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INSULATING COVER FOR TOILET FLUSH TANK

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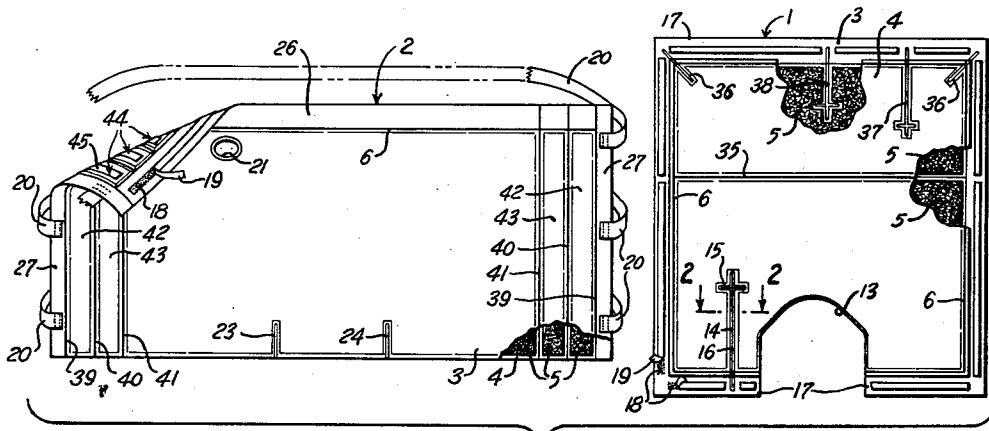


Fig. 2.

Fig. 1.

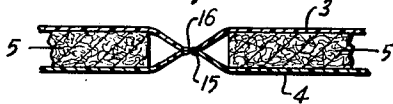


Fig. 3.

Fig. 4.

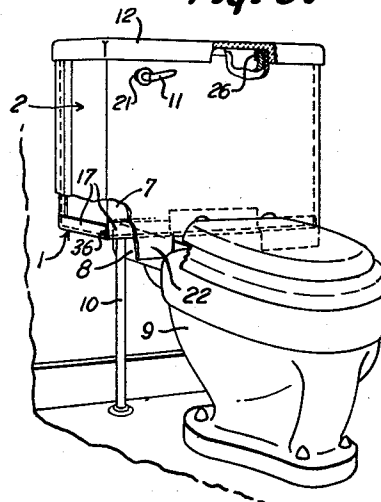
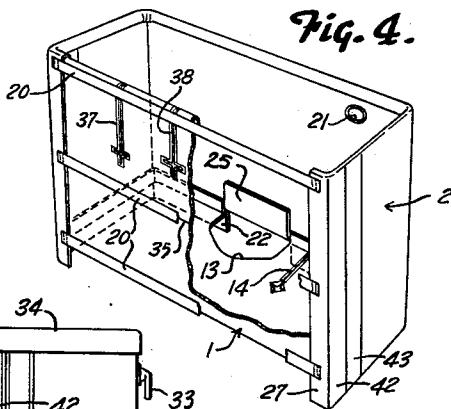


Fig. 6.

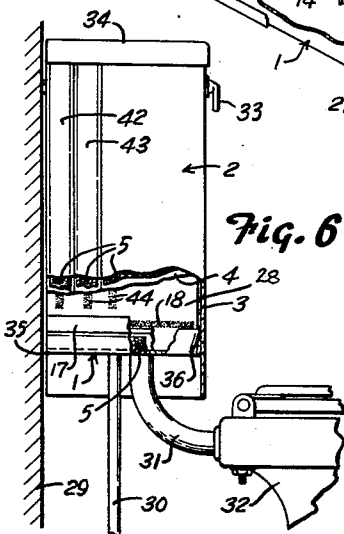


Fig. 7.

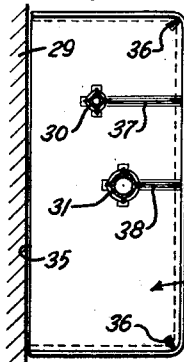
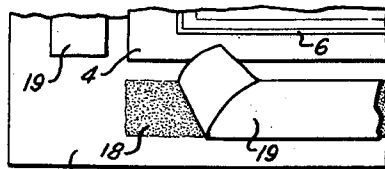


Fig. 5.



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3,068,490

INSULATING COVER FOR TOILET FLUSH TANK

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17 Claims. (Cl. 4-68)

This invention relates to an insulating cover for a toilet flush tank and particularly to a universal cover of two-piece design including a decorative exterior front and side panel and a back and bottom panel which may be applied to all standard free-standing flush tanks and wall-hung flush tanks.

Generally, the usual toilet construction includes a flush tank of vitreous material which holds a supply of water for flushing the toilet. An inlet water supply line is connected through a bottom wall opening to the tank and to a cold water supply for replacement of the water which is used. A discharge pipe connects an opening in the bottom of the flush tank to the toilet bowl which is normally mounted immediately adjacent thereto. Although the size and configuration of the tanks vary with manufacturer and model, the location of the inlet pipe and the discharge pipe are well standardized.

Generally, the water supply to the flush tank is relatively cold and consequently, the moisture in the air adjacent the tank under certain conditions condenses on the outer surface of the tank. The condensed water flows down along the exterior wall of the tank falling to the floor immediately below the tank. The problem is particularly severe during summer when the warm air carries a relatively high percentage of water vapor. Particularly on very humid days, substantial amounts of condensate collect about the base of the toilet beneath the flush tank and produces an unsightly and untidy appearance as well as possibly damaging the adjacent floor area.

Various means have been suggested for preventing the condensation of the moisture in the air or for collecting and removing the condensed moisture.

The prior art has suggested provision of a drip pan, with or without an absorbing material therein, which is mounted immediately below the flush tank to collect the condensate. The accumulated water in the drip pan is periodically removed. It has also been suggested that insulating liners be provided covering the interior wall of the tank up to the normal water level in the tank. The insulating liner such as shown in U.S. Patent 2,832,964 to Se Breny, prevents the cold water from cooling of the tank wall and consequently eliminates condensation. An insulating internal liner however fills a certain amount of the water space and thus reduces the volume of water available for flushing. The liner must be constructed as a unitary assembly to prevent leakage of the cold water between the liner and the tank wall. Further, the liners generally must be custom constructed to the interior configuration of the tank and are not readily adapted for existing tanks. A variety of liners must also be provided for the various sizes of tanks.

Another solution proposed has been an encircling outer decorative and insulating cover such for example as shown in U.S. Patent 2,527,418. As disclosed therein, an insulating jacket is provided including a first piece adapted to extend around the front and the two sides of the flush tank. This piece is secured in place by a plurality of hanging hooks adapted to bend over the upper open end of the flush tank. A separate bottom cover is provided having openings adapted to be aligned with the inlet and discharge pipes. The bottom cover is secured in place by straps which are secured to the side portions of the front panel and which extend laterally across the bottom cover to lock the bottom piece in place.

Although the various previous suggestions can be satis-

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factorily applied to any one flush tank, the various manufacturers of flush tanks employ different designs. There are two basic designs of flush tanks normally described as a free-standing flush tank or a wall-hung tank. For example, see U.S. Patent 2,788,043 to S. S. Dolnick for a general illustration of the two varieties of flush tank mountings. The free-standing tank is normally secured to a supporting ledge extending horizontally backwardly from the toilet bowl. The wall-hung tank is secured, as the name implies, to the adjacent wall and connected by a discharge pipe to a slightly spaced toilet bowl. Generally, the sizes of the various tanks vary with the manufacturers and with the model. The location of the inlet pipe and the discharge pipe from the flush tanks is standardized for each of the two standard types of flush tanks; that is, the free-standing tank and the wall-hung tank.

The present invention is directed to a universal insulating cover for flush tanks. The cover is adapted to be readily interconnected and applied to either the free-standing tank or the wall-hung tank of the various common configurations and manufacture.

In accordance with the present invention, the complete cover includes a front-side panel adapted to be secured to cover the front wall and the side walls of the flush tank and a back-bottom panel adapted to cover the back wall and the bottom wall or only the bottom wall of the flush tank. Each of the panels is formed as a double wall covering of an impervious material preferably a thermoplastic sheeting in which seams can be formed by heat sealing or welding employing actual heat and pressure or a radio frequency heating unit. The latter heat sealing method is particularly desirable for polyvinyl plastic because the seal is effected very rapidly. An insulating filler, preferably a fiber glass mat variety, is held between the walls or sheeting of the covering. The double wall impervious covering of this invention hermetically encloses the insulation and prevents moisture absorption which can reduce the effectiveness of the insulation.

The back-bottom panel is provided with a marginal area or flaps carrying a suitable adhesive which is adapted to readily stick to the exterior flush tank wall to hold the panel in position. One edge of the back-bottom panel is provided with a recess to accommodate the supporting ledge structure of the free-standing flush tank. A criss-cross seam area is provided spaced from the recess with the axis of the criss-cross coinciding with the axis of the inlet pipe when the back-bottom panel is secured with the recess mounted adjacent the discharge pipe support of the free-standing flush tank. The one seam line preferably extends to the edge of the panel such that the seam may be separated to allow mounting of the panel to the bottom wall of the tank without removing of the inlet water pipe. If a thermoplastic material is employed to form the outer walls or sheets of the cover, the seam lines can be readily formed by heat sealing the walls together with a sufficient width to allow cutting there-through.

The back-bottom panel projects upwardly across the back of the flush tank to at least the level of the critical area being the normal water level in the tank. A lateral seam line divides the upper portion of the back-bottom panel into a separable upper section which can be removed from the complete panel without exposure of the insulation. This separable section of the back-bottom panel is employed separately in connection with the wall-hung flush tank and is provided with suitable criss-cross seam lines having intersection points located to coincide with the axis of the inlet water pipe and the discharge water pipe of a wall-hung flush tank.

The back-bottom panel is thus constructed for application to either form of flush tank. The panel is made suffi-

sufficiently large to cover the largest standard flush tank and when applied to small tanks, the excess material is merely wrapped around the adjacent edge of the flush tank.

The front-side panel of the present invention is made of a sufficient depth to generally extend downwardly of the greatest standard depth tank to form an encircling apron around the lower edge of the tank. The width of the front-side panel is sufficiently great to extend around the front and two sides and partially around the back of the largest standard free-standing flush tank. Suitable elastic bands or the like resiliently interconnect the ends of the front-side panel and secure the front-side panel in close fitting engagement to the free-standing flush tank.

The front-side panel includes suitable adhesives for attaching of the panel to a wall-hung flush tank. Further, the front-side panel is provided with a series of adjustment sections on the opposite ends of the panel. Each of the sections is defined by a vertical seam of sufficient width to allow cutting of a section from the end of the panel without exposing the adjacent insulating material. In the installation of the front-side panels, the adjusting sections are removed to provide the closest complete coverage. The panel is then applied to the flush tank with the adhesive securely holding the panel in position.

The present invention thus is directed primarily to providing an insulating cover having a thermoplastic shell for supporting an insulating filler. Selected internal seams are provided in the thermoplastic shell construction which readily permit form-fitting of the cover in a universal manner to the complete range of flush tanks of generally recognized and commercially available sizes. The structure of the present invention is simply and readily installed without any specific required skill while providing a close effective insulating fit to the tank wall and about the various water connections.

The drawing furnished herewith illustrates the best mode presently contemplated for carrying out the invention.

In the drawing:

FIG. 1 is an elevational view of a two-piece unit including a front-side panel and a back-bottom panel constructed in accordance with the present invention;

FIG. 2 is a fragmentary sectional view through a seam line taken on line 2-2 of FIG. 1;

FIG. 3 is a front perspective view of a toilet construction employing a free-standing flush tank;

FIG. 4 is a rear perspective view showing the two panels in the assembled relation with the free-standing flush tank of FIG. 3 removed for clarity of illustration;

FIG. 5 is an enlarged fragmentary view illustrating the adhesive attachment of the invention shown in FIGS. 1-4;

FIG. 6 is a side elevational view of a toilet assembly employing a wall-hung flush tank; and

FIG. 7 is an inverted plan view of the bottom wall of the flush tank shown in FIG. 6.

Referring to the drawing and particularly to FIGS. 1 and 2, a flush tank cover is illustrated including a back-bottom panel 1 and a front-side panel 2. Each of the panels 1 and 2 includes an outer shell formed of a front thermoplastic sheet 3 and a back sheet 4. An insulating filler 5 is disposed between the sheets 3 and 4 and held in place by outer encircling heat sealed or welded outer seams 6. The front sheet 3 of the front-side panel 2 is formed of a suitable decorative sheeting material, not illustrated, to provide a pleasing appearance when applied to a flush tank. The back sheet 4, and the front sheet 3 of the back-bottom panel 1 can be formed of any suitable thermoplastic including a translucent sheeting.

The insulating filler 5 may be a fiber glass mat or the like which is adapted to insulate a tank wall from the surrounding atmosphere to a degree which prevents condensation in the presence of relatively cold water.

Referring particularly to FIGS. 1-4, the two panels 1 and 2 shown in FIG. 1 are applied to a free-standing flush tank 7. A supporting ledge 8 projects rearwardly from a

bowl 9 for supporting of the flush tank 7 immediately behind the bowl 9 and on the upper surface of the ledge 8. The discharge pipe, not shown, extends from the tank 7 down through the wall or ledge 8 into the bowl 9 for discharging of the water from tank 7 into the bowl 9. A water inlet pipe 10 extends upwardly to and through the bottom wall of the tank 7 to the left of the ledge 8 in accordance with standard construction. An operating handle 11 is secured to the upper front wall of the tank 7 and is connected to a suitable operating mechanism, not shown, to allow selective discharge of the water from the flush tank 7 to the bowl 9. A tank lid 12 rests on the upper open end of the tank 7 to close the tank.

Referring particularly to FIGS. 1, 3 and 4, the back-bottom panel 1 is illustrated as applied to the tank 7. The illustrated back-bottom panel 1 is slightly greater in width and length than the tank 7 and extends from the forward edge of the bottom wall of the tank 7 rearwardly across the bottom wall and then upwardly completely covering the back wall. A recess 13 is provided in the forward edge of the back-bottom panel 1 and is disposed to accommodate the construction of the ledge 8 and the interconnection of the tank 7 to the ledge 8. A straight line seam 14 projects inwardly from the forward edge of the back-bottom panel 1 laterally spaced from the recess 13 in accordance with the spacing of the axis of the water inlet pipe 10 from the connection of the flush tank 7 to the ledge 8. A cross seam 15 interconnects the seam 14 perpendicularly thereto to form a generally T-shaped seam with the intersection of the seam 14 and 15 coinciding with the vertical axis of the pipe 10 with the front edge seam 6 of the back-bottom panel 1 generally aligned with the front edge of the bottom wall of the tank 7. The insulation filler 5 is removed adjacent the area of seams 14 and 15 and the T-shaped seam formed by the seams 14 and 15 can be split down through the center of the seams, without exposing of the adjacent insulating filler 5 to accommodate the inlet pipe 10. The opening in the panel 1 can be formed to substantially correspond to the diameter of the inlet pipe 10 and the material adjacent the seams 14 and 15 bent downwardly to maintain complete coverage of the bottom wall of tank 7.

Referring particularly to FIGS. 1 and 2, the T-shaped seam configuration formed by seams 14 and 15 is illustrated with a heat formed tear seal. In a tear seal, each welded seam 14 and 15 is formed of a slight width with a central tear line 16 along which the seam can be readily split by pulling transversely of the seam. This provides a convenient means of opening the seams 14 and 15 for receiving inlet pipe 10.

Generally, the seams hereinafter described are plain seal formed by heating the plastic generally similar to seams 14 and 15 without the thinned tear line 16. The other seams are generally in sections which may or may not have to be divided.

The back-bottom panel 1 includes an integral encircling flap 17 extending around the perimeter of the panel exclusive of the recess 13, as shown in FIGS. 1 and 5. The flap 17 is formed, in the illustrated embodiment of the invention, as an integral extension of the back or outer thermoplastic sheet forming the shell of panel 1. Referring to FIG. 3, the flap 17 along the forward edge of panel 1 extends upwardly adjacent the front of tank 7. Similarly, the flap 17 adjacent the sidewall of tank 7 is folded upwardly. The thin thermoplastic backing sheet 3 can be readily folded at the corner without formation of an unsightly bulk of material. Adhesive strips 18 are provided on the flap 17 with a paper backing or cover 19 covering the adhesive 18. In securing the back-bottom panel 1 to the tank 7, the paper backing 19 is removed preferably after proper locating of the panel 1 on the tank 7. Pressure is applied adjacent the area of adhesive 18 to force the back-bottom panel 1 into firm engagement with tank 7 to firmly secure the back-bottom panel 1 in

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place. The back-bottom panel 1 covers the critical areas normally holding the flushing water. The top or upper portion of the flap 17 as shown may be bent over the upper rear edge of the tank 7 in the event there is an excess of material, as most clearly shown in FIG. 4. In the event 5 that the tank 7 is substantially larger in depth, the upper edge portion flap 17 is secured to the exterior back wall of the tank 7. However, no standard size tanks are presently constructed which would provide a water level above the upper edge of the insulation 5 in the back-bottom panel 1. 10

To complete the enclosure of the tank 7, the front-side panel 2 is secured in position by a series of elastic bands 20 which are vertically spaced and secured as by sewing or the like at the opposite ends of the front-side panel 2. 15

The front-side panel 2 is a generally rectangular shaped unit of a sufficient length to completely encompass the front and the two sides of the tank 7 and to extend partially over the back wall of tank 7. An opening 21 is provided properly in the panel 2 with a heat sealed seam or edge for accommodating the handle 11. The elastic bands 20 pull the front panel 2 snugly into place to provide a neat, decorative cover. 20

The lower edge of panel 2 projects downwardly below the bottom wall of the tank 7 and the level of the ledge 8 as at 22. In accordance with the present invention, a pair of short vertically plain seams 23 and 24 extend upwardly from the lower edge of the front-side panel 2. The vertical seams 23 and 24 are located and spaced to provide alignment generally with the outer edges of the supporting ledge 8 of the bowl 9. The seams 23 and 24 are of a sufficient width to allow centrally slitting, with a scissor or knife, not shown, without exposing the adjacent insulating filler 5 to form a folding flap 25 in alignment with ledge 8. The flap 25 is formed in accordance with the extent of the projection 22 below the upper level of the ledge 8. The flap 25 is tucked upwardly behind the adjacent portion of the panel 2 to provide a form-fit generally about the ledge 8 and maintain the pleasing appearance of the outer cover. 25

The front-side panel 2 includes a top marginal flap 26 and side marginal flaps 27 generally formed as an extension of the front and back thermoplastic sheeting 3 and 4 of panel 2. In the event there is excess material, the marginal flap 26 is laid upwardly over the top of the tank 7 and provided with the adhesive strip 18. The side marginal flaps 27 provide a connection area to which the bands 20 are readily secured. 30

The panels 1 and 2 can be fit to free-standing flush tanks of any standard construction to provide a pleasing appearance while maintaining all critical areas of the tank well insulated from the adjacent air and thus eliminating of the problem of condensate. The insulating cover is mounted in a simple and facile manner requiring little or no skill. 35

Referring particularly to FIGS. 6 and 7, the panels 1 and 2 shown in FIG. 1 are applied to a wall-hung flush tank 28 which is secured with the back wall engaging an adjacent supporting wall 29 in any suitable manner, not shown. A water inlet pipe 30 and a relatively small discharge pipe 31 are secured to the bottom of the flush tank 28 in accordance with standard locations with respect to each other. The discharge pipe 31 terminates in a bowl 32 spaced from the tank 28. An operating handle 33 is provided in the upper forward portion wall of the tank 28 and a lid 34 rests on the upper end of the tank 28, in accordance with known construction. 40

Referring particularly to FIG. 1, the back-bottom panel 1 includes a lateral seam 35 extending completely across the panel 1. The insulating filler 5 of panel 1 is formed in two sections disposed within the shell on opposite sides of seam 35. The lower portion of panel 1 may be removed by cutting along seam 35 without exposing of the insulating filler 5 in the upper portion of the panel 1. The seam 35 need not be as wide as other seams such as 45

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seams 23 and 24 wherein the seal must be maintained on both sides of the cut.

The depth of the upper separable section of the back-bottom panel 1 is sufficient to cover the deepest standard wall-hung tank 28 and only this removed portion of panel 1 is employed when applying the illustrated embodiment of the present invention to a wall-hung flush tank 28. The removed section of panel 1 is secured with the seam 35 defining a back edge abutting the wall 29 as shown in FIGS. 6 and 7. The panel 1 extends forwardly over the bottom wall of the tank 28 with excess material extended upwardly over the front wall of the tank 28. The panel 1 is secured in position by removal of the paper covering 19 and pressing of the adhesive section to the tank 28. 50

Angularly related corner seams 36 are formed at each of the upper corners within the separable section of the panel 1 and extend inwardly into the insulating filler 5 which is notched out in the area of each seam 36, as shown in FIG. 1. The seams 36 bisect the front lower corners of the bottom wall of the tank 7 and a portion of the panel including the insulating filler 5 may be smoothly folded upwardly over the front and sides of the tank 28. The seams 36 provide a mitered corner construction to prevent excessive bulging of the insulating filler. 55

The panel 1 is provided with a pair of T-shaped plain seams 37 and 38 projecting inwardly from the top edge as shown in FIG. 1 and from the front edge as shown in FIGS. 6 and 7 of the panel 1. The T-shaped seams 37 and 38 are laterally spaced in accordance with the spacing of the inlet and discharge pipes 30 and 31 with the intersection in the T-shaped seams coinciding respectively with the axis of the inlet pipe 30 and the discharge pipe 31. The illustrated T-shaped seams 37 and 38 are slit with a scissors, knife or the like, not shown, and allow assembly of the bottom insulating cover to the tank 28 without removal of the pipes 30 and 31. 60

As in the embodiment shown in FIGS. 3 and 4, the insulating filler 5 fits snugly about the pipes 30 and 31. 65

As shown in FIG. 1 and particularly at the seam 38, the insulating filler 5 is cut away generally in conformity to the seams to positively prevent exposure of the filler 5 when a seam is slit.

The bottom cover section of the panel 1 is secured in position by removing the paper covering 19 and forcing the flap 17 into firm engagement with the side and front of the tank 28 such that the adhesive 18 firmly attaches the cover in position. 70

Although not shown, an adhesive strip may also be provided immediately adjacent the back edge formed by split seam 35 if additional support is desired. Generally it has been found that by suitable selection of an adhesive, the side and front securement of the cover to the tank is sufficient to hold the bottom cover in firm engagement with the bottom wall of the tank 28. 75

The wall-hung tank 28 fits relatively tightly against the wall 29 and consequently the elastic bands 20 cannot be conveniently moved behind the tank to secure the front-side panel 2 to the tank 28.

As shown most clearly in FIG. 1, a series of vertical seams 39, 40 and 41, generally similar to seam 35, are provided on each end of the front-side panel 2 and extend the complete depth of the panel 2. The seam 39 defines the attachment flap 27 to which the elastic bands or straps 20 are secured. To apply the front-side panel 2 to a wall-hung tank 28, the flaps 27 are removed by cutting downwardly through seams 39. 80

The seams 40 and 41 define a pair of side adjusting sections 42 and 43 including separate sections of insulating filler 5 as shown most clearly in FIG. 1. The sections 42 and 43 may be removed from the front-side panel 2 for varying the length thereof in accordance with the size of the tank 28. In this manner, the length of the front-side panel 2 can be made to very closely 85

correspond to the length of the front wall and the two side walls of the tank 28 and provide a relatively close fit. An adhesive strip 44 covered by a suitable paper backing 45 is provided on each of the adjusting sections 42 and 43 and also on the immediately adjacent main body portion of the panel 2.

After cutting of the necessary sections 42 and 43, if any, from the panel 2, the front-side panel 2 is assembled with the handle 33 passing through the opening 21. The paper backing 45 is removed from the adhesive strip 44 and the corresponding portion pressed into firm engagement with the adjacent tank 28 to securely and firmly attach the front-side panel 2 to the tank 28. As in the previous embodiment, the upper edge of the front-side panel 2 may extend upwardly over the edge of the tank 28 and be secured adhesively in a similar manner to the tank 28.

The present invention can, in the above manner, be readily applied to a wall-hung flush tank of standard construction in a simple and rapid manner.

The impervious facing 3 and backing 4 of the panels 1 and 2 seals the insulating filler 5 from the moisture in the surrounding air. Therefore, even though the dew point may be established internally of the insulating filler 5, moisture is not condensed and absorbed and the effectiveness of the insulation is maintained. The sealing of the insulating medium also prevents the danger of saturating the exterior cover with condensed moisture and subsequent dripping of the condensed moisture onto the floor or the like.

Although not illustrated, a matching cover for the lid and for the conventional seat of the toilet can be provided for consistent appearance of the covered unit.

Although illustrated as comprising two distinct panels, in the process of manufacture obviously the structure can be formed from a single panel with a suitable seam line or the like provided for separating of the respective panels from each other. The seams are preferably formed by heat sealing or welding with a radio frequency field although the bond can be established by other heating means and pressure or by any other suitable means such as adhesive bonding, stitching or the like.

The present invention thus provides an insulating cover for a flush tank of a basic two-piece design including an impervious outer shell supporting a suitable insulating filler and having selected internal seams which permit form-fitting of the cover to the various flush tanks of standard construction. The universality of the present invention substantially reduces the manufacturing and inventory costs of providing form-fitted insulating covers of the many various size tanks in present use and available for purchase.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

I claim:

1. An exterior insulating cover for a flush tank, comprising a double wall edge-sealed shell, an insulating filler within the shell, and internal seams joining selected portions of the walls of the shell, said seams being severable to separate adjacent portions of the shell without exposing the insulating filler and permitting form fitting of the cover to the flush tank.

2. An exterior insulating cover for a flush tank, comprising a double wall edge-sealed shell of an impervious sheeting, an insulating filler within the shell, and internal seams defined by intimately bonded selected portions of the walls of the shell, said seams being severable to separate adjacent portions of the shell without exposing the insulating filler and permitting form fitting of the cover to the flush tank.

3. An exterior insulating cover for a flush tank, comprising a double wall edge-sealed shell of thermoplastic, an insulating filler within the shell, and internal heat

welded seams joining selected portions of the walls of the shell, said seams being severable to separate adjacent portions of the shell without exposing the insulating filler and permitting form fitting of the cover to the flush tank.

4. A universal exterior insulating cover for flush tanks, comprising a front-side panel and a back-bottom panel, each of said panels including a double wall edge-sealed shell of thermoplastic sheets and an insulating filler within the shell, internal seams defined by intimately bonded selected portions of the shell walls of the front-side panel for form fitting thereof to the front and sides of a flush tank, and internal seams defined by intimately bonded selected portions of the shell walls of the back-bottom panel for form fitting thereof to the exposed back and bottom of a flush tank.

5. The cover of claim 4 wherein said internal seams are defined by thermal welding of the shell walls.

6. An exterior insulating cover for the bottom of a flush tank having a bottom water inlet pipe, comprising a double wall edge-sealed shell of thermoplastic adapted to be secured to the bottom of the flush tank, an insulating filler within the shell, and a heat sealed seam joining the walls of the shell, said seams being separable to form an opening for the inlet pipe without exposing the adjacent insulating filler and snugly fitting about the inlet pipe to maintain complete insulating coverage of the tank bottom.

7. The cover construction of claim 6 including a pair of laterally spaced heat sealed ledge seams projecting inwardly from the lower edge of said first panel, said ledge seams being longitudinally severable without exposure of the adjacent insulating material for form fitting of the panel about the supporting ledge.

8. An exterior insulating cover for the bottom of a flush tank having a bottom water inlet pipe, comprising a double wall edge-sealed shell of thermoplastic adapted to be secured to the bottom of the flush tank, an insulating filler within the shell, and a cross-shaped heat sealed tear seam joining the walls of the shell with the seam intersection coinciding with the axis of the inlet pipe, said seam being slit substantially in accordance with the diameter of the inlet pipe.

9. In an exterior insulating cover for both wall-hung and free-standing flush tanks, a front-side panel for the flush tank, said panel having a double wall shell and an insulating filler within the double wall shell, a series of vertical seams on the ends of the panel forming adjustment sections for closely approximating the length of the front and two sides of a wall-hung tank, an adhesive on the back side of the double wall shell adjacent and on the adjustment sections for securing the cover to a wall-hung flush tank, and means joining the opposite ends of the panel for attachment of the cover to a free-standing tank.

10. The construction of claim 9 wherein the panel projects below the bottom of the tanks and includes a pair of horizontally spaced seams extending perpendicularly inwardly from the lower edge for forming of a selected length tab without exposing the insulating filler, said tab being formed to form fit the panel to a free-standing flush tank having a supporting ledge projecting outwardly adjacent the bottom wall.

11. In an exterior insulating cover for wall-hung flush tanks and for free-standing flush tanks of the character described, a bottom-back panel having a double wall sealed shell adapted to be secured to the bottom end of a free-standing flush tank, an insulating filler within the shell, said shell including a recess in the lower edge to accommodate a supporting ledge unit of a free-standing flush tank, a pair of perpendicularly related and intersecting seams joining the walls of the shell with the intersection of the seams coinciding with the axis of the inlet pipe to a free-standing flush tank, a lateral seam extending across the panel in spaced relation to the upper panel

edge to define a bottom cover section for a wall-hung tank, first and second pairs of perpendicularly related and intersecting seams joining the walls of the shell within the bottom cover section, said first and second pairs of seams being arranged to align the intersections of the seams with the inlet pipe and the discharge pipe of a wall-hung flush tank.

12. In a universal insulating cover for flush tanks of the characteristic wall-hung and free-standing type described, a back-bottom panel including a superimposed thermoplastic facing and backing peripherally joined by a heat sealed seam, an insulating mat disposed between the facing and the backing, said back-bottom panel being of a size to cover the exterior bottom wall and the exterior back wall of various size free-standing flush tanks above the normal water level therein, said back-bottom panel having a recess formed in one edge to accommodate the enlarged discharge pipe of a free-standing flush tank, a heat sealed pipe seam located in accordance with the location of the water inlet pipe of a free-standing flush tank, a heat sealed separation seam extending laterally across the panel and defining a bottom cover section on the end of the panel opposite said recess for a wall-hung tank, said bottom cover section being of a size to cover the exterior bottom wall of a large wall-hung tank and to project laterally and forwardly from smaller tanks, a pair of heat sealed seams located in accordance with the inlet pipe and the discharge pipe of a wall-hung flush tank with the separation seam aligned with the back edge of the bottom wall, corner seams bisecting the forward corners of the bottom cover section of the panel for folding of the adjacent sections upwardly along the sides and front of the tank, and means to secure the panel to the tanks.

13. An exterior insulating cover for wall-hung flush tanks of various sizes, a first panel of sufficient length to cover the front and sides of the largest flush tank and of sufficient depth to project downwardly below the bottom of the flush tanks, said panel including a superposed decorative facing and a backing of thermoplastic sheeting joined by a heat sealed encircling edge seam, a marginal flap on the ends and top of the panel defined by a similar seam spaced inwardly from said edge seam, adjusting sections defined by parallel vertical seams on each end of the panel, an insulating filler disposed between said facing and said backing including said adjusting sections and within the marginal flap, the vertical seams defining the end flaps and the adjusting sections permitting separation along the seams without exposure of the insulating filler, a second panel of sufficient length to project laterally of the tank and of sufficient depth to project forwardly of the tank, said second panel including a superimposed thermoplastic sheet joined by a heat sealed seam, an integral marginal flap on the ends and front of the panel formed by an extension of one of said thermoplastic sheets, a pair of T-shaped seams having a stem projecting inwardly from the front edge and having the intersections of the seams located with respect to the back edge in accordance with the spacing of the inlet and outlet pipes of the flush tank, and an adhesive on the back side of said first and second panels for securing the panels to the tank.

14. An exterior insulating cover for wall-hung flush tanks of various sizes, a first panel of sufficient length to cover the front and sides of the largest flush tank and of sufficient depth to project downwardly below the bottom of the flush tanks, said panel including a superposed decorative thermoplastic facing and a thermoplastic backing joined by a heat sealed encircling edge seam, adjusting sections defined by parallel vertical seams on each end of the panel, an insulating filler disposed between said facing and said backing including said adjusting sections, the vertical seams defining the adjusting sections permitting separation of the adjusting sections without exposure of the insulating material in the adjacent panel

portion, a second panel of sufficient length and depth to cover the largest wall-hung tank and projecting forwardly of smaller wall-hung tanks, said second panel including a superimposed thermoplastic facing and backing edge joined by a heat sealed edge seam, corner seams projecting inwardly of the front edge of the second panel and substantially bisecting the corners thereof and being severable without exposure of the insulation material for folding the forwardly projecting portions upwardly along the sides and front of the tank, a pair of T-shaped seams having a stem projecting inwardly from the front edge and the intersections being located with respect to the back edge in accordance with the spacing of the inlet and outlet pipes of the flush tank, and an adhesive on the backing of said first and second panels for securing the panels to the tank.

15. An exterior insulating cover for free-standing flush tanks of various sizes supported on a ledge of a toilet unit, a first panel of sufficient length to cover the front and sides of the largest flush tank and of sufficient depth to project downwardly below the bottom of the flush tanks, said panel including a superposed decorative facing and a backing of thermoplastic joined by a heat sealed encircling edge seam, a marginal flap on the ends and top of the panel defined by a heat sealed seam spaced inwardly from said edge seam, an insulating material disposed between said facing and said backing inwardly of said marginal flap, strap means secured to the end flaps for securing the first panel about a flush tank, a second panel of sufficient length to cover the bottom and the back of the largest tank at least to the normal water level of the largest tank, said second panel including superimposed thermoplastic facing and backing joined by a heat sealed edge seam, an encircling marginal flap on the second panel defined by an extension of the thermoplastic facing, a recess in the lower front edge of the second panel to accommodate the supporting ledge, a T-shaped seam having a stem projecting inwardly from the front edge of the second panel and having a cross bar with the intersection of the T-shaped seam located with respect to the recess in accordance with the spacing of the inlet pipe of the flush tank from the ledge, and means on said second panel for securing the panel to the tank.

16. In a universal two-piece exterior insulating cover for flush tanks of the characteristic wall-hung and free-standing type described, a back-bottom panel including superimposed thermoplastic facing and backing peripherally joined by a heat sealed seam to define a shell and having an outer marginal flap defined by an extension of one wall of the shell, an insulating mat disposed between the facing and the backing inwardly of said marginal flap, said back-bottom panel being of a size to cover the exterior bottom wall and the exterior back wall of various size flush tanks above the normal water level therein, said back-bottom panel having a recess formed in one edge to accommodate the enlarged discharge pipe unit of a free-standing flush tank, a heat sealed pipe seam in said panel of generally T-shape with the stem projecting inwardly from the edge containing said recess and with the intersection point in the pipe seam located in accordance with the location of the water inlet pipe of a free-standing flush tank, a heat sealed separation seam extending laterally across the panel and defining a bottom cover section on the end of the panel opposite said recess, said bottom cover section being of a size to cover the exterior bottom wall of wall-hung tanks, a pair of T-shaped seams having parallel stems extending perpendicularly inwardly from the edge of the back-bottom panel opposite said recess and having parallel and non-aligned cross bars to define intersections coinciding with the axis of the inlet pipe and the discharge pipe of wall-hung flush tanks with the separation seam aligned with the back edge of the bottom wall, an adhesive on said flap, a paper cover on the adhesive, a front-side

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panel including superposed thermoplastic decorative facing and thermoplastic backing peripherally joined by an outer heat sealed seam, said front-side panel being of a size to extend completely over the front and sides and a portion of the back of a free-standing flush tank and to project downwardly of the lower edge of the tank, a pair of parallel seam lines projecting from the central lower edge of the front-side panel and spaced in accordance with supporting ledge of a free-standing flush tank, a flap on the top and side edges of the front-side panel defined by an inwardly spaced heat sealed seam, adjusting sections on each end of the front-side panel defined by parallel vertical heat sealed seams, fiber glass insulating mats interposed between the facing and the backing of the front-side panel inward of the flap and including said adjusting sections, elastic bands secured to the side flaps to draw the panel about a free-standing tank, an adhesive on the backing of the front-side panel including said adjusting sections and the area immediately inwardly of said adjusting sections for fastening the panel to a wall-hung tank, and a paper backing on said adhesive.

17. In a universal two-piece exterior insulating cover for flush tanks of the characteristic wall-rung and free-standing type described, a back-bottom panel including superimposed thermoplastic facing and backing peripherally joined by a heat sealed seam to define a shell, an insulating mat disposed between the facing and the backing, said back-bottom panel being of a size to cover the exterior bottom wall and the exterior back wall of various size flush tanks above the normal water level therein, said back-bottom panel having a recess formed in one edge to accommodate the enlarged discharge pipe of a free-standing flush tank, a heat sealed cross-shaped tear seam with the intersection point located in accordance with the location of the water inlet pipe of a free-standing flush tank, a heat sealed separation seam ex-

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tending laterally across the panel and defining a bottom cover section on the end of the panel opposite said recess, said bottom cover section being of a size to cover the exterior bottom wall of a wall-hung tank, a pair of cross shaped seams in the bottom cover defined by said separation seam with individual intersections coinciding with the axis of the inlet pipe and the discharge pipe of a wall-hung flush tank, means on said back-bottom panel for securing the same to free-standing tanks and to wall-hung tanks, a front-side panel including a thermoplastic decorative facing and a thermoplastic backing peripherally joined by a heat sealed seam, said front-side panel being of a size to extend completely over the front and sides and a portion of the back of free-standing flush tanks and to project downwardly of the lower edge of the tank, a pair of parallel seam lines projecting from the central lower edge of the front-side panel and spaced in accordance with supporting ledge of a free-standing flush tank, a pair of adjusting sections on each end of the front-side panel defined by parallel vertical heat sealed seams, fiber glass insulating mats interposed between the facing and the backing of the front-side panel including said adjusting sections, strap means secured to the ends of the front-side panel to draw the panel about a free-standing tank, and separate means on the front-side panel for fastening the front-side panel to a wall-hung tank.

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