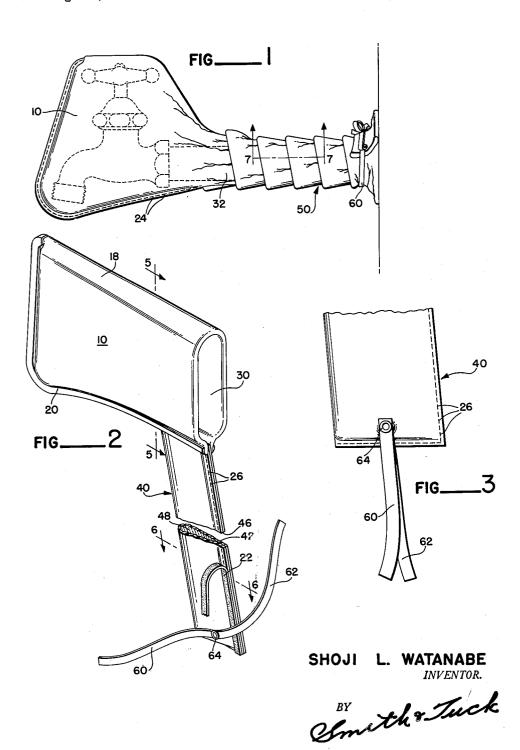
THERMAL INSULATING UNIT FOR FAUCETS

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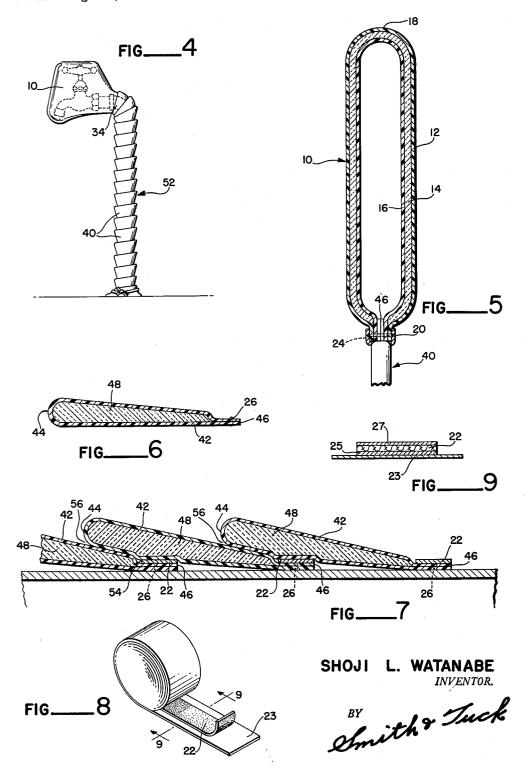
2 Sheets-Sheet 1



THERMAL INSULATING UNIT FOR FAUCETS

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2 Sheets-Sheet 2



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THERMAL INSULATING UNIT FOR FAUCETS
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5 Claims. (Cl. 154—44)

This present invention relates to the general art of insulating means for outdoor faucets and their connecting pipes and, more particularly, to an insulating unit made of sheet plastic protected insulation which is so arranged that it may be slipped onto the faucet quickly and then the insulation completed by wrapping a straplike insulating tube around the pipe in a spiral manner so as to protect the faucet supply pipe as well.

The protection of outdoor faucets from freezing has always posed quite a problem to the house owner and this is particularly true where, as a matter of convenience, a number of outdoor faucets may be employed for the watering of lawn areas at various locations on the building lot. Many devices have been produced for this purpose. However, they all pose quite a problem particularly in their storage during the principal part 30 of the year when there is no need for such protection. Many home owners improvise protection from the elements for their faucets out of various insulating materials, newspapers and the like. In so many cases, however, this makeshift insulation becomes wet, entirely losing its insulating value. In this present invention, it is believed, I have overcome many of the faults of the arrangements used in the past and have provided an insulating unit in which the insulating material is fully encased in sheet plastic so that it cannot become wet 40 and which can be very quickly applied to a faucet. A further advantage of my present insulating unit is that it folds very compactly when it is removed from the faucet and can thus be stored very conveniently for subsequent use from year to year.

A principal object of my present unit therefore is to provide a flexible insulating unit which can be conveniently and quickly applied to an outdoor faucet, by persons of limited experience with such devices, and which can be easily removed and folded in a compact manner to facilitate convenient storage when the cold season

A further object of this invention is to provide an inexpensive unit which can make use of the cheaper forms of insulating materials by the expedient of protecting these materials from the weather by enclosing the same in a watertight plastic covering.

A further object of this invention is to provide an insulating unit in which one portion provides a hood to cover the faucet itself and which has angularly attached to it a flattened tube of insulating material so anchored as to naturally start a spiral lay of the tube as it is wound around the base of the faucet and any connecting supply pipe and in which the protective tube is finally terminated by thong means so that it can be conveniently tied in place.

Further objects, advantages and capabilities will be apparent from the description and disclosure in the drawings, or may be comprehended or are inherent in the device.

Figure 1 is a side elevation showing an outdoor faucet, as commonly used, extending from the wall of a house

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and showing the same as protected by my insulating unit, the faucet itself being shown in dotted lines.

Figure 2 is a broken view illustrating my insulating unit before it is put in place.

Figure 3 illustrates the extreme end of the flattened tube portion of my device showing the thongs employed for securing the same in place.

Figure 4 is a side elevation showing my insulating unit protecting an outdoor faucet of the type where the 10 supply pipe rises out of the ground itself.

Figures 5 and 6 are cross-sectional views taken along similarly numbered lines of Figure 2.

Figure 7 is a fragmentary sectional view taken along the line 7—7 of Figure 1.

Figure 8 is a perspective view illustrating a satisfactory form of adhesive tape used to reinforce some of the seams in my device.

Figure 9 is a cross sectional view taken along the line

9-9 of Figure 8. Referring to the drawings, throughout which like reference characters indicate like parts, the numeral 10 designates the slip-on covering or hood for the faucet itself. This portion of my device is made in the form of a hood and is preferably formed after the showing of 25 Figure 5 in which an outer protective sheet of plastic 12 forms an impervious protective covering. This should be of plastic material of fair weight and it is found that polyethylene sheet stock of a thickness of approximately .005 inch is adequate. Inside of this is thermo-insulating material indicated at 14. Inside of the hood proper is an inner lining 16, again made of sheet plastic material, but here the weight of material can be appreciably reduced and material of approximately .002 inch has proven to be very satisfactory. The insulating material 35 14 disposed between the two sheets of plastic 12 and 16 may be any type having a relatively high resistance to thermal conductivity. It is to be noted, however, that when the plastic coverings are sealed at their margins the insulating material is fully protected from any type of dampness and as a result the very cheap types of insulating material may be employed. For instance the short fiber cotton batting which normally has but limited utility serves very effectively for this purpose and provides adequate insulation. It follows that any of the various bat or felted types of insulation may be used satisfactorily.

A preferred construction of the hood portion 10 is shown particularly in Figures 2 and 5 in which a composite sheet formed of the plastic layers 12, 16 and the included insulating layer 14 is folded along the top indicated at 18 so as to first provide against any possible leakage at the top of the unit and second to insure that a full thickness of insulation will be present without compression, as often happens at the joined margins. Where strain can occur at the sealed margins it has been found desirable to use reinforcing material as indicated around the two sides of the hood 10 at 20 and at the joined margins of the flattened tube portions at 22. A preferred joining of the margins is to provide 60 for adhesive joining and with certain types of plastic materials heat sealing, and to reinforce these margins where unusual strain may occur by first using stitching as at 24 and 26, to provide additional strength at this point and insure that the reinforcing materials as 20 will be held in place.

Referring to Figure 2 it will be noted that an open end 30 is provided for the hood portion 10. This is a convenience in that the hood can be easily slipped over the faucet to be protected. It is then necessary to collapse this open end, after the showing of Figures 1 and 4 as at 32 and 34, respectively. It is desirable to provide a convenient starting of this collapsing means so as to in-

sure a spiral, overlapping wrapping, as is indicated in of tube 40, are then wrapped around the end of the Figures 1 and 4. To achieve this a flattened tubular tube after the showing of Figures 1 and 4 and knotted to compress the end and make it relatively air and moisture tight and further to hold the spiral wrapping from loosening during periods of use. It is believed that it will be apparent from the above

description and the disclosure in the drawings that the invention comprehends a novel construction of a thermal

insulating unit for faucets and the like.

Having thus disclosed the invention, I claim:

1. A faucet insulating unit, comprising in combination: a faucet hood providing a slip-on covering, said hood being open at one end and adapted to enclose a faucet; said covering having an inner plastic lining of lightweight plastic sheet material, a layer of thermal insulating material and an outer plastic covering of greater weight than said inner lining; a flattened tube of plastic sheet material having a strip of thermal insulating material enclosed within said tube; said tube secured to the lower margin of said slip-on covering adjacent the open end thereof and at an angle of greater than 90° between the longitudinal axes of said covering and said tube; said tube disposed to provide a spiral, overlapping thermal protective cover for the water pipe supplying the faucet, being protected, means adapted to hold the tube in place on said water pipe and said inner plastic lining, said outer plastic covering, and said tube being flexible and deformable.

2. The subject matter of claim 1 in which said faucet slip-on covering, comprises: a composite insulating covering which is folded along its upper margin to provide a leak-proof covering top and having an open end adapted to admit a faucet; and a seam joining the folded covering along the end opposite said open end and along the bottom of said covering.

3. The subject matter of claim 1 in which said flattened tube comprises: a sheet of flexible plastic material folded lengthwise and seamed to join the longitudinal edges to form a flat tube, distortable when applied to a water pipe under pressure; a flattened filling of insulating material disposed in said tube and a seam joining the unsecured end margins of said tube to provide a sealed protective covering for said insulation.

4. The subject matter of claim 3 in which the insula-The preferred wrapping technique is to first slip hood 45 ation employed in said flattened tube is formed thicker along the folded margin of said tube than along the seamed edge to facilitate the spiral winding of said tube about a water pipe and tend to equalize the thickness of insulation when the tube is in use.

5. The subject matter of claim 3 in which a reinforcing double faced adhesive tape is employed along the longitudinal seam of said tube to reinforce the same and insure the positioning of the tube by means of its adhesive faces, when the tube is in use.

insulating member 40 is provided. This tube is constructed after the showing of Figures 6 and 7 in which a strip of sheet plastic material 42 is folded as at 44 and joined together at 46 either adhesively or by heat sealing and then a reinforcing tape 22 is employed which assists in resisting undue strain which might be occasionally imposed during the wrapping procedure. The reinforcing tape 22 is preferably of the type having pressure 10 or heat setting adhesives on each side of the tape depending on which type of closure treatment is provided. A suitable tape is illustrated in Figures 8 and 9 where a protective tear-off covering 23 is employed with adhesive coatings at 25 and 27. Fresh tape is preferably 15 applied each time the protective device is used. Inside the tube, thus formed, is disposed the insulating material 48. This insulating material can be particle material that is formed and held together by plastic or other adhesives or it may be felted, material shaped generally to comply with the transversely tapered form of the tube 40. As this is a device intended for use by housewives

and others of limited experience in handling equipment of this order, it has been found desirable to attach tube 40 to hood 10 substantially after the showing of Figure 2 and 5 with the axis of tube 40 forming an angle greater than 90 degrees with the longitudinal axis of hood 10. When so attached the angle of attachment should be that which would normally conveniently start a person in $\ ^{30}$ the wrapping operation with the proper lead to the wrappings, so that the showing at 50 in Figure 1 and 52 in Figure 4 can be easily achieved. Attention is particularly invited to Figure 7 where it will be noted that the adhesively positioned reinforcing material 22 forms a seal and abutment at 54, which provides that no moisture will find its way into the space between successive wrappings of tube 40; otherwise, the V-shaped margin of the overlap indicated at 56 would tend to direct moisture inwardly, particularly as shown in Figure 4. It is 40 to be noted, however, that any such moisture would not directly affect the insulating qualities of the insulating material since it is fully enclosed in waterproof sheet material:

10 over the faucet and to then start the spiral wrapping of the flattened tube 40, first around the end of the head to close the open end 30 and to then continue the wrapping as shown at 50 and 52. The tubular member 40 should be applied under considerable endwise tension to insure a degree of distortion, as shown in Figure 7, and thus provide a snug engagement of the various turns with each other and the pipe being protected. Where rains and melting of snow are to be expected at intervals, the tape 22 should be employed. This tape is normally supplied in the protected roll, as indicated in Figure 8, and is applied from the roll adjacent the margin 46, as shown in Figure 7, and the protective covering 23 discarded. The adhesive tape 22 insures further that the successive turns of tube $\tilde{\textbf{40}}$ will be maintained substantially as illustrated.

When the wrapping is completed the thongs as 60 and 62, which are pivotally secured at 64 to the end

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