Aug. 15, 1950 C. C. CAMDEN, JR., ET AL 2,518,863

HEATING JACKET FOR AUTO DRAIN VALVES

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Fig. 1.

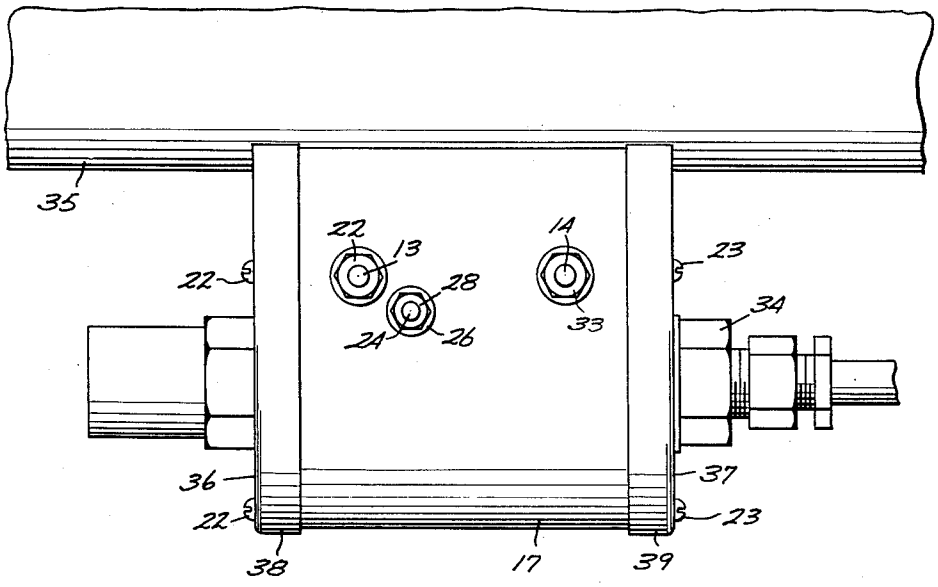


Fig. 5.

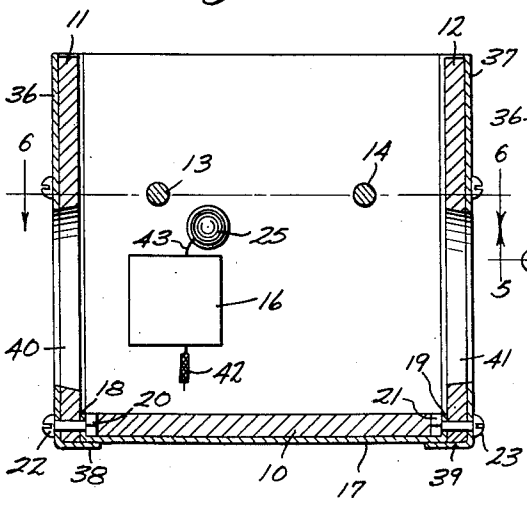
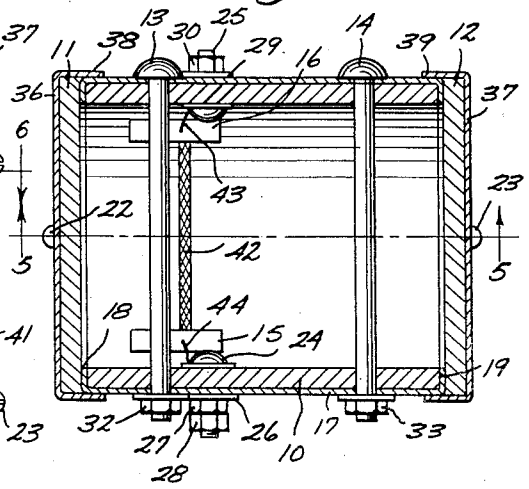


Fig. 6.



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Fig. 2.

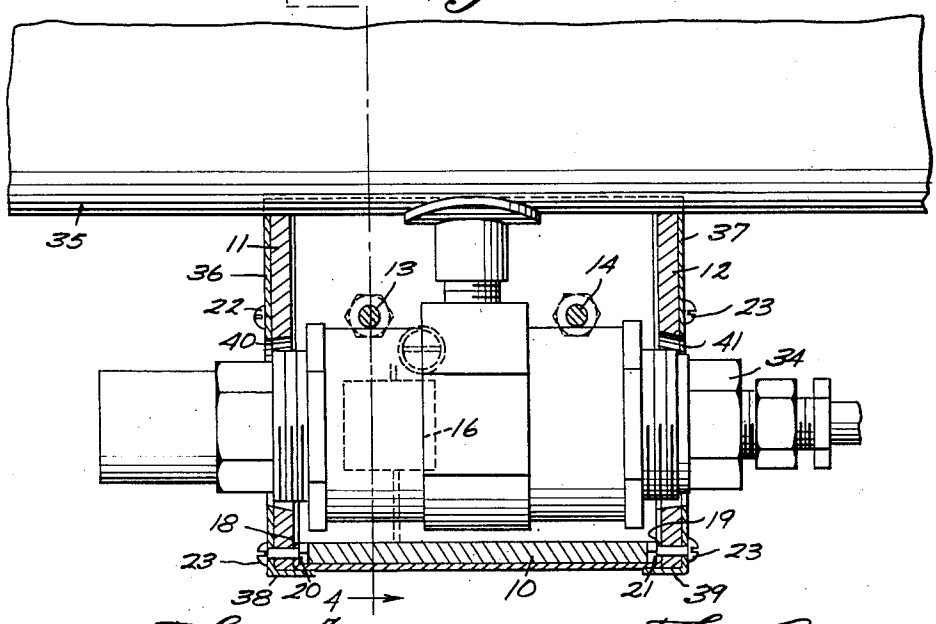


Fig. 4.

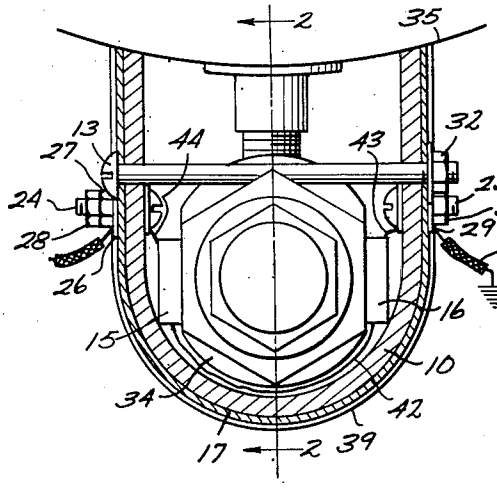
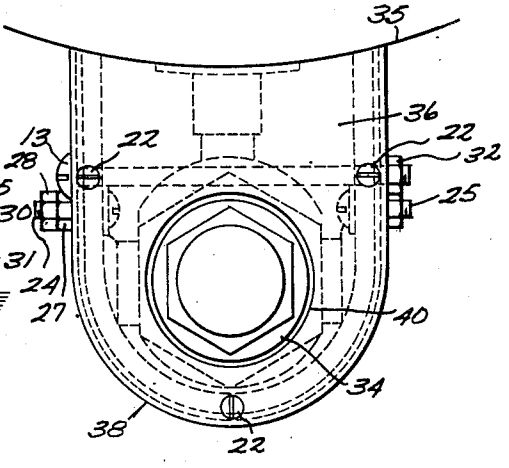


Fig. 3.



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HEATING JACKET FOR AUTO DRAIN VALVES

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Application October 17, 1947, Serial No. 780,324

4 Claims. (Cl. 219—39)

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This invention relates to heating jackets and enclosures for valves and particularly drain valves where condensation and the like accumulate in the valve and are subject to freezing, and in particular a jacket having insulated walls and electric heating units therein and means whereby it may be suspended around the drain valve of an air tank or the like.

The purpose of this invention is to provide a jacket adapted to be manufactured independently that may readily be installed around a drain valve which will maintain a relatively high temperature around the valve.

Various methods have been employed for applying heat to valves, pipes and joints, and the like but as these are usually wrapped around the device it is difficult to repair or replace a valve or part thereof, and furthermore as heating elements require special handling it takes an expert to make a proper installation. With this thought in mind this invention contemplates a comparatively small unique jacket that may be placed on the market as an article of manufacture which is provided with electric heaing elements and that may readily be installed on a valve or the like.

The object of this invention is to provide an insulated electrically heated jacket that may readily be installed around a drain valve of a tank or the like and supported by stay bolts extending through the walls of the jacket and resting on the valve structure.

Another object of the invention is to provide a heating jacket for automatic drain valves that is not fitted to the valve so that it may be used on valves of different types.

A further object of the invention is to provide a heating jacket for drain valves and the like which is of a simple and economical construction.

With these and other objects and advantages in view the invention consists of the new and novel combination, construction, and arrangement of parts as hereinafter more fully described, set forth in the claims appended hereto, and disclosed in the accompanying drawings forming part hereof, wherein:

Figure 1 is a side elevational view showing the heating jacket installed on a drain valve under a tank.

Figure 2 is a similar view taken on line 2—2 of Figure 4 showing a vertical section through the jacket with parts in elevation.

Figure 3 is a view showing an end elevation of the jacket.

Figure 4 is a cross section through the jacket taken on line 4—4 of Figure 2.

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Figure 5 is a vertical longitudinal section through the jacket taken on line 5—5 of Figure 6.

Figure 6 is a sectional plan through the jacket taken on line 6—6 of Figure 5.

Referring now to the drawings wherein like reference characters indicate corresponding parts the heating jacket of this invention includes a U-shape body 10 of relatively thick asbestos insulation, end cover sections 11 and 12 also of thick asbestos insulation, stay bolts 13 and 14, and heating units 15 and 16.

The outer surface of the body 10 is covered with a sheet of thin metal 17 having flanges 18 and 19 at the ends and threaded inserts 20 and 21 are embedded in the insulation and secured to the inner surfaces of the flanges to receive screws 22 and 23 that hold the end covers to the ends of the body. The body is also provided with threaded studs 24 and 25 providing posts or terminals for connections to the heating units, the stud 24 having an insulating washer 26 separating the nuts 27 and 28 from the metal sheet 17, and the post 25 having a metal washer 29 which is held against the metal sheet to form a ground by a nut 30, as shown. A ground connection 31 is illustrated in Figure 4, and it will be understood that the connection to a ground may be formed in any manner. The stay bolts 13 and 14 are positioned in the side walls of the body 10 and these are secured by nuts 32 and 33 as shown in Figure 6. The stay bolts are positioned to rest on the upper surface of the valve 34 as shown in Figure 4 and thereby provide means for clamping the jacket on the valve with the upper edges of the jacket against the lower surface of a tank 35.

The end cover sections 11 and 12 are also formed with thin sheet metal 36 and 37 on the outer surfaces thereof and the edges are provided with flanges 38 and 39 that overlap the sides of the body as shown in Figure 6. The ends are provided with openings 40 and 41 that are positioned over the connections to the valve as shown in Figure 2.

The heating units 15 and 16 may be of any suitable type and these are connected by a wire 42 with one unit connected to the ground by a wire 43 and the other to the terminal or stud 24 by a wire 44 providing an electrical connection.

With the parts arranged in this manner the heating jacket may readily be installed on an automatic drain valve by placing the body section upward around the body of the valve and inserting the stay bolts which, as illustrated in Figures 2 and 4, will hold the body upward in position around the valve. The ends may then be placed

over the ends of the valve and secured to the body by the screws as shown and described. The heating elements may then be connected to any suitable source of electric current with the terminal at one side forming a ground and the other providing an electrical connection.

It will be understood that any suitable insulating material may be used and the outer shell may also be made of plastic or the like.

It will also be understood that other changes may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. A heating jacket for drain valves and the like comprising a U-shaped body section of comparatively thick insulating material having an outer shell, end sections providing closures at the ends of the body also with insulating material having outer shells, means securing the end sections to the body, and stay bolts through the body adapted to rest upon upper surfaces of the valve to support the jacket on the valve.

2. In a heating jacket for drain valves and the like, a U-shaped body of insulating material, stay bolts through the body positioned to engage upper surfaces of the valve to support the body with the upper edges thereof engaging the under surface of a tank on which the valve is mounted, ends of insulating material having flanges overlapping the ends of the body and having openings therein to receive ends of the valve, and means securing the ends to the body.

3. In a heating jacket for drain valves, the combination, which comprises, a U-shape casing having inwardly extending flanges at the ends with threaded inserts on the inner surfaces of the flanges, a continuous lining of insulating material covering the inner surface of the casing, end covers with flanges at the sides shaped

to correspond with the cross section of the casing and with the flanges overlapping the sides of the casing, said end covers having centrally disposed openings therethrough, linings of insulating material covering the inner surfaces of the end covers, screws in the end covers positioned to correspond with the threaded inserts in the ends of the casing for securing the end covers to the casing, stay bolts extending through the casing positioned to engage the upper surface of a valve on which the jacket may be installed to support the jacket around the valve, and heating elements in the casing with one terminal thereof grounded through the casing and the other providing an electrical connection.

4. In a heating jacket for drain valves of tanks and the like, a U-shape insulated casing having an outer wall, stay bolts extending through the casing and wall positioned to support the casing on a valve or the like, insulated end covers with outer walls and having openings therethrough, said walls of the end covers having flanges overlapping the wall of the casing, and means providing heat on the inside of the casing.

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