

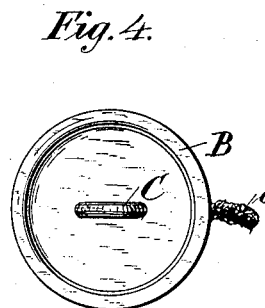
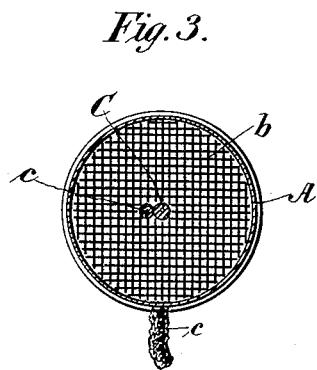
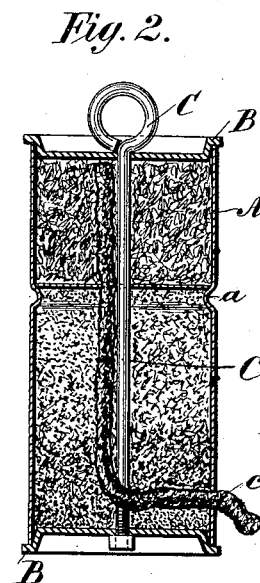
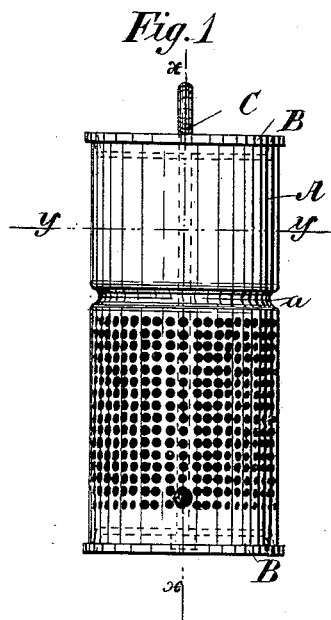
(No Model.)

J. H. SHERWOOD.

FIRE KINDLER.

No. 386,499.

Patented July 24, 1888.



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FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 386,499, dated July 24, 1888.

Application filed November 4, 1887. Serial No. 254,298. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. SHERWOOD, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Fuel Supply and Firing Packages, of which the following is such a full, clear, concise, and exact description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of firing-packages which contain an indestructible absorbent—such as infusorial earth, asbestos or mineral wool, and the like, which takes up coal oil or other volatile fuel and retains the same while being burned, admitting of repeated charging and use without destruction.

As heretofore constructed, fuel-packages have been made with a cylinder of asbestos inclosed in a net of reticulated wire-gauze wrapped around the cylinder to protect it from abrasion, and in some instances with a perforated or open-work metallic shell filled or supplied with the asbestos, and some packages have also been made with a solid cylinder having perforated or open ends; but the various packages as heretofore constructed are subject to serious objections when put to practical use. The reticulated or open-work cylinders have permitted the flame to surround the package from one end to the other, thereby allowing the consumption of the fuel from all portions of the outer surface adjacent to the absorbent material, and the supply of fuel very soon became exhausted, and when the cylinder was made solid, but provided with open work ends, a draft was created through the cylinder and the flame took an inward course, thereby highly heating the package, which not only soon became deprived of its fuel, but was itself destroyed by the fire after being in use a short time.

The object of my invention is to overcome the objections heretofore existing, and to provide a firing-package having a suitable chamber capable of retaining oil where it will not be subject to a direct flow to or direct action of the flame, but which is automatically supplied to the portions adjacent to the flame as

the same become deprived of their original charge, and thus by continuing the feed prolong the duration of the fire; and to these ends the invention consists in a package the casing of which is perforated or constructed with open-work for a portion of its length only, while the remainder is solid and forms a reservoir for an additional quantity of oil, as will be hereinafter more fully described, and pointed out in the claim.

In the drawings, Figure 1 is an elevation of the package containing the absorbent material. Fig. 2 is a central longitudinal section of the same, taken on the line *xx* of Fig. 1. Fig. 3 is a horizontal cross-section taken on the line *yy* of Fig. 1, and Fig. 4 is a plan view of the package.

In the drawings, A represents the casing; B B, the heads or ends, which are each shown as provided with a hole through which they may be secured by a rod, C, in the usual manner.

The shell A is preferably made of tin, having a lap-joint, so as to avoid the use of solder. The shell is perforated for a portion of its length only, and between the perforated portion and the solid part I preferably make a crease or groove, *a*, which serves to strengthen the cylinder, and also affords a convenient seat for a reticulated or open-work partition, *b*, which may be employed to divide the package into two compartments communicating with each other through the openings in such partition, the portion of the casing surrounding one compartment being solid, while around the other compartment it is perforated or open. The open-work partition *b* is of particular utility when it is found desirable to use different absorbent materials in the two portions of the package, as it keeps the absorbents separate, while allowing a flow of oil from one to the other, and also allows a separate renewal or removal.

To complete the package ready for use, the casing is filled or packed with infusorial earth or other proper absorbent, as indicated in Fig. 3; but I prefer the infusorial earth, owing to its great absorbing properties; but, if desired, one compartment may be filled with this or other suitable material and the other with some other absorbent. I sometimes also find it desirable to insert an incombustible absorb-

ent wick, *c*, which leads to a suitable point for ignition, and also extends into both chambers or compartments, the object being to afford a convenient means of lighting, and also to assist in drawing the oil to the supply-chamber when the package is being filled. The package being completed, it may be dipped in a vessel of oil in the usual manner, in which case the oil will pass through the perforations in the casing, saturate the infusorial earth, and be drawn into the compartment surrounded by the solid portion, charging the absorbent therein. The oil in this compartment is not subject to the immediate action of the flame, which when lighted surrounds the perforated portion only, drawing the oil it consumes through the perforations; but as the absorbent nearest the flame is being deprived of its oil the supply is kept up not only by the oil from the interior of the package, but by the flow to the exhausted portions of the oil from the supply-chamber.

If desired, the package may have such a chamber or compartment at each end to supply an intermediary perforated or open por-

tion, or the casing may be made with a series of alternating solid and perforated portions, thereby lengthening the package by duplicating the respective solid and perforated portions of the sides of the package shown.

It will be apparent that in the use of a firing-package constructed as described the duration of the fire will be increased in proportion to the capacity of the additional supply chamber or chambers, as the case may be.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A fuel supply and firing package containing incombustible absorbent material and having solid ends and a portion of the length of its casing formed with open-work and a portion thereof solid, said solid portion forming a reservoir for an additional supply of fuel, substantially as described.

JAMES H. SHERWOOD.

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