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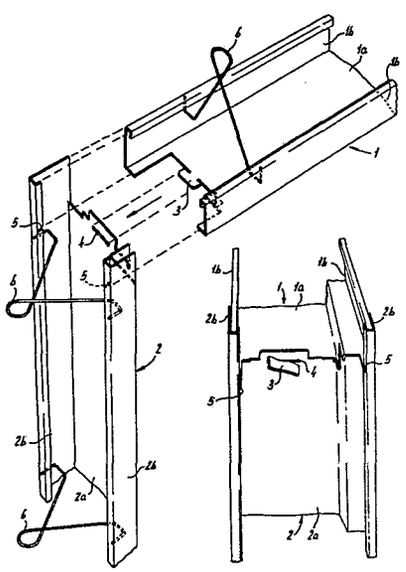
(54) Corner connection and anchor for metal door frame.

(57) A door frame for bricking in, comprising two side members (2) and a doorhead member (1), the side members (2) and the doorhead member (1) being made from sheet metal shaped to U-like form, the open sides of which members being directed outwards, which members may be connected in the upper corners without mitre, whereby the adjacent ends of the members have been cut off or cut in complementary, whereby the doorhead member (1) is provided with one or more lips (3), fitting in one or more slots (4) in the side member (2), which lip or lips (3) is or are bent or turned after connecting in order to fix the connections, whereby the legs of the U-like members are provided with turned in ends, so that channels are formed facing inwards and whereby locking slots (5) for the ends of the doorhead member (1) are provided in the innerwalls of the channels of the side members (2).



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Corner connection for metal door frame.

The present invention relates to a door frame for bricking in, comprising two side members and a doorhead member, the side members and the doorhead member being made from sheet metal shaped to U-like form, the open sides of which members being directed outwards, which members may be connected in the upper corners without mitre, in that the adjacent ends of the members have been cut off or cut in complementary, whereby one member is provided with one or more lips, fitting in one or more slots in the other member, which lip or lips is or are bent or turned after connecting in order to fix the connections and with locking slots extending perpendicularly to the longitudinal direction of the member, in which locking slots the ends of the other member may be taken up.

Such a door frame is known from US Patent 2,601,164. The members of this door frame may be shipped in knock-down form and connected on the construction site in a rigid form for installation.

At this known frame the lips are provided at the upper ends of the side members, while the doorhead member contains the slots for these lips as well as the locking slots. These locking slots are extending through the whole width of the legs and through a part of the bottom of the doorhead member.

The present invention aims to improve this frame and this improvement is obtained in that the legs of the U-like members are provided with turned in ends, so that channels are formed facing inwards and in that the locking slots are only provided in the inner walls of the channels of the member, which contains the slot or slots for the lips.

The legs of the members according to the invention are provided with channel-shaped ends. These channel-shaped ends give a better connection with the surfaces of the wall, in which the door frame is installed. The inner walls of these channels are used for arranging the locking slots. Making these short locking slots in the inner walls is much easier than making the long locking slots in the legs themselves. The locking slots are moreover completely out of sight after assembly the frame.

The invention will be explained now with reference to the drawing, in which:

fig. 1 shows perspectively the corner connection between the doorhead member and a side member, whereby both members are shown apart from each other; and

fig. 2 is a side view of the corner connection according to fig. 1.

The doorhead member is indicated with 1 and the side member with 2. The doorhead member as well as the side members are made of rolled metal sheet with a U-shaped cross-section. The bottom of the channel is indicated with 1a resp. 2a and the legs with 1b resp. 2b.

The free ends of the legs of the members are turned in, so that channels are formed facing inwards.

The bottom 1a of the doorhead member 1 is provided with an undercut lip 3. This lip can be passed through a slot 4 in the bottom 2a of each side member 2, the sides of the undercutting of each lip are preferably slightly tapering, so that the lip may be turned more easily. After inserting the lip can be turned by tongs or the like, so that the situation of fig. 2 is obtained.

This single lip-slot-connection 3,4 does not give a sufficient stiff corner connection. For this reason in the innerwalls of the channels of the legs 2b of the side members 2, locking slots 5 are provided. After connecting the doorhead member 1 and the side members 2 the ends of the bottom 1a are received in these slots 5. Owing to the stepped form of the bottom 1a the locking slot 5 in one leg is higher located than in the other leg.

In order to facilitate the mounting the sides of the locking slots are slightly tapering, so that at mounting some kind of aligning occurs.

Owing to the combination of a single lip-slot-connection 3,4 and locking slots 5 a very stiff corner connection is obtained without welding or the like.

Since the corner connections are made without mitre the side members 2 must be somewhat broader than the doorhead member 1, namely twice the sheet thickness. In this way no gaps will be present.

As appears from fig. 1 the door frame is connected with the surrounding wall by means of anchors 6 adapted for bricking in.

These anchors 6 are made of somewhat resilient metal wire. The ends of the anchors 6 are clamped against the innersides of the legs 1b and 2b. In this way a very simple connection of the anchors is obtained.

CLAIMS

1. A door frame for bricking in, comprising two side members and a doorhead member, the side members and the doorhead member being made from sheet metal shaped to U-like form, the open sides of which members being directed outwards, which members may be connected in the upper corners without mitre, in that the adjacent ends of the members have been cut off or cut in complementary, whereby one member is provided with one or more lips, fitting in one or more slots in the other member, which lip or lips is or are bent or turned after connecting in order to fix the connections and with locking slots extending perpendicularly to the longitudinal direction of the member, in which locking slots the ends of the other member may be taken up, c h a r a c t e r i z e d in that the legs of the U-like members are provided with turned in ends, so that channels are formed facing inwards and in that the locking slots are only provided in the innerwalls of the channels of the member, which contains the slot or slots for the lips.

2. A door frame according to claim 1, c h a r a c t e r i z e d in that the doorhead member contains a lip on both ends, lying in the plane of the bottom of the U-like doorhead member and in that each sidemember at the upper end is provide with a lip, lying in the plane of the bototm of the sidemember, whereby the locking slots are provided in the sidemembers.

3. A door frame according to claim 1 or 2, c h a r a c t e r i z e d in that the lip or lips is or are undercut, so that this lip or these lips after inserting in the slot or slots may be fixed by turning.

4. A door frame according to claim 1, 2 or 3, c h a r a c t e r i z e d in that the sides of the undercutitng of each lip is slightly tapering.

5. A door frame according to claim 1,2,3 or 4, c h a r a c t e r i z e d in that each locking slot is provided with tapering sides.

6. Anchor adapted for the door frame according to one or more of the preceding claims, c h a r a c t e r i z e d in that the anchor is formed as a resilient tong-shaped clamp, the ends of which can engage the channels of the sidemembers or the doorhead member.

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Fig-1

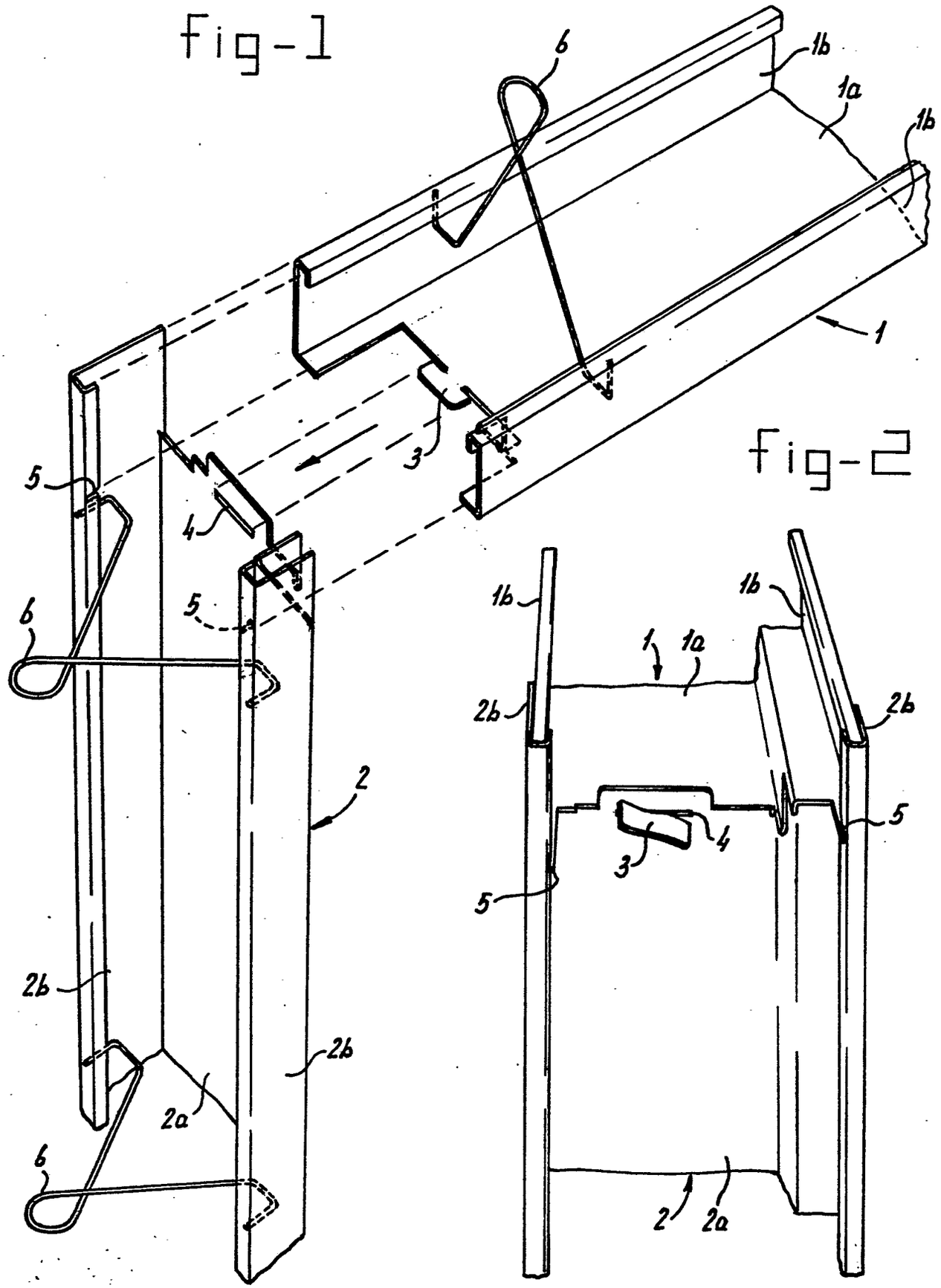

Fig-2