

(12) PATENT APPLICATION
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. AU 200240614 A1

(54) Title
Door frame at lift shaft doors

(51)⁷ International Patent Classification(s)
B66B 013/30

(21) Application No: **200240614**

(22) Application Date: **2002.05.13**

(30) Priority Data

(31) Number	(32) Date	(33) Country
01810473	2001.05.14	EP

(43) Publication Date : **2002.11.21**

(43) Publication Journal Date : **2002.11.21**

(71) Applicant(s)
Inventio AG

(72) Inventor(s)
jules Christen; Peter Spiess; Roland Weidmann

(74) Agent/Attorney
**WATERMARK PATENT and TRADEMARK ATTORNEYS, Locked Bag 5, HAWTHORN
VIC 3122**

Abstract

In this door frame the posts (2) are conceived as basic elements which can be combined with cladding profile members (10) of different shape and size. In a preferred embodiment 5 the posts (2) consist of a plate-like profile member (4) with two U-shaped corrugations (5, 6) and a plate (7) fastened to the profile member (4) and covering the corrugations (5, 6).

(Fig. 2)

Fig. 4

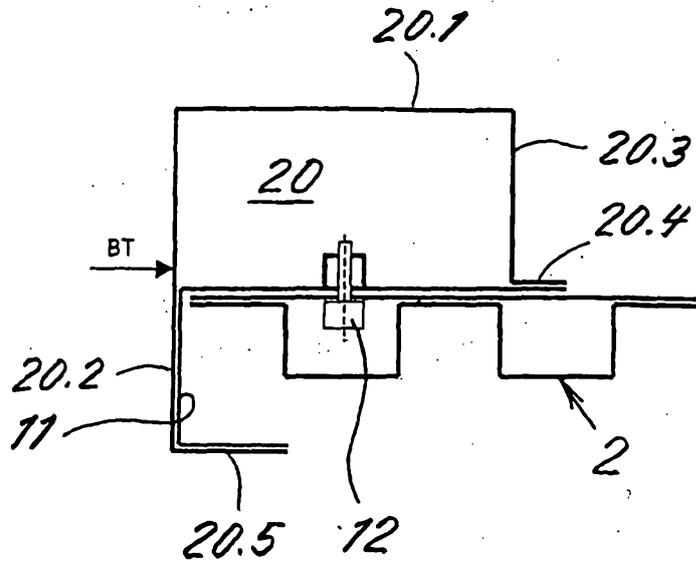
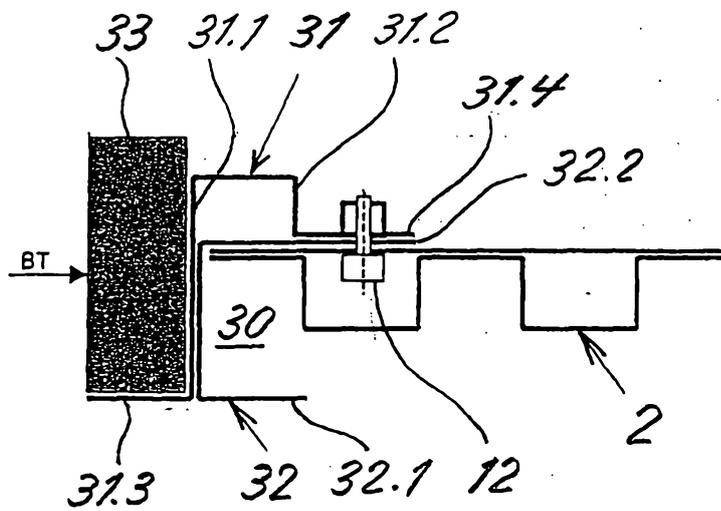


Fig. 5



AUSTRALIA

Patents Act 1990

COMPLETE SPECIFICATION STANDARD PATENT

Application Number:

Lodged:

Invention Title: **DOOR FRAME AT LIFT SHAFT DOORS**

The following statement is a full description of this invention, including the best method of performing it known to :- us

Description

Door frame at lift shaft doors

- 5 The invention relates to a door frame for lift shaft doors, wherein the door frame is assembled from at least two posts and an upper part.

10 Door frames of that kind are used for edging or trimming the rough masonry of the wall openings which lead to the lift shaft. In that case special door frames have to be made for each case respectively according to size of the wall opening, thickness of the masonry, type of lift shaft doors employed and wishes of the customer and in a given case kept in stock, which contributes to cost increase of a lift installation.

15 The invention is therefore based on the object of proposing a door frame which is in accordance with the introductory statement, but does not have this disadvantage.

20 This object is met by the invention stated in claim 1. In that case, the posts are conceived as basic elements which can be combined with cladding profile members of different shape and size.

In a preferred embodiment, the posts consist of a plate-like profile member with two U-shaped corrugations and a plate fastened to the profile member and covering the corrugations.

25 The advantages achieved by the invention reside in the fact that a self-supporting, robust basic frame, in which the cladding profile members serve only for decoration and do not have a supporting function, is realised by the proposed door frame, so that it can be designed to be simpler and lighter. Further advantages result from the rational and therefore economic fabrication, which is achieved by the capability of combination, of door frames of different kind and size.

30 The invention is explained in more detail in the following on the basis of several embodiments in conjunction with the drawing, in which:

35 Fig. 1 shows a view of the door frame,

- Fig. 2 shows a cross-section according to the line II-II in Fig. 1 in enlarged scale, with a first cladding profile member,
- Fig. 3 shows a cross-section according to the line III-III in Fig. 1 in reduced scale relative to Fig. 2,
- Fig. 4 shows a cross-section like Fig. 2, but with a second cladding profile member,
- Fig. 5 shows a cross-section like Fig. 2, with a third cladding profile member,
- Fig. 6 shows a cross-section like Fig. 2, with a fourth cladding profile member, and
- Fig. 7 shows a cross-section like Fig. 2, with a fifth cladding profile member.

15

In Figs. 1 to 3 a door frame, which is composed of at least two posts 2 and an upper part in the form of a crossbar 3, is denoted by 1. The posts 2 consist of a plate-like profile member 4 with two U-shaped corrugations 5, 6 and a plate 7 fastened to the profile member 4 and covering the corrugations 5, 6. The posts 2 are fastened at the upper end to the masonry 8 and at the lower end to a door threshold member (not illustrated).

20

A first cladding profile member 10 has in cross-section partly a box-shaped, square form, wherein a first wall 10.1 of the cladding profile member 10 extends at the side of a storey, whilst a wall 10.2 extending at right angles to the first wall defines the door opening width BT. The first wall 10.1 has a Z-shaped bent-over portion 10.3 forming a flange 10.4. Fastened to the cladding profile member 10 is U-shaped profile member 11, which bears by a longer limb 11.1 against the flange 10.4 and by a shorter limb 11.2 against the inner side of a bent-over portion 10.5 of the wall 10.2. The first cladding profile member 10 is fastened, by means of, for example, screw connections 12 to the posts 2.

30

The first cladding profile member 10 is also used as a head member 13 of the door frame cladding (Fig. 3) and is, as not further illustrated and described, connected with the vertically extending cladding profile members 10 fastened to the posts 2. Provided in the head member 13 is a bore 14 for the actuation of an unlocking device 15, by means of which a shaft door 16 can be unlocked in emergency cases.

35

According to Fig. 4 a second cladding profile member 20 has the same construction as the first cladding profile member 10, but is larger than this, wherein, for example, the walls 20.1, 20.2 are twice as wide as the walls 10.1, 10.2. The bent-over portion 20.3 is correspondingly wider than the bent-over portion 10.3, whilst the flange 20.4 and the bent-over portion 20.5 have the same dimensions.

According to Fig. 5 a third cladding profile member 30 consists of a first U-shaped profile member 31 with limbs 31.1, 31.2 of unequal length, which are bent over and form flanges 31.3, 31.4. Fastened to the first U-shaped profile member 31 is a second U-shaped profile member 32 with limbs of unequal length, the shorter limb 32.1 of which is aligned with the flange 31.3 and the longer limb 32.2 of which bears against the flange 31.4. Contact surfaces for a further cladding element 33, which, for example, consists of marble, are formed by the limb 31.1 and the flange 31.3. The third cladding profile member 30 is fastened to the posts 2 by means of screw connections 12.

A fourth cladding profile member is denoted by 40 in Fig. 6 and consists of a first U-shaped profile member 41, one limb 41.1 of which has a bent-over flange 41.2 which is connected with a limb 42.1 of a second U-shaped profile member 42. Contact surfaces for a further cladding element 43 consisting of, for example, marble are formed by the limb 41.1 and the flange 41.2 of the first U-shaped profile member 41. The fourth cladding profile member 40 is fastened to the posts 2 by means of screw connections 12.

According to Fig. 7 a fifth cladding profile member 50 particularly suitable for dry masonry consists of a first U-shaped profile member 51, at one limb 51.1 of which a hook-shaped bent-over portion 51.2 is provided. A second, narrower U-shaped profile member 52 with limbs of unequal length is fastened to the first U-shaped profile member 51, wherein the shorter limb 52.1 bears against the inner side of the other limb 51.3 of the first U-shaped profile member 51. Arranged in the first U-shaped profile member 51 are reinforcing plates 53, which engage at one end in the hook-shaped, bent-over portion 51.2 and rest at the other end by a bent-over portion 53.1 on the longer limb 52.2 of the second U-shaped profile member 52. The reinforcing plates 53 have a second bent-over portion 53.2 which bears against the inner wall of the first U-shaped profile member 51 and is fastened thereto by, for example, gluing. A third bent-over portion 53.3 of the reinforcing plates 53 serves for fastening to the dry masonry (not illustrated). The fifth cladding profile member 50 is fastened to the posts 2 by means of screw connections 12.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

~~Patent Claims~~

1. Door frame for lift shaft doors, wherein the door frame (1) is assembled from at least two posts (2) and an upper part (3), characterised in that the posts (2) can be combined with cladding profile members (10, 20, 30, 40, 50) of different shape and size.
2. Door frame according to claim 1, characterised in that the posts (2) consist of a plate-like profile member (4) with two U-shaped corrugations (5, 6) and a plate (7) fastened to the profile member (4) and covering the corrugations (5, 6).
3. Door frame according to claim 1, characterised in that a first cladding profile member (10) has in cross-section partly a box-like, square shape, wherein a first wall (10.1) of the cladding profile member (10) extends at the side of a storey, whilst a wall (10.2) extending at right angles to the first wall defines a door opening width (BT), that the first wall (10.1) has a Z-shaped, bent-over portion (10.3) forming a flange (10.4) and that a U-shaped profile member (11) is fastened to the cladding profile member (10) and bears by a longer limb (11.1) against the flange (10.4) and by a shorter limb (11.2) against the inner side of a bent-over portion (10.5) of the wall (10.2).
4. Door frame according to claim 1, characterised in that a third cladding profile member (30) consists of a first U-shaped profile member (31) with limbs (31.1, 31.2) of unequal length which are bent over and form flanges (31.3, 31.4), that a second U-shaped profile member (32) with limbs of unequal length is fastened to the first U-shaped profile member (31), wherein the shorter limb (32.1) of the second profile member is aligned with the flange (31.3) and the longer limb (32.2) of that profile member bears against the flange (31.4), and that contact surfaces for a further cladding element (33) are formed by the limb (31.1) and the flange (31.3).
5. Door frame according to claim 1, characterised in that a fourth cladding profile member (40) consists of a first U-shaped profile member (41), one limb (41.1) of which has a bent-over flange (41.2), which is connected with a limb (42.1) of a second U-shaped profile member (42), wherein contact surfaces for a further cladding element (43) are formed by the limb (41.1) and the flange (41.2) of the first U-shaped profile member (41).

6. Door frame according to claim 1, characterised in that a fifth cladding profile member (50) consists of a first U-shaped profile member (51), at one limb (51.1) of which a hook-shaped bent-over portion (51.2) is provided, that a second U-shaped profile member (52) with limbs of unequal length is fastened to the first U-shaped profile member (51), wherein the shorter limb (52.1) of the second profile member bears against the inner side of the other limb (51.3) of the first U-shaped profile member (51), that arranged in the first U-shaped profile member (51) are reinforcing plates (53) which engage at one end in the hook-shaped, bent-over portion (51.2) and bear at the other end by a bent-over portion (53.1) against the longer limb (52.2) of the second U-shaped profile member (52), and that the reinforcing plates (53) have a second bent-over portion (53.2) for fastening to the first U-shaped profile member (51).

7. Door frame according to claim 6, characterised in that the reinforcing plates (53) are fastened to the first U-shaped profile member (51) by gluing.

15

8. Door frame according to claim 1, characterised in that the cladding profile members (10, 20, 30, 40, 50) are fastened to the posts (2) by means of screw connections (12).

DATED this 13th day of May 2002.

INVENTIO AG

WATERMARK PATENT & TRADEMARK ATTORNEYS
290 BURWOOD ROAD
HAWTHORN. VIC. 3122.

1/3
Fig. 1

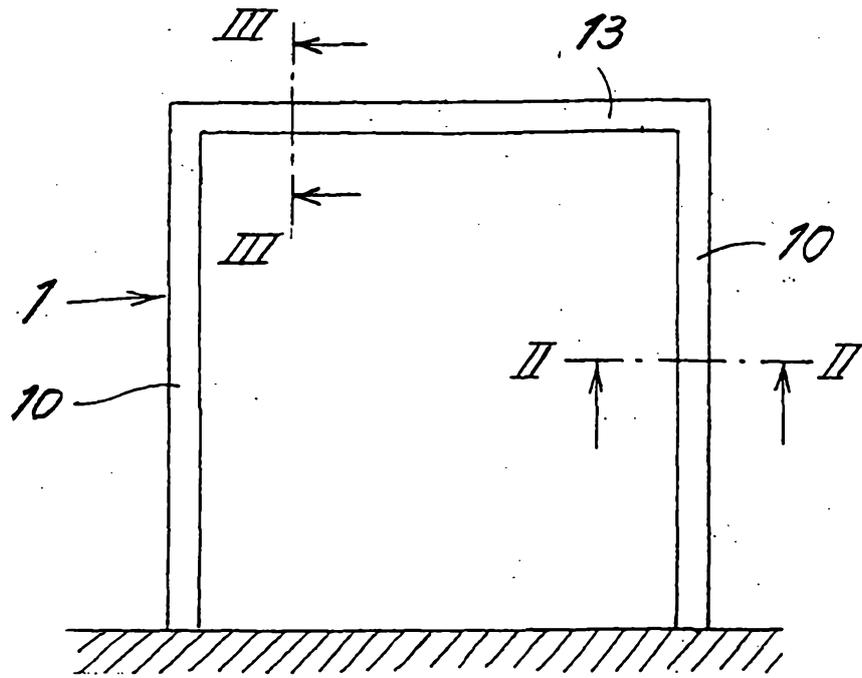


Fig. 2

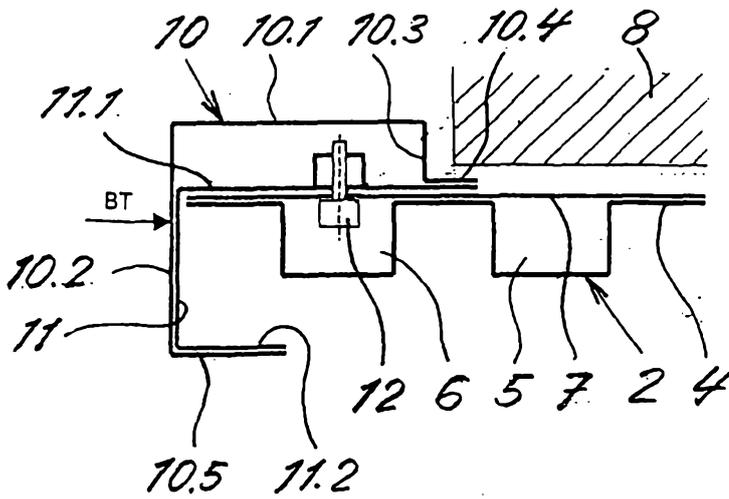


Fig. 3

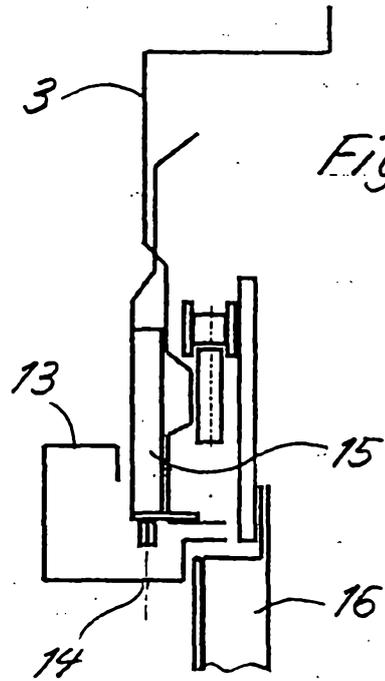


Fig. 4

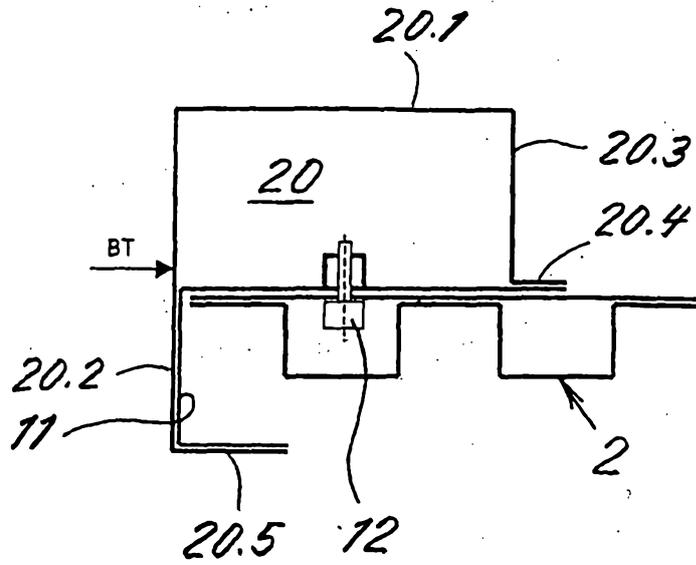


Fig. 5

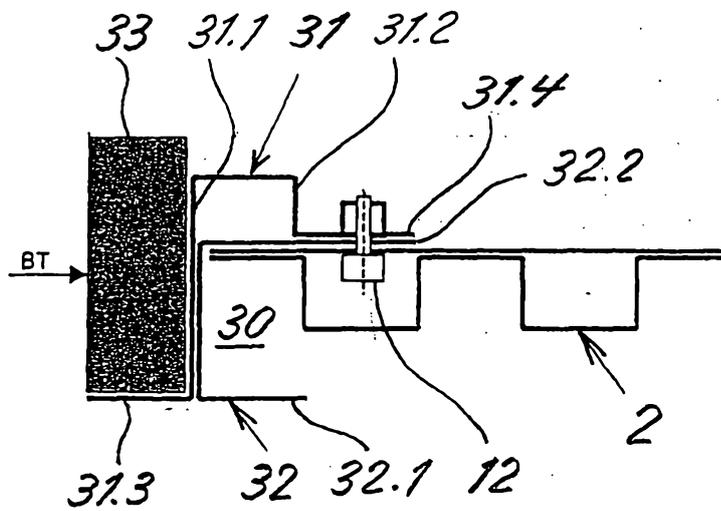


Fig. 6

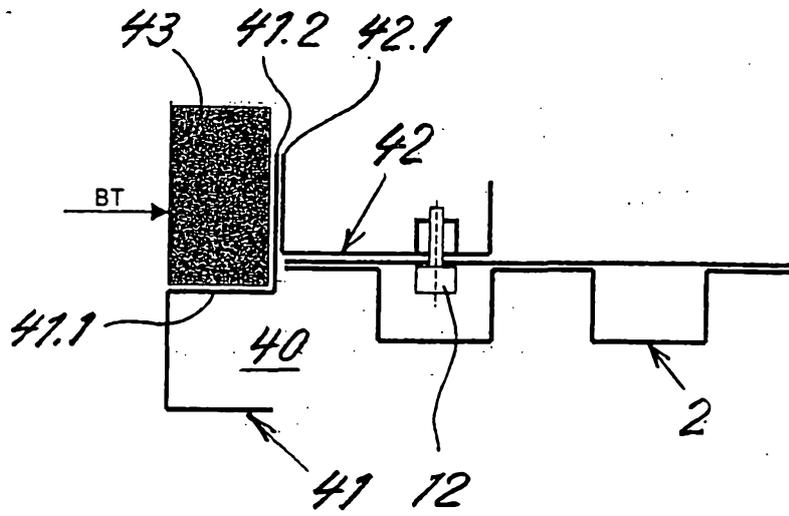


Fig. 7

