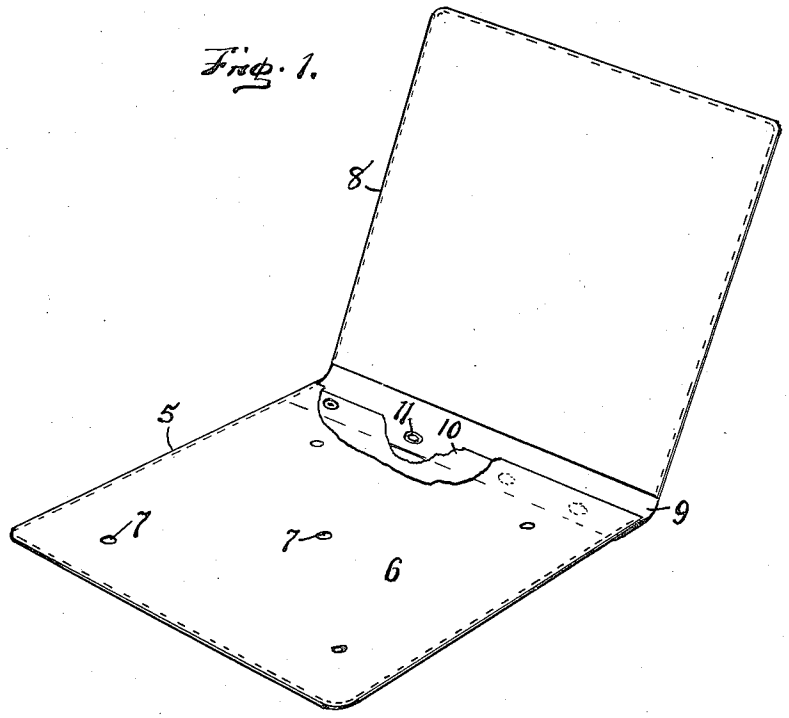


Fig. 2.

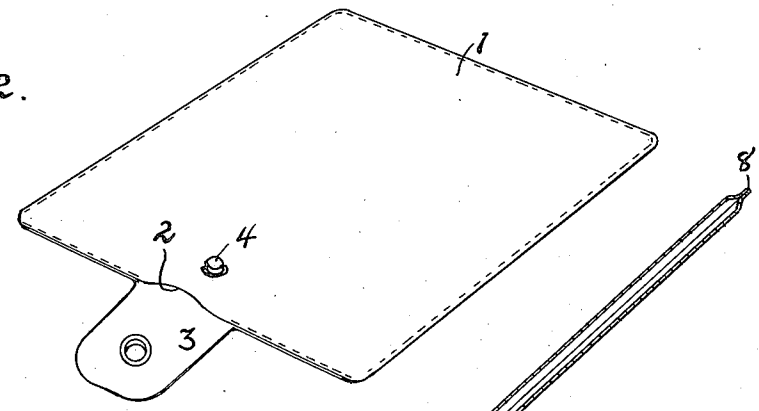
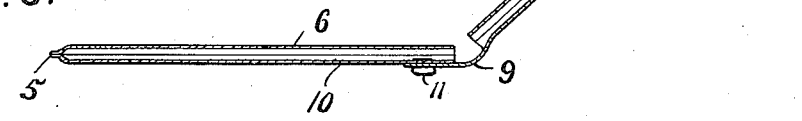


Fig. 3.



Inventor

William H. McIntyre

By H. G. Burns Attorney

Patented Mar. 18, 1924. 1,487,114

UNITED STATES PATENT OFFICE.

WILLIAM H. McINTYRE, OF CHICAGO, ILLINOIS.

HOT PACK.

Application filed April 10, 1922. Serial No. 551,424.

To all whom it may concern:

Be it known that I, WILLIAM H. McINTYRE, a citizen of the United States of America, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hot Packs, of which the following is a specification.

This invention relates to improvements in hot packs for supplying warmth for protracted periods, and the object thereof is to afford a device by which warmth may be applied to the body and in which the heat is generated as it is absorbed. Also, it is an object of the invention to provide means by which the extent of the heat generated may be predetermined. A further object is to provide a convenient container for the heat generating member which will shield the body of the patient from direct contact therewith, and the outer covering of which may be detached and separately laundered.

These objects are accomplished by the construction illustrated in the accompanying drawings in which:—

Fig. 1 is a perspective view of a container for the heat generating member, parts thereof being broken away;

Fig 2 is a perspective view of a pouch forming part of the heat generating member; and

Fig. 3 is a longitudinal section of the container.

The characters appearing in the description refer to parts shown in the drawings and designated thereon by corresponding characters:

The invention is comprised of a heat generating member and a container therefor. The heat generating member consists of a pouch 1 having an opening 2 at one end which is adapted to be closed by an adjoining flap 3, a snap fastener 4 being provided for securing the flap in closed position. The pouch is made of close woven fabric, such, for example, as duck, kaki and the like, and the pouch is partially filled with a heat generating substance prepared according to the following formula:

No. 1. Coarse grey iron turnings, 15 oz; Fine grey iron turnings, 3 oz. (Immerse in water until rust coating is formed).

No. 2. Water 2 pints, FeCl. 3 1½ lbs. (Mix No. 1 with 1 fluid oz. of No. 2 and dry).

The container consists of a pocket 5 preferably made of rubberized cloth or other waterproof flexible material. The top thickness 6 of the pocket has several widely separated perforations 7 for the escape of vapor. To the open end of the pocket 5 is separably attached a jacket 8 having a flap 9 which is secured to the underthickness 10 of the pocket by a series of snap-fasteners 11. The jacket is preferably made of flannel or other soft flexible fabric and is open along its ends adjacent the pocket.

In utilizing the invention a quantity of the heat generating substance is placed into the pouch, the quantity being limited sufficiently to admit of flexibility of the pouch. When thus charged the pouch is slipped into the pocket 5 of the container and water, to the extent of approximately 1 fluid oz., is then introduced into the pouch so that the substance therein becomes moistened. By shaking the device the water thus introducd spreads so that the substance becomes more or less uniformly moistened. The flap 3 is then closed and the pocket 5 containing the heating element is folded into the jacket through its adjoining open end, and thus the outer surface of the outer flannel jacket only is left exposed.

The FeCl. 3 coating on the iron, when moist attacks the iron, and heat is generated as a consequence which is imparted through the container to the body of the patient.

The pouch being of a more or less porous material tends to retain and spread the moisture, and the pocket 5 of the container being non-porous prevents the escape of moisture and tends to retard the escape of the heat, and the jacket also acts as an insulator of the heat and shields the body of the patient from direct contact with the pocket.

It has been found that the invention thus utilized will generate sufficient heat to be serviceable for many hours, and that by the introduction of additional water from time to time the operation may be repeated several times before renewal with a new charge of the heat generating substance becomes necessary.

What I claim is:—

1. A hot pack comprising a pouch; a heat generating substance enclosed in the pouch; and a container having a pocket adapted to

receive the pouch and having also a jacket detachably secured to the pocket and adapted to completely envelop the pocket.

2. A hot pack comprising a heat generating member and a container therefor, the heat generating member consisting of a flexible porous pouch and a heat generating substance contained in the pouch, and the container consisting of a pocket adapted to receive said member and a jacket detachably secured to the pocket and adapted to completely envelop the pocket.

3. A hot pack consisting of a flexible porous pouch, a waterproof pocket for containing the pouch, a flannel jacket adapted to completely envelop the pocket, and a heat generating substance contained in the pouch adapted to become active when moistened.

4. A hot pack comprising a heating member consisting of a porous pouch containing a substance adapted to generate heat when moistened, an impervious pocket adapted to receive the heat generating member, and a flannel jacket for the pocket detachably secured thereto.

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

WILLIAM H. McINTYRE.

Witnesses:
W. F. LILLEY,
J. C. KENNEDY.