Aug. 24, 1943. R. EWING 2,327,628

THERMAL SHIELD FOR TANK HEADS

Filed March 14, 1940

FIG. 1.

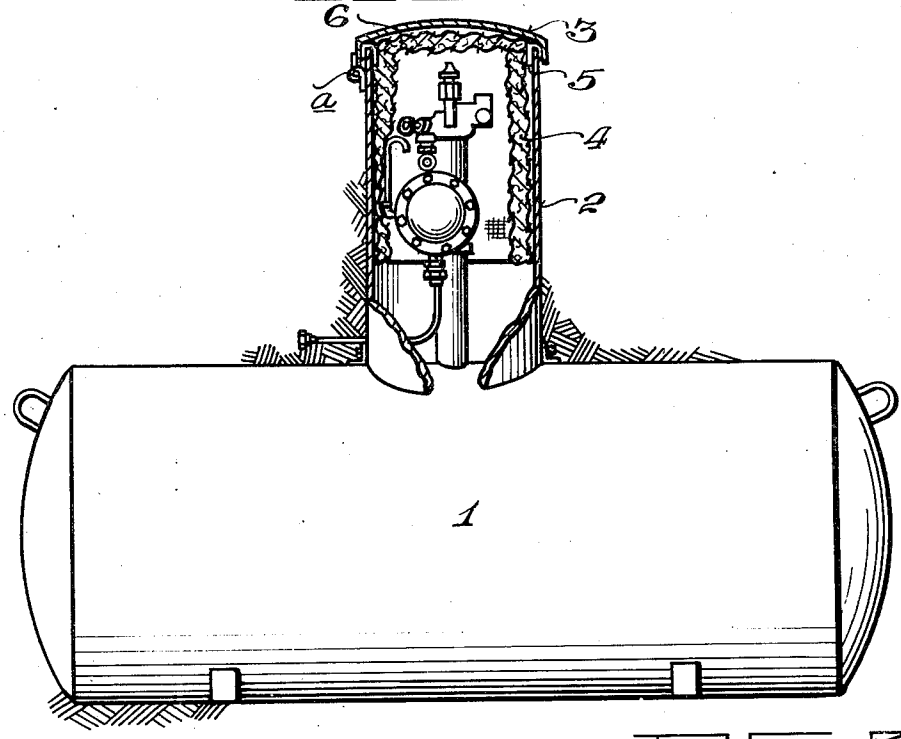


FIG. 3.

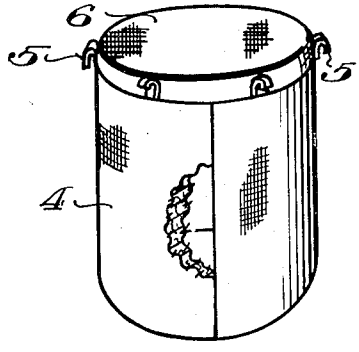
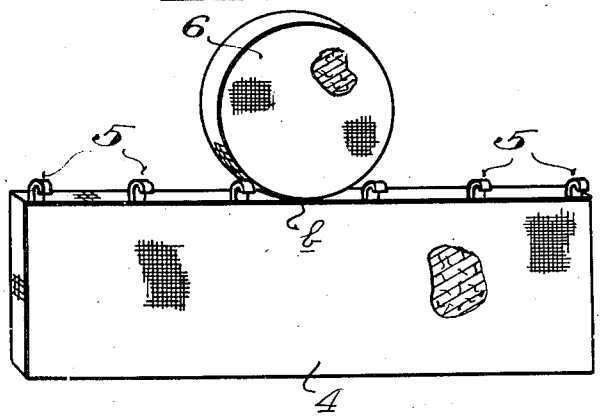


FIG. 2.



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THERMAL SHIELD FOR TANK HEADS

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Application March 14, 1940, Serial No. 323,864

1 Claim. (Cl. 220—85)

This invention relates to protective insulating liners and more particularly to insulating liners for the heads or domes of butane plants.

The principal object of the invention is to afford a protecting medium for the valve mechanism of a butane tank, which, if exposed to radical exterior temperature changes, would cease to operate efficiently and in some cases, create a hazard to life and property. Gas tanks of the character specified are popular for supplying heating and lighting service for rural homes. These tanks are buried in the ground and it is difficult and impractical to provide exterior insulation as a protection for the operative parts of the plant, hence the invention affords a means by which protection is insured, yet without interfering with the effects of latent heat from the earth below the immediate surface where such heat is beneficial.

Another object of the invention is to provide an insulator capable of being readily removed for replacement or to effect repair of any part of the mechanism enclosed thereby. Moreover, the device, in being arranged for conformity with the dome of the plant, a portion thereof is so related to the body that it will be in the dome cover and be displaced when the cover is lifted for recharging the tank.

With the foregoing objects as paramount, further and lesser objects as well as salient features of construction will become manifest as the description proceeds, taken in connection with the accompanying drawing, wherein:

Figure 1 is a side elevational view of a butane plant showing the preferred use of the invention.

Figure 2 is a perspective view of the invention extended, and

Figure 3 is another perspective view showing the form taken by the invention when operatively installed.

Continuing with a more detailed description of the drawing, reference is primarily made to Figure 1 in which 1 designates the usual form of butane tank which, together with the most part of the head or dome 2 thereof, is buried in the ground. In order to gain access to the mechanism of the head to charge the tank with gas or for other purposes, a cover 3 is provided and hinged at *a*.

In extremely cold weather, even though the tank is below the surface of the ground, the gas line sometimes freezes and in changeable weather, this presents a hazard in that the line will thaw as quickly as it freezes and should any burners be open and burning at the time of freezing, the flame will be extinguished to release gas into the building when the thaw occurs. On the other hand, in extremely hot weather, expansion of the gas takes place resulting in waste and a similar hazard.

Accordingly, the invention affords a thermal shield for the head mechanism in the form of a body 4 of fabric, rectangular in shape and filled with an insulating substance, preferably rock wool. The body is formed into a cylindrical roll, the ends meeting, as shown in Figure 3, so that it will conform to the inner surface of the dome 2. Hooks 5 are secured at spaced points along one edge of the body in order that they will overreach the top of the cylindrical dome to suspend the shield in operative position for ready removal and so that it will in no way interfere with ordinary access to the mechanism.

Connected higedly to the body 4 at *b* is a circular top portion 6 which snugly conforms to the inside of the dome cover 3. Therefore, when the cover is in place, the entire head mechanism is enclosed by the shield except for the bottom of the latter which is purposely left open to latent earth heat to trap the same, and which is beneficial in maintaining the mechanism in operative condition.

It is to be understood that while the invention has been shown as providing a removable thermal shield for the purposes set forth, it may likewise form a permanent part of the tank and installed at the time the tank is constructed, if so desired.

Moreover, other minor changes and modifications may be resorted to from time to time to conform to varying requirements without departing from the intent and purposes of the invention as set forth in the appended claim therefor.

What is claimed is:

The combination with the dome and cover of butane tanks, of a pad of insulating material of greater length than width, a substantially circular pad of the same material hingedly connected at one point to a point on one side of said first pad midway between its ends, the said pads each consisting of an outer covering of fabric having a filler of said insulating material of uniform thickness throughout said covering and means forming hooks for suspending said first pad in said dome in rolled form, to lie against the walls thereof whereby said circular pad will be conformably received in the cover of said dome.

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