United States Patent

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[54] **TILE TRIM FOR TRENCH DUCT COVER PLATES**
2 Claims, 7 Drawing Figs.

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[51] **Int. Cl.** **E04f 17/08**
[50] **Field of Search** ..... 52/122, 173, 220, 221; 174/48, 49, 66, 101; 220/3.3, 3.4, 3.7; 206/46, 46 R; 138/92

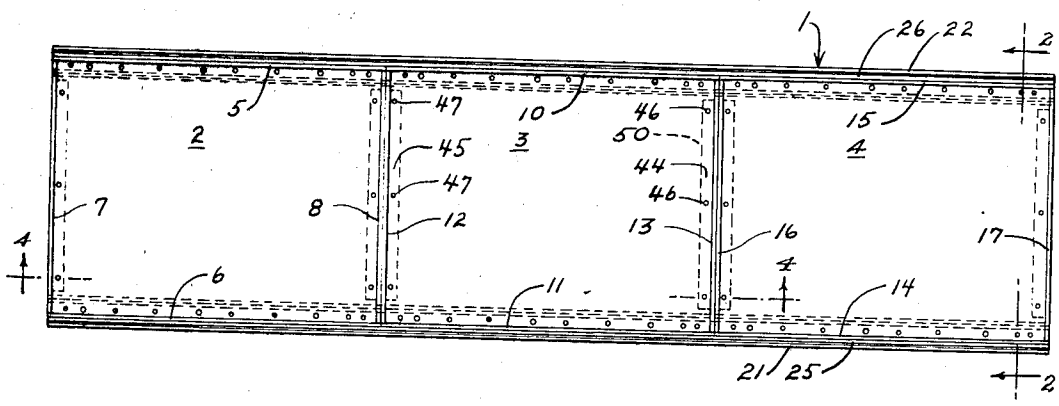
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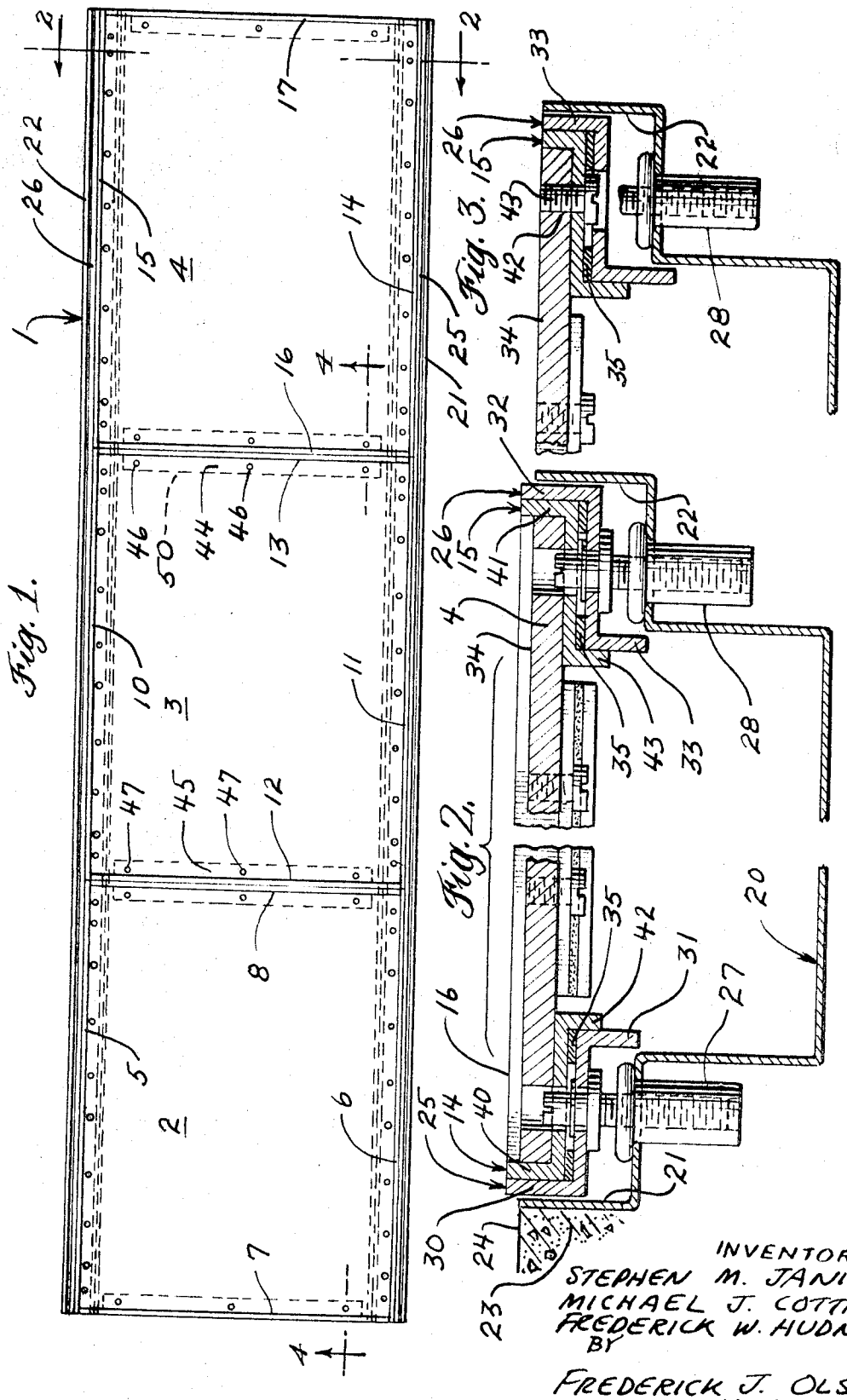
ABSTRACT: A trench duct cover having, in the shipping condition, trim along each longitudinal edge and a filler piece along each transverse edge, the trim and filler pieces being flush with the surface of the cover and the cover, in its installation condition, having the trim along the longitudinal edges reversed with portions extending above the cover surface and a spacer along one transverse edge and an offset along the other transverse edge for interlocking with the adjacent cover, both the spacer and offset having portions extending above the cover surface, all of said above-the-surface portions being for use in protecting floor covering on the cover.



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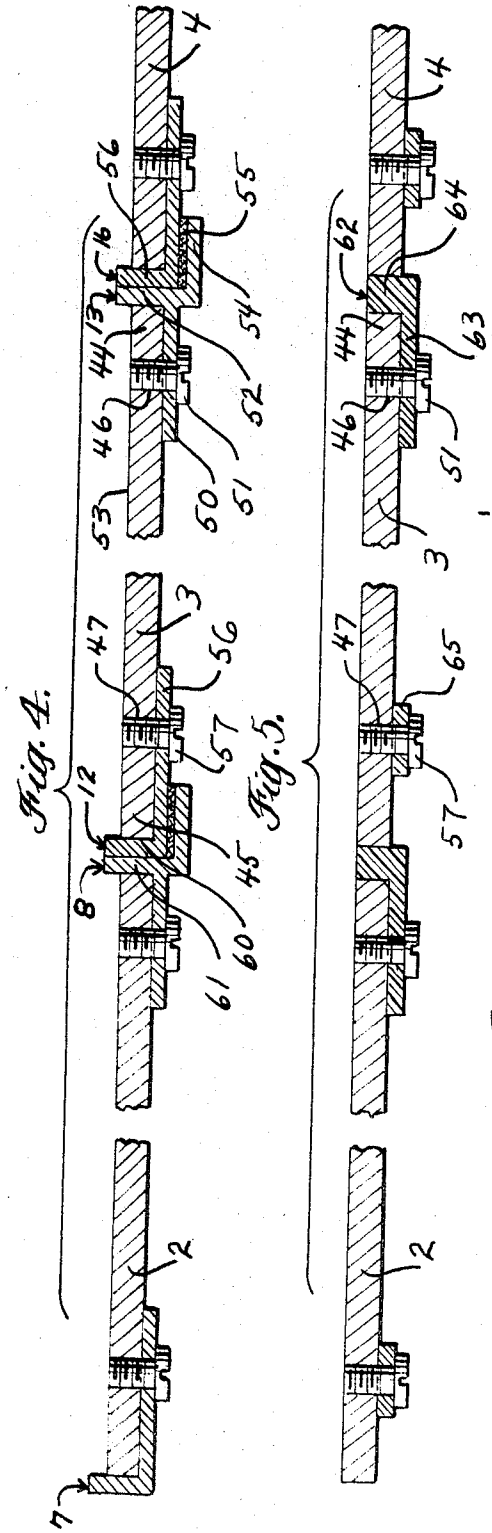
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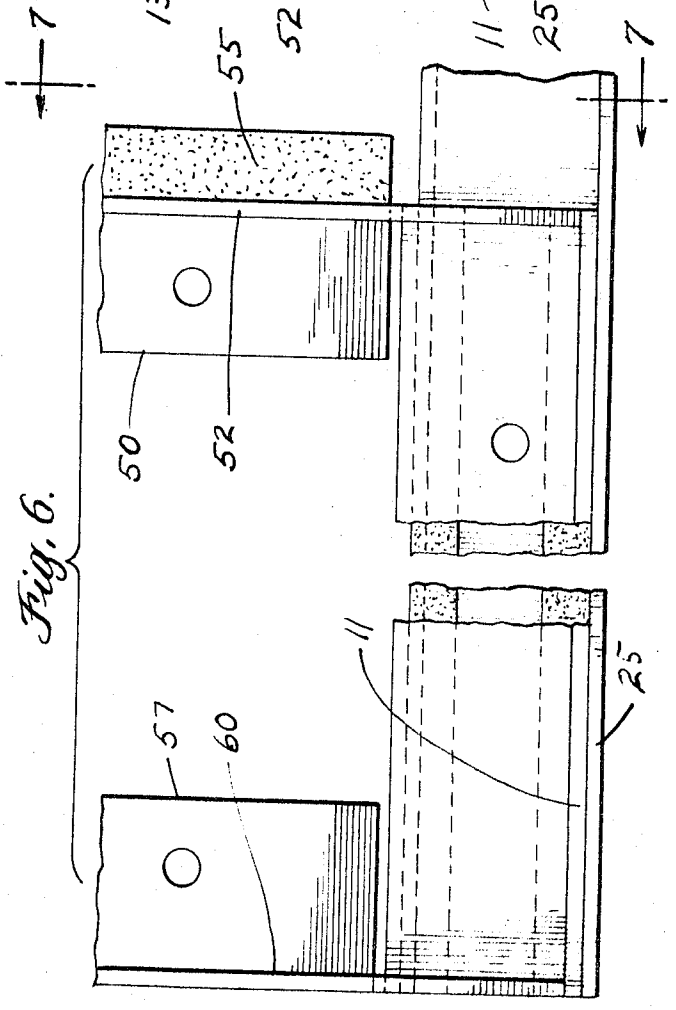


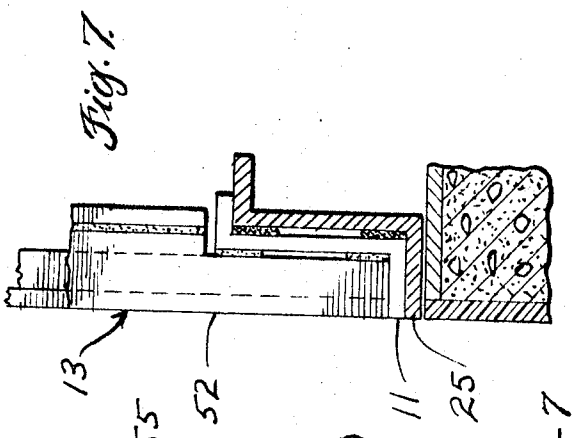
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TILE TRIM FOR TRENCH DUCT COVER PLATES

This invention relates in general to underfloor ducts and in particular relates to improvements in trenchduct covers having tile trim on all four sides.

In certain types of trench duct installations it is necessary that the covers of the trench be frequently removed to make the interior accessible. In such instances it has been conventional to provide trim on all four sides of the cover and also to provide trim along the edges of the trench. The trim around the cover protects the tile or other floor covering on the surface of the cover while the trim along the sides gives protection for the tile or other floor covering installed on the floor surface.

The principal object of the invention is to present tile trim of the kind in question which provides substantial advantages to the manufacturer in reducing production costs and also to the contractor in savings on field installation.

The invention will be described below in connection with the following drawings wherein;

FIG. 1 is a plan view of a three cover trenchduct incorporating the invention;

FIG. 2 is an enlarged broken-out section taken as indicated by the arrows 2–2 in FIG. 1 showing the trim in installation position.

FIG. 3 is a fragmentary cross section showing the tile trim in shipping position;

FIG. 4 is a broken out cross section taken on the line 4–4 of FIG. 1 with the transverse tile trim in the installation position;

FIG. 5 is a view similar to FIG. 4 showing the transverse tile trim in the shipping condition;

FIG. 6 is a fragmentary, broken out plan view of the arrangement of the longitudinal and transverse trim with the cover plate being omitted; and

FIG. 7 is a cross section taken on the line 7–7 of FIG. 6.

In FIG. 1 the trench 1 includes the covers 2, 3 and 4 which are generally elongated, rectangular in shape and serially arranged along the longitudinal dimension of the trench. The cover 2 has trim pieces 5 and 6 respectively extending along the longitudinal edges of the cover and trim pieces 7 and 8 respectively extending along the transverse edges of the cover. The cover 3 has trim pieces 10 and 11 along the longitudinal edges and trim pieces 12 and 13 along the transverse edges. Similarly the cover 4 has longitudinal trim 14 and 15 and transverse trim 16 and 17.

The condition of the parts of the trench in FIG. 1 is for installation, that is to say, for floor covering to be put down on the covers and on the floor in while the trench is imbedded. Thus in FIG. 1 the various protective trim pieces extend above the top surfaces of the covers substantially a distance equal to the thickness of the floor covering. The trim serves to protect the edges of the floor covering when the cover is removed from the trench.

In addition to providing the protective trim in the installation condition, the invention contemplates means around the edge of each cover for the shipping condition; i.e. from the time the trench leaves the factory to just prior to installation of floor covering. In the shipping condition, the trim around the edges is flush with the top surface of the cover as will be explained later.

The trench 1 in itself is conventional and the general structure is shown in FIG. 2. The trench comprises a channel-shaped body 20 terminating in the vertically extending screed flanges 21 and 22. The top edges of the flanges 21 and 22 serve as screed lines for the concrete within which the trench is embedded. For example the concrete 23 has its top surface 24 flush with the top of screed flange 21.

Adjacent to screed flanges 21 and 22 are the outer tile trim pieces 25 and 26 which are respectively supported by adjusting mechanisms 27 and 28. The trim 25 and 26 are Z-shaped and have flanges respectively 30–31 and 32–33. In FIG. 2 the trim 25 and 26 are shown in the installation position wherein the flanges 30 and 32 project upwardly beyond the floor surface 24 and the cover surface 34. The amount of projection is determined by the thickness of the floor covering to be used.

For the shipping condition, the trim 25 and 26 are reversed so that the flanges 31 and 33 are disposed adjacent the screed flanges 21 and 22 and are flush with the top of the screed flanges and with the top surface 34 of the cover. This condition is shown in FIG. 3.

The trim pieces 14 and 15 are also Z-shaped and are supported on the gaskets 35 carried by the trim 25 and 26. The trim pieces 14 and 15 have the flanges 40 and 41 which in FIG. 3 extend above the top surface 34 of the cover 4. This is for the installation condition. For the shipping condition the trim pieces are reversed and the flanges 42 and 43 are flush with the cover surface 34.

The manner in which the longitudinal trim 14 and 15 are secured to the cover is shown in FIG. 3. A set of threaded holes such as the hole 42 are disposed along the respective longitudinal edges of the cover and the screws 43 threaded in these holes secure the trim firm against the underside of the cover. The trim piece is easily reversed by removing the screws changing position 180° and resecuring with the same screws.

The various other longitudinal trim pieces 5,6, 10 and 11 are secured to their respective covers 2 and 3 and are reversible as between the shipping and installation positions similarly as described above.

The manner in which the transverse trim 7, 8, 12, 13, 16 and 17 are set up on the covers for the installation condition will be explained in connection with FIGS. 1 and 4.

For the cover 3, the first and second transverse edges of the cover are indicated as 44 and 45. The covers 2 and 4 have corresponding first and second transverse edges.

Along the edge cover 44 there is a set of threaded holes 46 and along the cover edge 45 there is a set of similar holes 47. The edges of covers 2 and 4 have similar sets of threaded holes.

The trim piece 13 on the edge 14 is an offset member comprising a leg 50 which extends underneath the cover and is secured thereto as by the screws 51 threaded in the first set of threaded holes 46. The offset also has a flange 52 which abuts and extends upwardly adjacent the edge 44 and projects above the surface 53 of the cover 3 the same distance as the flanges 40 and 41. The offset 31 also has a leg 54 which is spaced downwardly from the leg 50 and extends outwardly generally normal to the flange 52. As noted the leg 54 has a gasket 55 on which rest the trim piece 16.

The gasketed flange 55 helps to minimize cover flexure and affords some protection against the entry of liquids to the trench interior. The trim piece or offsets 8 and 17 are identical in construction to the offset 13 and attached to their covers in the same manner.

Extending along the transverse edge 45 of the cover 3 is the trim piece 12 which is the form of an L-shaped spacer having a leg 56 extending under the cover and secured thereto by the screws 57 threaded in the holes 47. The spacer also has a flange 60 which extends up and abuts the longitudinal edge 45 and projects above the surface of the cover 53.

As will be noted the flange 52 on the offset 13 abuts the flange 56 of the trim piece or spacer 16 and the flange 61 of the trim piece or offset 8 abuts the flange 60 of the trim piece or spacer 12.

The manner in which the transverse edges of the cover are set up for the shipping condition of the trench will be described in connection with FIG. 5.

For shipment of course the trim pieces 7, 8, 12, 13, 16 and 17 are removed. Thus with reference to cover 3 the filler 62 has a leg 63 extending under the cover (similar to the leg 50) and is secured thereto as by the same screws 51 in the threaded holes 46. The filler has a flange 64 which extends up adjacent the edge 44 and fills the space between the covers 3 and 4.

On the edge 45 the trim piece or spacer 12 has been replaced by a washer 65 which is held by the screws 57. The

washer **65** has the same thickness as the leg **56** of the trim piece **12**. It will be noted that the edge of the screw **57** is flush with the edge of surface of the cover.

Before closing it is pointed out that the above described arrangement has distinct cost advantages for both the manufacturer and the installation contractor.

First of all the construction of the cover is greatly simplified in that three holes can be punched and threaded along each longitudinal edge and three holes punched and threaded along each transverse edge. Along the longitudinal edge the holes are arranged and disposed so that the trim pieces are interchangeable between the two edges and are reversible on the edge simply by removing the holding screws turning 180° and then resecuring by the same screws. Along the transverse edges the threaded holes are interchangeably usable as between the shipping screws and filler pieces and also are interchangeably usable as respects the installation trim pieces. Thus there are no special or different arrangements of the threaded holes to accommodate the shipping and installation conditions.

This simplifies cover manufacture and also simplifies installation in that no special cover orientation is required as between the shipping and installation position nor must the covers be aligned with each other in any special way.

The single filler piece and the duel offset-spacer arrangement make for a minimum number of parts yet providing the necessary functions for both the shipping and the installation conditions. This results in saving in manufacturing costs and reduces the installation costs in that it minimizes the handling by installer personnel.

We claim:

1. In combination for a trenchduct:

an elongated rectangular-shaped cover having first and second transverse and longitudinal edges;

a pair of tile trim respectively removably secured along opposite longitudinal cover edges and each trim being reversible as between a shipping position and an installation position, in the shipping position, each trim having a flange abutting a longitudinal cover edge and in the installation position having a flange abutting a longitudinal cover edge and projecting above the top surface of the cover for use in protecting floor covering on the cover and each trim being in the shipping position and being connected to the cover;

first and second sets of threaded holes respectively disposed along said first and second transverse edges;

a throwaway L-shaped filler piece connected to the cover and extending along said first transverse edge and having a leg extending under the cover and secured thereto by a first set of screws in said first set of threaded holes and also having a flange abutting the first transverse edge and being flush with the top surface of the cover;

a second set of screws threaded in said second set of threaded holes, the end of each screw being flush with the top surface of the cover;

an L-shaped spacer for use in being connected to the cover when the second set of screws has been removed and the trim is in the installation position, the spacer, when connected, extending along said second transverse edge and having a leg extending under the cover and secured thereto by screws threaded in said second set of threaded holes and a flange abutting the second transverse edge and projecting above the top surface of the cover for use in protecting floor covering on the cover; and

an offset for use in being connected to the cover when the filler piece has been removed and the tile trim is in the installation position, the offset, when connected, extending along said first transverse edge and having a leg extending under the cover and secured thereto by screws in said first set of threaded holes and the offset having a flange abutting said first transverse edge and projecting above the top surface of the cover for use in protecting covering on the cover and the offset also having a second leg extending normal to last said flange and projecting outwardly away from the first transverse edge.

2. The combination of claim **1** wherein each said tile trim projects outwardly of said first and second transverse cover edges and said filler piece, said spacer and said offset when connected to the cover engaging the trim.