

Oct. 14, 1969

J. P. BERTICS ET AL

3,472,272

RAILING

Filed Nov. 21, 1966

2 Sheets-Sheet 1

FIG. 3

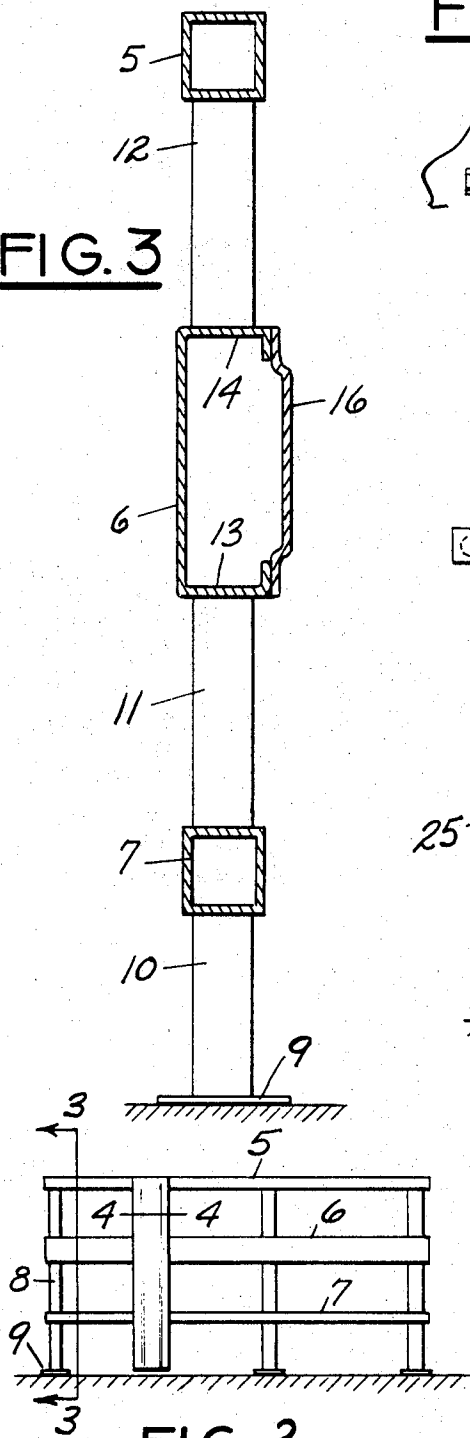


FIG. 1

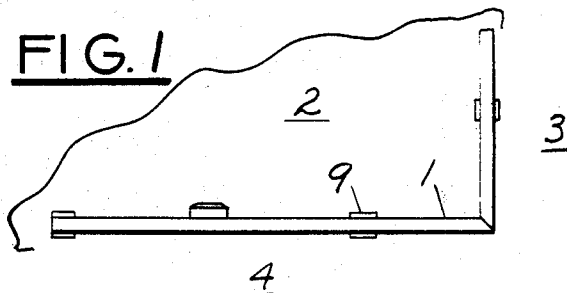
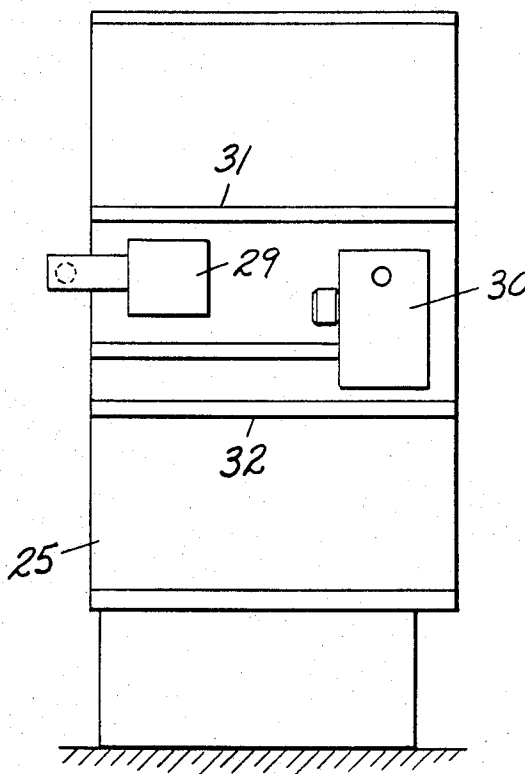


FIG. 6



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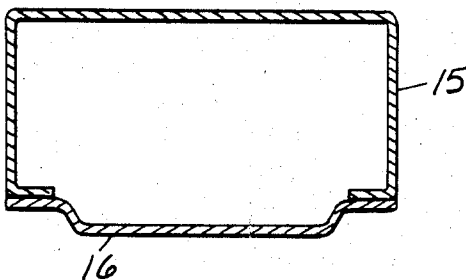
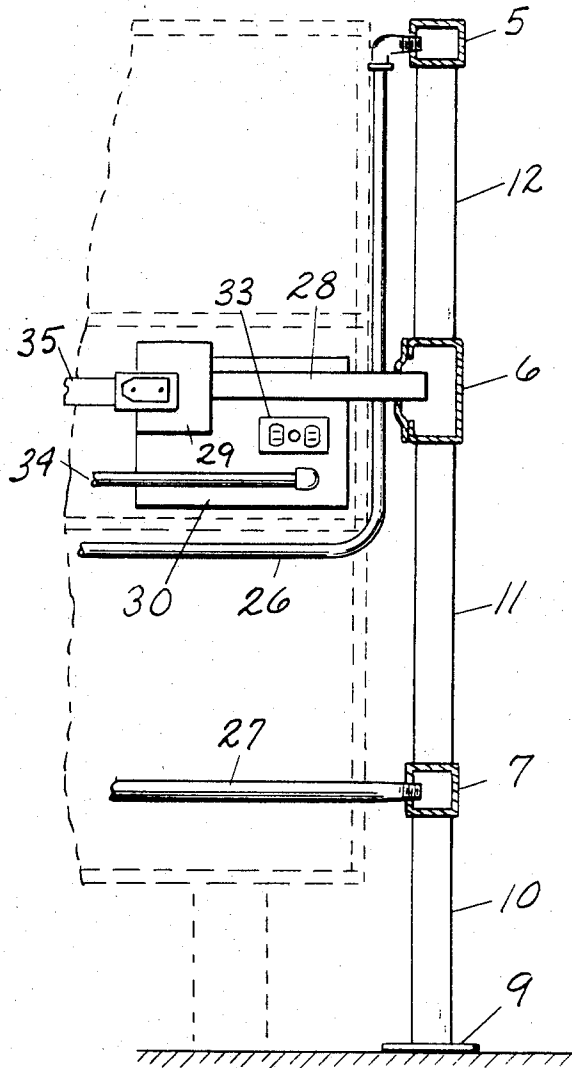
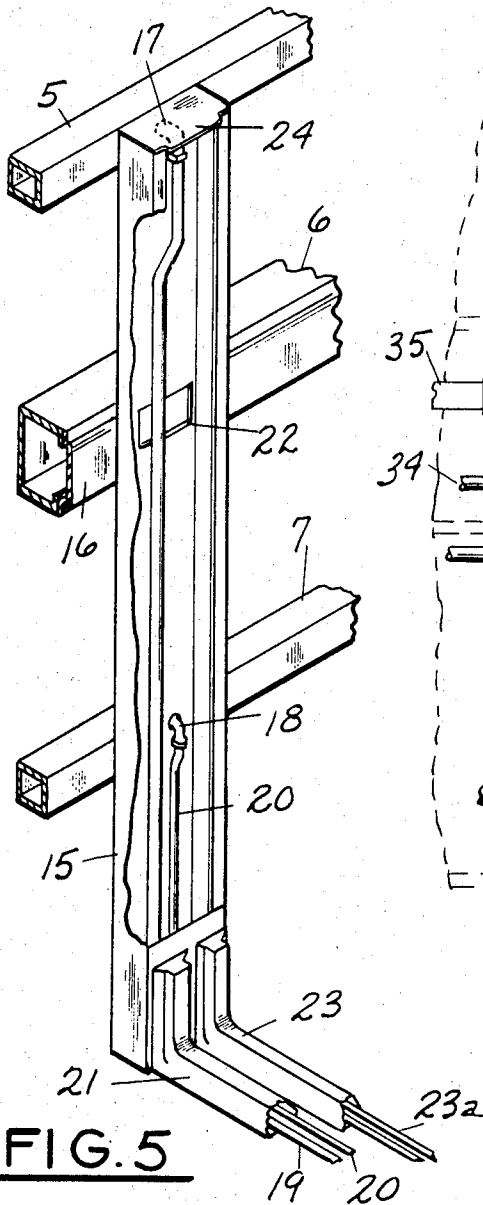


FIG. 4

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3,472,272
RAILING

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U.S. Cl. 137—356

4 Claims

ABSTRACT OF THE DISCLOSURE

A guard railing for floor areas and the like having a plurality of horizontal conduits vertically spaced one above the other and supported by posts extending from the floor to the outer side of the lowermost conduit and between the outer sides of adjacent conduits. At least one of the conduits is fluid tight and serves as a supply line and storage tank.

This invention is intended to increase safety and convenience by incorporating compressed air, vacuum, electrical and other service lines into railings dividing work areas. The required physical size and strength of railings for dividing work areas is more than adequate for the service lines. Incorporating the service lines into the railing also permits convenient take-off at desired points along the railing.

In the drawing, FIG. 1 is a fragmentary top plan view of a railing, FIG. 2 is an elevation, FIG. 3 is a section on line 3—3 of FIG. 2, FIG. 4 is a section on line 4—4 of FIG. 2, FIG. 5 is a perspective of one of the service line take-offs, and FIGS. 6 and 7 are diagrammatic elevations of another take-off.

In FIG. 1 of the drawing there is shown a railing 1 dividing a work area 2 from aisles or other work areas 3, 4. The railing is required for physical separation and protection and, for this purpose, is of sturdy construction. In a preferred form, the rail comprises square pipe 5 at the top, a channel 6 at the center and square pipe 7 at the bottom. At suitable intervals, the rail has uprights or posts 8 having feet 9 for attachment to the floor. As shown in FIG. 3, each upright comprises sections of tubing 10, 11, 12, the section 10 being welded to the foot 9 and to the underside of the pipe 7, the section 11 being welded to the upper side of the pipe 7 and to the lower flange 13 of the channel 6 and the section 12 being welded to the upper flange 14 of the channel 6 and the underside of the pipe 5. The rail is prefabricated in convenient lengths, usually consisting of two or more uprights 8 and the associated pipes and the sections are welded or otherwise suitably connected end to end to form the complete railing. In the particular railing shown, the top rail 5 serves as a compressed air line, the bottom rail 7 serves as a vacuum line and the center channel 6 serves as a conduit for electric, water and telephone lines. The rails are generally horizontal. The top and bottom rails are fluid tight. The center rail or channel 6 has its bottom wall in a generally vertical plane and its flanges 13 and 14 in generally horizontal planes. A removable cover plate 16 bridges the projecting edges of the flanges 13, 14 and completes the closure.

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In order to have the required physical strength to serve as a railing, the top and bottom rails 5 and 7 are much larger than the usual compressed air or vacuum line and, accordingly, also serve as storage tanks. For example, instead of the usual one half inch vacuum and compressed air lines with associated storage tanks, the two inch square rails 5 and 7 serve the function of both the lines and the storage tanks. The channel 6 is likewise of heavy construction.

FIGS. 5-7 illustrate service take-offs. FIG. 5 shows take-off from the railing to an open area. For this purpose, a vertical channel 15 similar to channel 6 is attached to the inside of the railing. The channel has a removable cover plate (not shown) the same as the cover plate 16 for the channel 6. Take-off connections to the compressed air and vacuum lines 5 and 7 are made by pipe fittings 17 and 18 tapped directly into the respective lines. The compressed air and vacuum take-off lines 19 and 20 leave the base of the channel 15 through the usual floor protector 21. The electrical or other take-off from the channel 6 is through a window 22 in the base of the channel 15 and the electrical take-off lines 23a leave the lower end of the channel 15 through a floor protector 23. The upper end of the channel 15 is closed by a top cap 24 and the lower end may be similarly closed. When the cover 16 is replaced, all of the take-off connections from the railing are enclosed.

FIGS. 6 and 7 show a typical take-off on the back of shelving 25. The compressed air and vacuum lines 26 and 27 are tapped respectively into the top and bottom rails 5 and 7. The electric power take-off 28 is connected to the channel or middle rail 6 and extends to a junction box 29 and breaker box 30 suitably supported between shelves 31 and 32. The breaker box may have surface outlets 33 and a conduit 34 under control of the breaker box. A conduit 35 may leave the junction box 29 to extend to another take-off installation.

What is claimed as new is:

1. An above surface guard railing for floor areas and like surfaces comprising a plurality of generally horizontal conduits vertically spaced one above the other with the lowermost conduit spaced above a floor surface and associated vertical posts for supporting the railing on the floor surface, said posts each comprising a plurality of vertical sections vertically spaced from each other and lying within the vertical projection of said conduits and extending from the floor surface to the outer side of the lowermost conduit and between the outer sides of adjacent conduits, means for fixing said vertical sections of each post to said outer sides of the conduits, at least one of the conduits being fluid tight and serving as a fluid service line, and at least another of the conduits being a channel with a bottom wall in a generally vertical plane, spaced upper and lower generally horizontal flanges projecting from upper and lower edges of said bottom wall and a cover plate bridging the projecting edges of said flanges to form a way for other service lines.

2. The railing of claim 1 in which said one conduit is of rectangular cross section large enough to serve as a storage tank.

3. The railing of claim 1 in which the vertical section between the lowermost conduit and the floor surface has a foot for supporting engagement with the floor surface.

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4. The railing of claim 1 having a vertical service take-off channel with a bottom wall presented to said conduits and with flanges projecting from the sides of said bottom wall and closed by a cover plate bridging the projecting edges of its flanges, the bottom wall of said take-off channel having a window presented to said other conduit, and a fluid take-off line within said takeoff channel having a fitting tapped into said one conduit.

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2,940,466	6/1960	Speights	137—356
3,194,361	7/1965	Thurman	52—221 XR
3,195,698	7/1965	Codrea	52—221 XR
3,264,791	8/1966	Hudson	52—221
3,295,833	1/1967	Everett	256—59 XR

FOREIGN PATENTS

336,414 10/1930 Great Britain.

References Cited

UNITED STATES PATENTS

2,578,280 12/1951 Barnard 174—95

10 HENRY T. KLINKSIEK, Primary Examiner

174—47; 256—65