

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 December 2002 (05.12.2002)

PCT

(10) International Publication Number
WO 02/097218 A2

- (51) International Patent Classification⁷: **E04G**
- (21) International Application Number: PCT/GB02/02448
- (22) International Filing Date: 24 May 2002 (24.05.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0112746.3 25 May 2001 (25.05.2001) GB
- (71) Applicant (for all designated States except US): **DORMAN LONG ACCESS SYSTEMS LTD** [GB/GB]; Yarm Road, Darlington, Co Durham DL1 4DE (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

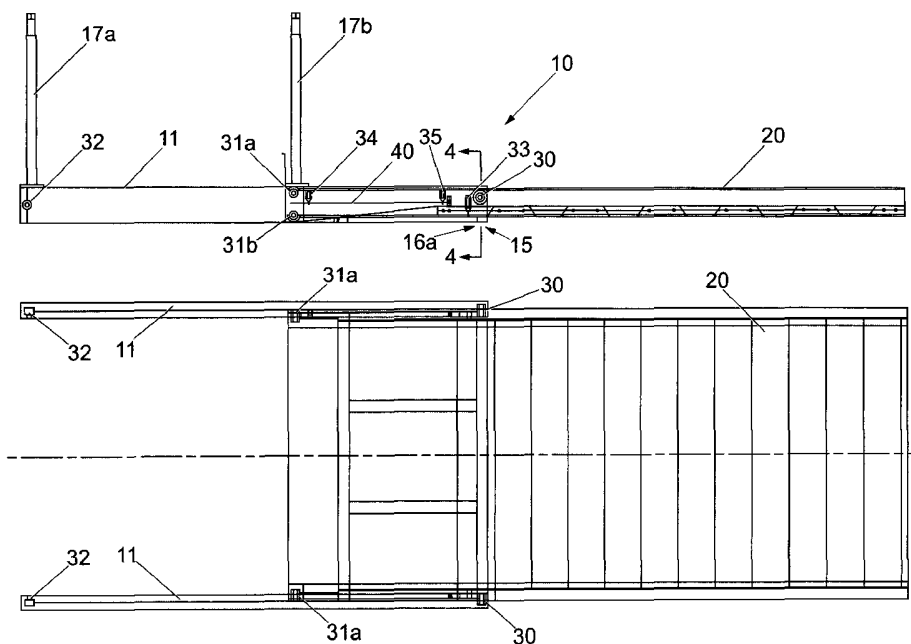
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **HUME, James** [GB/GB]; 16 Bonaly Steading, Colinton, Edinburgh EH13 0HA (GB).
- (74) Agent: **MURGITROYD & COMPANY**; Scotland House, 165-169 Scotland Street, Glasgow G5 8PL (US).

Published:
— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ROLLING PLATFORM



(57) Abstract: A rolling platform (10) comprises a static frame (11) fixed to a building by clamps (17), and a movable frame (20) telescopically slidable between a retracted position within the building and an extended position extending outwardly of the building. The movable frame (20) is carried by rollers (30, 31). Further rollers (32) are positioned to engage the movable frame (20) when retracted in such a manner that the movable frame (20) can be of greater length than the static frame (11).



WO 02/097218 A2

1 Rolling Platform

2

3 The present invention relates to a rolling platform
4 used particularly, but not exclusively, in the
5 building construction industry to provide access
6 platforms extending past the edge of floors of
7 buildings during their construction, the rolling
8 platform being cantilevered from the end of the
9 floor and also having the ability to fully retract
10 from its extended position.

11

12 Conventional rolling platforms used for providing
13 access platforms off the edge of floors of buildings
14 during their construction, comprise a static frame
15 and a rolling frame, the static frame extends partly
16 from the edge of the floor and the rolling frame can
17 be extended even further from the edge of the floor.

18

19 However, the disadvantage of these conventional
20 platforms is that the static frame extends outwardly
21 from the floor and this extension means that the

1 rolling frame (and the whole platform) can not be
2 retracted flush with the edge of the floor, during
3 use.

4

5 It is one object of the present invention to provide
6 a platform wherein the rolling frame fully retracts
7 to be flush with the edge of the floor, whilst still
8 being supported by the static frame.

9

10 According to the present invention, there is
11 provided a roller platform for use in providing
12 access platforms extending past the edge of floors
13 of buildings during their construction, the platform
14 comprising: a first, static frame which is securable
15 to the building; a second, movable frame which is
16 telescopically slidable with respect to the first
17 frame between an extended and a retracted position;
18 and roller means positioned between the first frame
19 and the second frame to permit relative sliding
20 movement between the frames; and wherein further
21 roller means are provided, said further roller means
22 being arranged to engage and support the second
23 frame as it is moved toward and is in the fully
24 retracted position.

25

26 Preferably, the first frame is an outer frame and
27 the second frame telescopes within the outer frame.

28

29 Preferably also, the inner frame is of greater
30 length than the outer frame.

31

1 The first-mentioned roller means may comprise
2 rollers at the rear of the inner frame bearing on
3 the outer frame, and rollers at the front of the
4 outer frame bearing on the inner frame; and the
5 further roller means may comprise rollers at the
6 rear of the outer frame which engage with a rail at
7 the rear of the inner frame as the latter is
8 retracted.

9
10 Preferably, when the second frame is fully
11 retracted, no part of the rolling platform extends
12 outwardly (away from the building) from the edge of
13 the floor.

14
15 Embodiments of the present invention will now be
16 described, by way of example only, with reference to
17 the accompanying drawings, in which:

18
19 Figs 1a and 1b show cross-sectional elevational
20 and plan views respectively of the rolling platform
21 of the present invention, the platform being in the
22 extended position;

23 Fig 2 is a cross-sectional side view of an
24 inner frame of Fig 1, to an enlarged scale;

25 Fig 3 is a plan view corresponding to Fig 2;

26 Fig 4 is a cross-section on the line 4-4 of
27 Fig 1;

28 Fig 5 is a detail of Fig 4 to an enlarged
29 scale;

30 Fig 6 is a side view of parts of the inner
31 frame in more detail;

32 Fig 7 is a plan view corresponding to Fig 6;

1 Fig 8 is a side view of parts of the outer
2 frame in more detail;

3 Fig 9 is a cross-section on the line B-B of
4 Fig 8;

5 Fig 10 is a cross-section on the line C-C of
6 Fig 8;

7 Fig 11 is a plan view corresponding to Fig 8;
8 and

9 Fig 11a is a cross-section on the line A-A of
10 Fig 11 to an enlarged scale.

11

12 Referring to the drawings, there is illustrated a
13 rolling platform 10. The rolling platform 10
14 comprises an outer static frame 11 and an inner
15 frame 20. The outer static frame 11 is in the form
16 of two I-sections 12a and 12b joined by a plate 14
17 to form a generally channel-shaped element. The
18 inner frame 20 is in the form of two I-sections 21a
19 and 21b joined by a plate 22 to form a generally
20 channel-shaped element.

21

22 The inner frame 20 is telescopically slidable within
23 the outer frame 11 and can slide between an extended
24 (see Fig. 1a) and a retracted position.

25

26 The rolling platform 10 is used in the building
27 industry to provide an access platform which extends
28 past the edge 15 of floors of a building during its
29 construction.

30

31 The rolling platform 10 is clamped to the building
32 by placing the platform 10 on the floor with a first

1 end 16a flush with the edge 15 of the building. The
2 platform 10 is then secured in the clamped position
3 by way of a number of clamping pillars 17a and 17b
4 (others not shown) which clamp between the outer
5 static frame 11 and the ceiling (not shown).

6

7 The inner frame 20 slides within the outer static
8 frame 11 by roller means in the form of a pair of
9 first rollers 30 and pairs of second and third
10 rollers 31a and 31b, which are all positioned
11 between the inner frame 20 and the outer frame 11
12 and permit relative sliding movement between the
13 respective frames 11, 20 thus allowing the inner
14 frame 20 to telescopically move out of the outer
15 frame 11, thus providing an access platform which
16 extends outwardly (away from the building) from the
17 edge 15 of the floor.

18

19 A further roller means in the form of rollers 32 is
20 fitted to the outer frame 11 and is arranged to
21 engage a track 40 provided on the inner frame 20 to
22 provide support for the inner frame 20 when it is
23 retracted and the rollers 31a and 31b no longer
24 engage with the outer frame 11 due to the outer
25 frame 11 being shorter in length than the inner
26 frame 20.

27

28 Lateral guidance is provided by vertical rollers 33
29 located near the front of the fixed frame 11, and by
30 axially spaced vertical rollers 34 and 35 located
31 toward the rear of the slidable frame 20. the
32 rollers 35 being sufficiently inboard to remain in

1 engagement when the slidable frame 20 is fully
2 retracted.

3

4 Alternatively, if the inner frame 20 and the outer
5 frame 11 are similar in length, the further roller
6 means 32 can still be utilised to give additional
7 support to the inner frame 20 even though the
8 rollers 31a and 31b may still be in contact with the
9 outer frame 11.

10

11 The rolling platform described above, provides a
12 platform 10 which is positioned flush with the edge
13 15 of the floor and which permits the inner frame 20
14 to fully retract within the outer frame 11 such that
15 when fully retracted, no part of the rolling
16 platform extends outwardly (away from the building)
17 from the edge 15 of the floor.

18

19 Modifications and improvements may be made to the
20 foregoing without departing from the scope of the
21 present invention.

1 CLAIMS

2

- 3 1. A roller platform for use in providing access
4 platforms extending past the edge of floors of
5 buildings during their construction, the
6 platform comprising: a first, static frame
7 which is securable to the building; a second,
8 movable frame which is telescopically slidable
9 with respect to the first frame between an
10 extended and a retracted position; and roller
11 means positioned between the first frame and
12 the second frame to permit relative sliding
13 movement between the frames; and wherein
14 further roller means are provided, said further
15 roller means being arranged to engage and
16 support the second frame as it is moved toward
17 and is in the fully retracted position.
- 18
- 19 2. A rolling platform according to claim 1, in
20 which the first frame is an outer frame and the
21 second frame telescopes within the outer frame.
- 22
- 23 3. A rolling platform according to claim 2, in
24 which the inner frame is of greater length than
25 the outer frame.
- 26
- 27 4. A rolling platform according to claim 3, in
28 which the first-mentioned roller means
29 comprises rollers at the rear of the inner
30 frame bearing on the outer frame, and rollers
31 at the front of the outer frame bearing on the
32 inner frame.

- 1
- 2 5. A rolling platform according to claim 4, in
- 3 which the further roller means comprises
- 4 rollers at the rear of the outer from which
- 5 engage with a rail at the rear of the inner
- 6 frame as the latter is retracted.
- 7
- 8 6. A rolling platform according to any preceding
- 9 claim in which, when the second frame is fully
- 10 retracted, no part of the rolling platform
- 11 extends outwardly (away from the building) from
- 12 the edge of the floor.
- 13
- 14

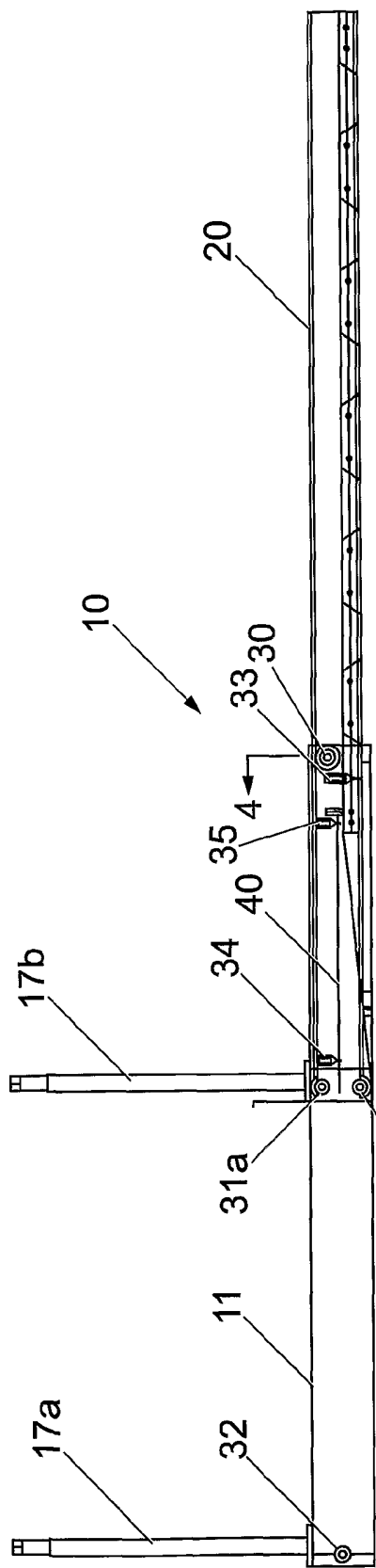


Fig. 1a

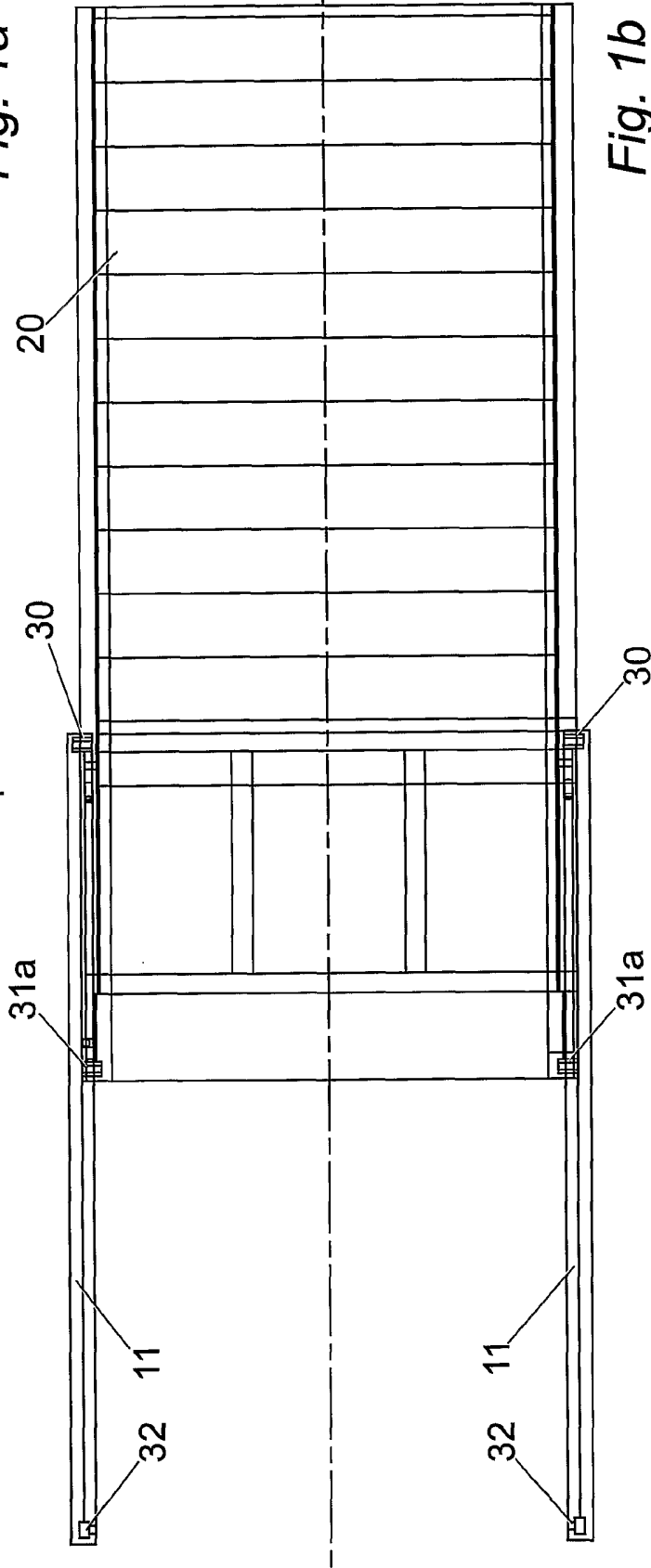
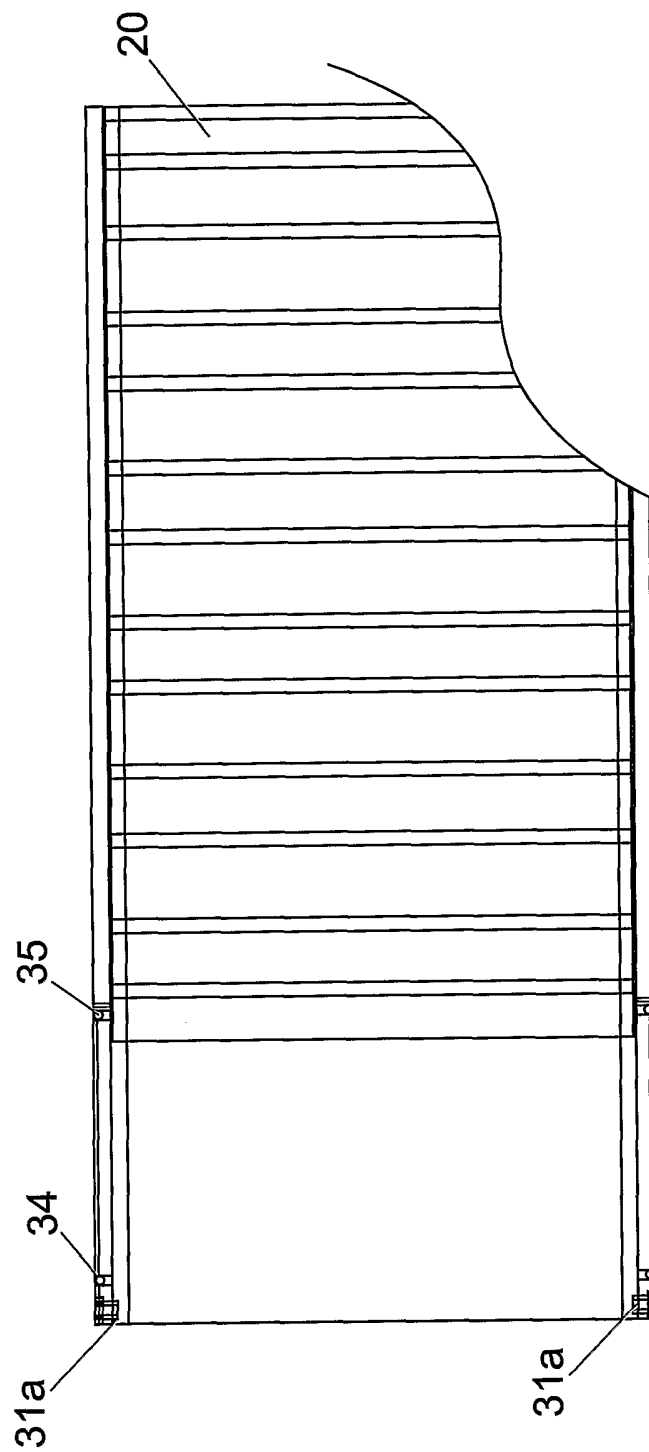
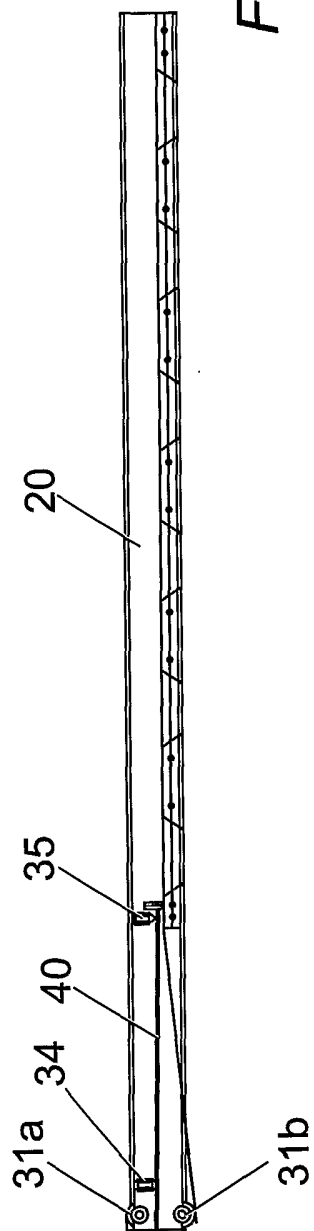


Fig. 1b



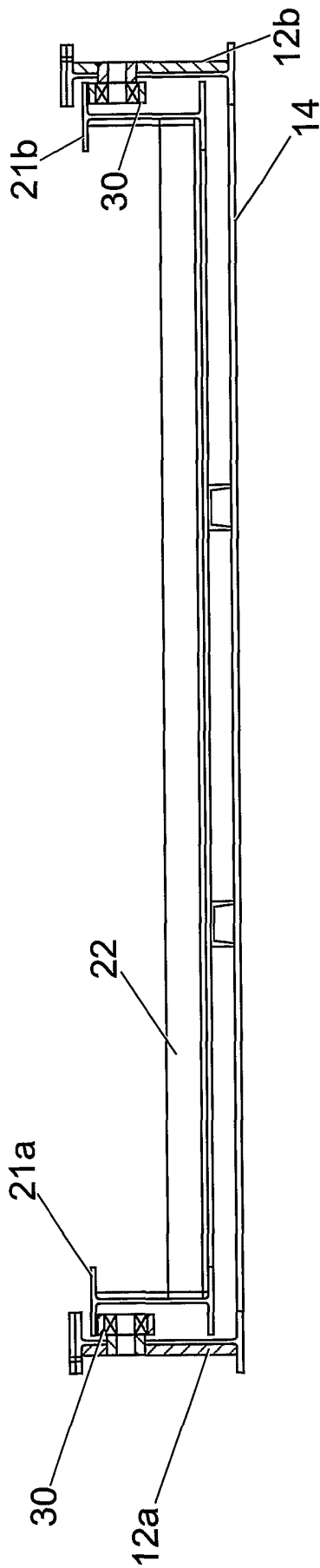


Fig. 4

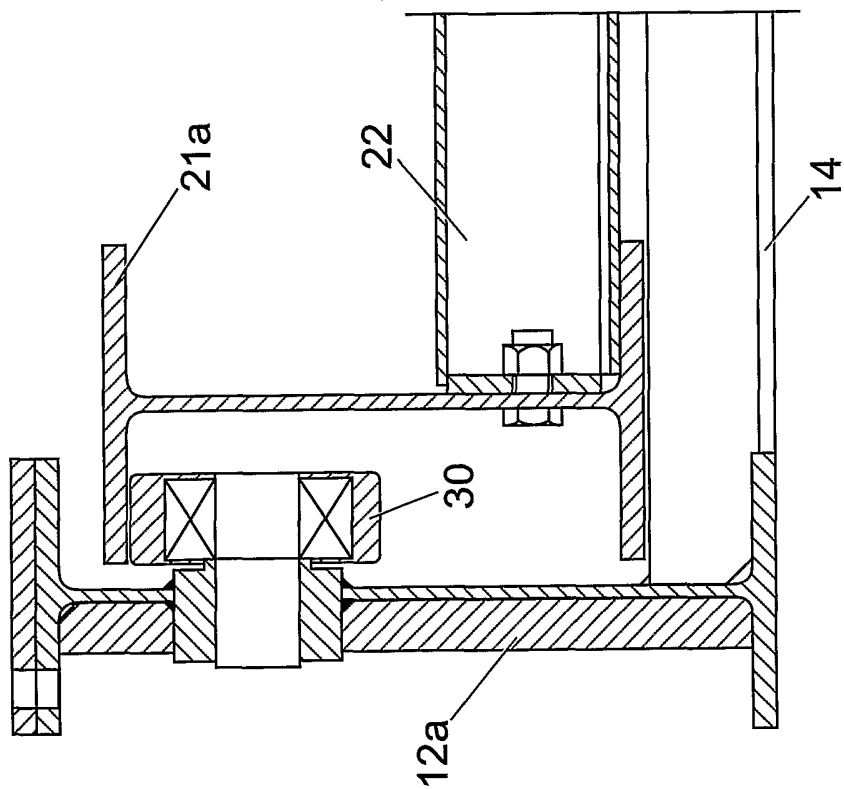


Fig. 5

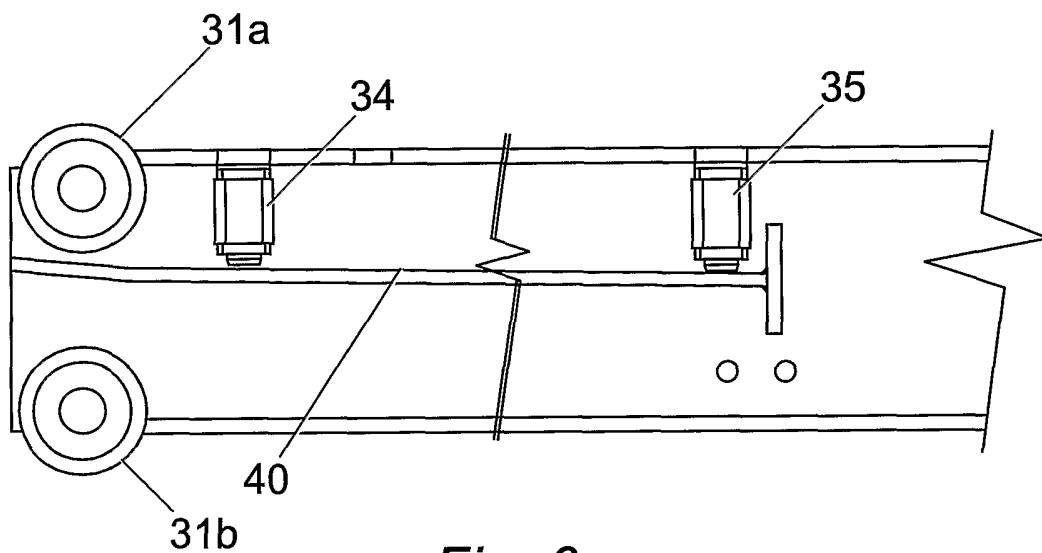


Fig. 6

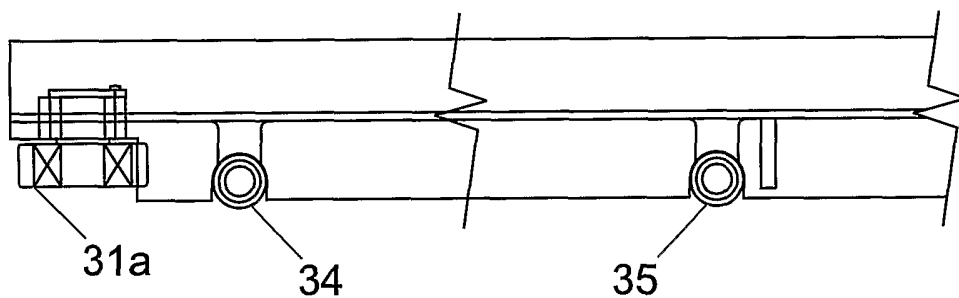


Fig. 7

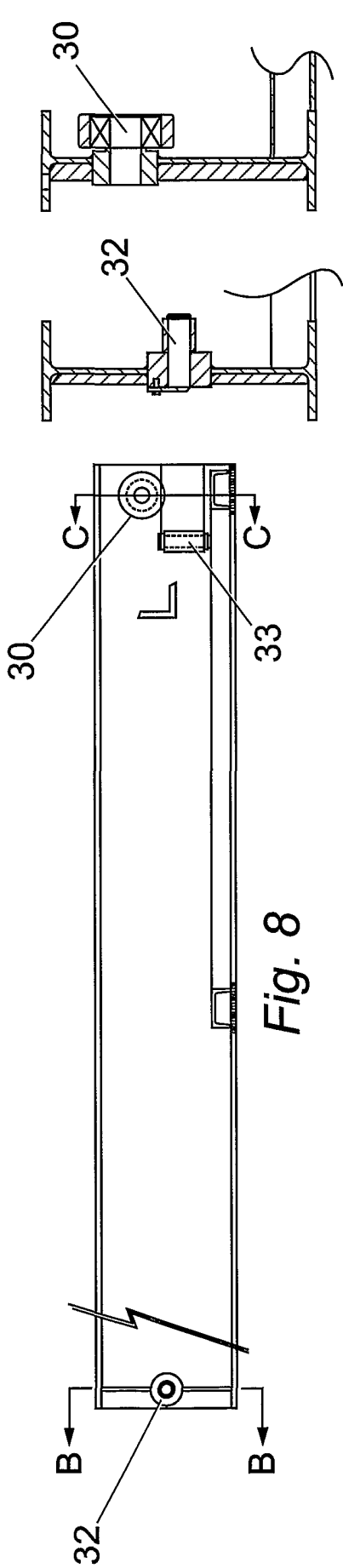


Fig. 9 Fig. 10 5 / 5

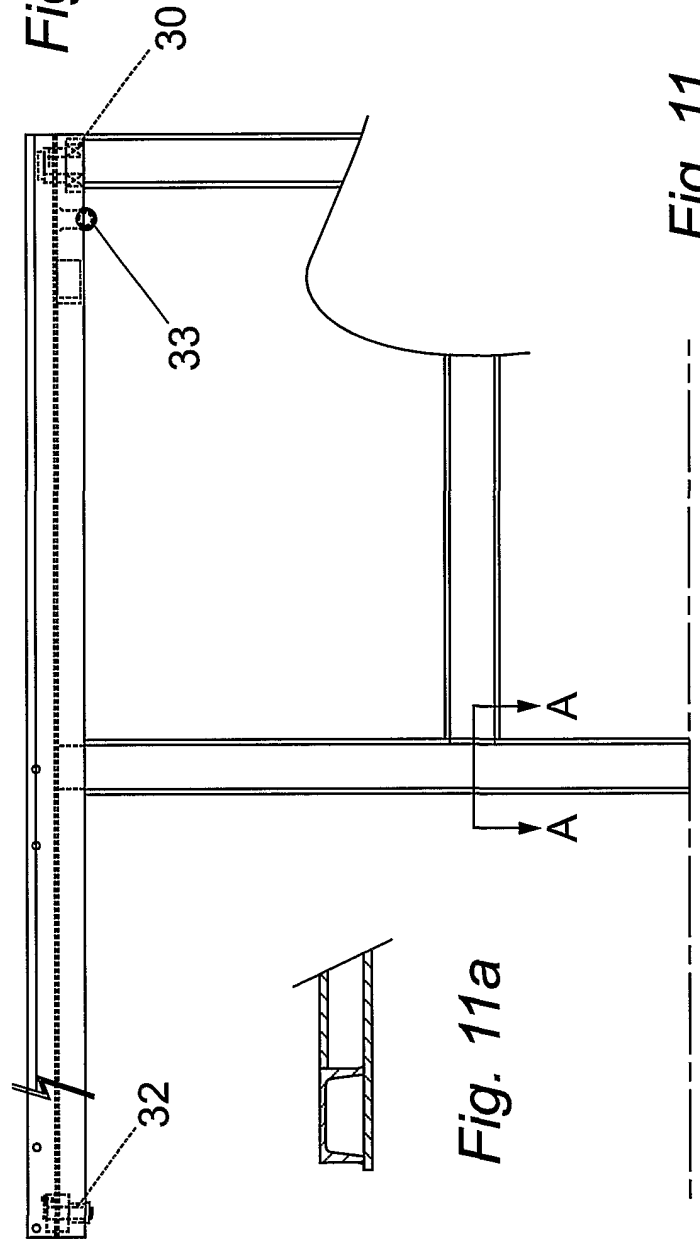


Fig. 11