

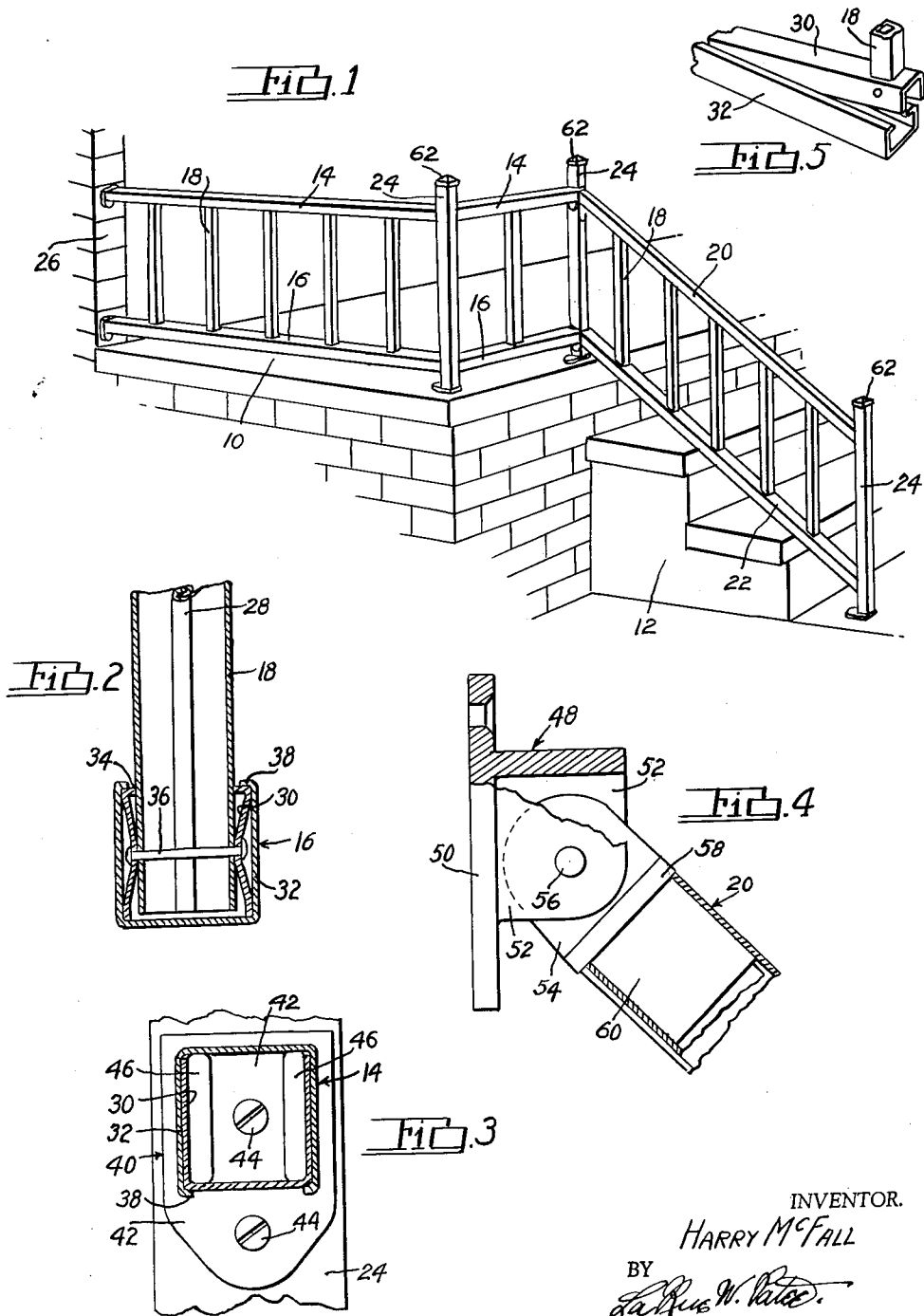
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RAILING CONSTRUCTION

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RAILING CONSTRUCTION

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1 Claim. (Cl. 256-21)

This invention relates to the construction of railing and more particularly to a railing made from sheet metal such as aluminum.

It is an object of the present invention to provide stamped sheet metal parts which may be readily assembled at low cost and which is inexpensive to manufacture.

Another object of the invention is to provide a two part rail construction of inter-engaging channel shaped parts for supporting vertical pales between the upper and lower rails.

A further object of the invention is to provide a pivoted supporting bracket, which is attached to a vertical wall or post, for attaching diagonally extending rails such as for stair rails.

Other objects and advantages of the invention will more fully appear from the following description taken in connection with the accompanying drawings in which:

FIG. 1 is a perspective view illustrating an adaptation of the invention as applied to a porch and stair railing;

FIG. 2 is a cross sectional view through a lower rail and a portion of a pale;

FIG. 3 is a cross sectional view through an upper rail showing a supporting bracket in front elevation for attaching the rail to a wall or post;

FIG. 4 is a side elevational view, partly in section, showing a pivoted supporting bracket for a diagonally extending rail, a portion of which is shown in cross section; and

FIG. 5 is a perspective view showing the manner of assembly of the rails.

Referring to the drawings, I have shown the improved railing as applied to a porch 10 and steps 12. The railing comprises an upper rail 14 and a lower rail 16 having vertical pales 18 between the two rails. Diagonally extending upper and lower rails 20 and 22 are arranged along the side of the steps 12. The rails are supported at their ends by vertical posts 24 and to a wall 26.

The pales 18 and posts 24 are made from sheet metal formed into hollow tubular sections of desired length by interengaging the longitudinal edges of the sheet with a lock seam as shown at 28.

The rails 14, 16, 20 and 22 are formed from channel-shaped sections of desired length, there being an inner channel 30 and an outer channel 32. The base of the inner channel 30 is provided with a plurality of longitudinally spaced openings 34 of a size to fit the outer perimeter of one end of a pale 18. The end of the pale 18 is slid through the opening so that its lower end is substantially flush with the outer edge of the side flanges of the channel 30. The pale 18 is secured to the side walls of the channel by a rivet 36 or the like extending through the side walls of the channel 30 and pale 18.

The outer edges of the side flanges of channel 32 are bent inwardly a short distance as at 38, and the outer channel 32 is pressed over the open end of channel 30, the side flanges of the channel 32 springing outwardly so that the flanges 38 will pass over the side flanges of the channel 30. When the base of channel 32 reaches the outer ends of the side flanges of channel 30, the side flanges of channel 32 spring inwardly to their normal position bringing the flanges 38 into holding engagement with the base of channel 30 as illustrated in FIG. 2, showing the lower rail 16.

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The upper rail 14 is formed and assembled in the same manner as defined for the bottom rail 16, except that it is inverted for receiving the upper ends of the pales 18 which are secured therein in the same manner as described in connection with FIG. 2.

A bracket 40 is secured to a supporting member such as the wall 26 and posts 24 for retaining the rails 14 and 16. The bracket 40 is provided with a back plate adapted to be secured to the support by bolts or screws 44, and outwardly extending projections 46 receive an open end of the box like tubular rails 14 and 16. The posts 24 are supported by the same bracket in the same manner and are secured to the porch floor, the lower end of the post being telescoped over the projections 46 and the bracket secured to the floor by screws.

When diagonally extending rails project from a wall or post, as illustrated by the rails 20 and 22, a bracket 48 has been provided having a back plate 50, adapted to be secured to a wall or post, and is provided with outwardly extending flanges 52 which pivotally support a member 54 by a bolt or rivet 56. The member 54 is provided with a head portion 58 which serves as an abutment for one end of the tubular rail 20, and is also provided with a projection 60 which fits into the tubular rail 20. By such an arrangement the angle of the diagonal rails may be adjusted to correspond to the angle desired without the necessity of special brackets for different installations.

The upper ends of the posts 24 may be capped by an ornamental plug 62 to close the open end thereof.

From the above it will be noted that by such a construction and arrangement of parts there is provided a railing in which the pales are securely fastened to the rails by unseen means and there are no exposed bolts, rivets or other parts to obstruct the smoothness of the railing. The assembly of the railing requires no welding and may be prefabricated before installation.

While the invention has been illustrated in connection with a porch railing, it will be understood that the construction is equally applicable to fences or the like, and that various changes including the size, shape and arrangement of parts may be made without departing from the spirit thereof, and it is my intention to cover by the appended claim such changes as may reasonably be included within a fair interpretation of the meaning thereof.

I claim:

A metallic railing comprising, a top rail, a bottom rail, spaced horizontal pales between said top and bottom rails, said rails having a channel member provided with openings through the base of the channel for receiving an end of said pales, means for securing the inserted end of said pales to the side walls of said channel, and another channel member fitted over the open edge of said first named channel, said second named channel having inwardly extending flanges on the outer ends of its side walls for locking engagement with the base portion of said first named channel, the side edges of said last named channel adapted for springing movement to permit said flanges to be pressed over the base of said first named channel.

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