

Bottom Part for an Installation Channel

The invention concerns a bottom part for an installation channel, particularly a wall channel, consisting of a sheet metal profile with a C-shaped cross-section provided with a mounting rail with C-profile extending over the length of the sheet metal profile in order to mount installation devices at the inside of the channel.

Installation channel with bottom parts of this kind are already known from Utility Model 87 04 502 or Utility Model 87 08 607, for example. In practice, the mounting rails provided at the floor of the channels are in cases produced separately from the trough-shaped sheet metal profile and are then attached to the channel floor via welding, riveting, bonding or other methods. Thus several work processes for separate parts are necessary, which involves a high degree of expenditure.

It is the purpose of the present invention to create a bottom part for an installation channel of the above mentioned kind in a more convenient manner with regard to production technology, in order to reduce work expenditure.

In order to implement this purpose, the above-mentioned bottom part according to the invention consists of a mounting rail

comprising strip-shaped cover plates arranged in pairs opposite each other and cut out in sections from the floor of the sheet metal profile with each pair shaped into a leg of the C-profile of the mounting rail.

Due to this design, separate production of the mounting rail becomes unnecessary, as well as the expenditure otherwise needed for affixing this rail. The invention is based on the premise that it is unimportant as regards the function of the mounting rail whether this rail is formed as a continuous piece or whether it is constructed from sections, arranged successively, which are also separated from each other by the floor parts of the wall channel. Due to the new design it is possible to punch the bottom part for the installation channel out of sheet metal, for example, in a single work process and to shape the mounting rail at the same time as the sheet metal profile is formed into its channel shape. Any additional work expenditure for attaching the mounting rail thus becomes unnecessary.

In a further development of the invention, a reinforcing stem each, running crosswise to the longitudinal edges of the cover plates, may be provided between the cover plates, ensuring that the remaining floor area of the bottom part is kept rigid enough in spite of the cover plates having been punched out of

the floor in sections. This reinforcing stem can be formed in a simple way via a straight cut, vertical to the centre longitudinal axis of the profile, and via a scoop-like deformation of the material area adjacent to the cut. The reinforcing stems can thus be shaped at the same time as the sheet metal profile as well, by means of relatively simple punching and stamping processes.

For reasons of stability, it is very convenient that the reinforcing stem is longer towards both sides of the centre longitudinal axis of the mounting rail than the openings punched out of the floor providing the material for the cover plates.

The invention is represented in the drawings via a design prototype and is further explained below .

Fig. 1 shows a plan view of the open side of a bottom part for a wall installation channel, with only the two end areas shown.

Fig. 2 shows a view of the wall channel of Fig. 1 in a size-reduced representation, viewed from the closed bottom side.

Fig. 3 shows a section of the wall channel of fig. 1 along the line III-III of Fig. 1.

Fig. 4 shows the enlarged representation of detail IV of Fig. 3, and

Fig. 5 shows the enlarged representation of the section along line V-V of Fig. 1.

Fig. 1 to 3 show the bottom part of a wall installation channel consisting of a sheet metal profile(1) with a C-shaped cross-section, whose floor (2) gradually turns into two side walls(3); wall end pieces(4) running parallel to the floor(2) extend from the two side walls(3) and are provided at their edges with troughs(5) intended for inserting a cover not shown here.

The inner side of the floor(2) is provided with a mounting rail(6) running parallel to the side walls(3), serving to take up and to hold anchoring parts of electric installation devices. This mounting rail(6) consists here of oblong cover plates(7), cut out of the material of the floor(2), whose edges are bent upwards and inwards. Fig. 4, and also Fig. 1, clearly show the rectangular openings(8) created by the cutting-out and bending of the cover plates(7).

Fig. 1 and 2 further show that the cover plates(7) are only cut out and shaped in sections, and that between every two pairs of cover plates arranged successively in the longitudinal direction of the profile(1), connecting stems(9) are provided, arranged between the floor areas remaining on both sides of the openings(8), in order to ensure the necessary stability of the profile(1). For the design prototype, these connecting stems(9) are further provided with additional reinforcement in the shape of a reinforcing rib(10), formed via a separating cut(cf. Fig. 5), effected at area(11) vertically in relation to the longitudinal edges of the cover plates(7) and thus also vertically in relation to the longitudinal edges of the openings(8), and via bending the area of material adjacent to the cut upwards like a scoop, open towards the cut(11), thus forming the reinforcing rib(10). The connecting stem(9) then gradually merges flush with the floor(2) of the profile(1). Due to this design, reinforcement in the area of the remaining connecting stems is obtained. Fig. 1, shows that the length of the reinforcing ribs(10), always measured vertically from the centre longitudinal axis(12) of the mounting rail(6) is greater than the width(6) between the outer edges of the openings(8), also measured in the same direction. The reinforcing stems(10) thus extend to the floor area(2) which is not weakened by any cuts.

It is easily understood that the new bottom part for a wall installation channel can be produced in a very simple manner from a common cut via punching, edging and bending as well as pressing as long as suitable tools are provided. Thus the profile can be formed from a strip of sheet metal and brought to its final shape without any additional work process.



Claims

1. Bottom part for an installation channel, particularly a wall channel consisting of a sheet metal profile(1) with a C-shaped cross-section, provided with a mounting rail(6) with C-profile extending along the length of the sheet of the sheet metal profile in order to mount installation devices at the inside of the floor(2), characterized by the fact that the mounting rail(6) consists of strip-shaped cover plates(7), arranged opposite each other in pairs and cut out of the floor in sections, with each pair shaped into a leg of the C-profile of the mounting rail(6).

2. Bottom part according to claim 1, characterized by the fact that between each section containing the cover plates(7), a connecting stem(9) with reinforcement(10) is provided, which extends cross-wise to the longitudinal edges of the cover plates(7).

3. Bottom part according to claim 2, characterized by the fact that the reinforcement consists of a reinforcing rib(10), formed via a straight cut(11) effected vertically to the centre longitudinal axis(12) of the mounting rail(6), and via a scoop-like deformation of the material area adjacent to the cut(11).



4. Bottom part according to the claims 1 to 3, characterized by the fact that the reinforcing rib(10) is longer towards both sides of the centre longitudinal axis(12) of the mounting rail(6) than the width(b) of the openings(8) punched out of the floor(2), providing the material for the cover plates(7).