(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 1 392 939 B2**

(12) **NEW EUROPEAN PATENT SPECIFICATION**
After opposition procedure

(45) Date of publication and mention of the opposition decision:
16.02.2011 Bulletin 2011/07

(45) Mention of the grant of the patent:
21.06.2006 Bulletin 2006/25

(21) Application number: **02726331.8**

(22) Date of filing: **24.05.2002**

(51) Int Cl.:
E04G 1/00 *(2006.01)*

(86) International application number:
PCT/GB2002/002448

(87) International publication number:
WO 2002/097218 (05.12.2002 Gazette 2002/49)

(54) **ROLLING PLATFORM**

ROLLBARE ARBEITSFLAECHE

PLATE-FORME DE TRAVAIL ROULANTE

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

(30) Priority: **25.05.2001 GB 0112746**

(43) Date of publication of application:
03.03.2004 Bulletin 2004/10

(73) Proprietor: **Xena Systems Limited**
Middlesbrough, Cleveland TS2 1UT (GB)

(72) Inventor: **HUME, James**
Colinton,
EdinburghEH13 0HA (GB)

(74) Representative: **Murnane, Graham John**
Murgitroyd & Company
165-169 Scotland Street
Glasgow
G5 8PL (GB)

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EP 1 392 939 B2

Description

[0001] The present invention relates to a rolling platform used particularly, but not exclusively, in the building construction industry to provide access platforms extending past the edge of floors of buildings during their construction, the rolling platform being cantilevered from the end of the floor and also having the ability to fully retract from its extended position.

[0002] Conventional rolling platforms (see e.g. WO-98/53161) used for providing access platforms off the edge of floors of buildings during their construction, comprise a rolling platform in accordance with the preamble of claim 1.

[0003] However, the disadvantage of these conventional platforms is that the static frame extends outwardly from the floor and this extension means that the rolling frame (and the whole platform) can not be retracted flush with the edge of the floor, during use.

[0004] It is one object of the present invention to provide a platform wherein the rolling frame fully retracts to be flush with the edge of the floor, whilst still being supported by the static frame.

[0005] According to the present invention, there is provided a rolling platform in accordance with claim 1.

[0006] Preferably, when the second, movable frame is fully retracted, no part of the rolling platform extends outwardly (away from the building) from the edge of the floor.

[0007] Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figs 1a and 1b show cross-sectional elevational and plan views respectively of the rolling platform of the present invention, the platform being in the extended position;
Fig 2 is a cross-sectional side view of an inner frame of Fig 1, to an enlarged scale;
Fig 3 is a plan view corresponding to Fig 2;
Fig 4 is a cross-section on the line 4-4 of Fig 1;
Fig 5 is a detail of Fig 4 to an enlarged scale;
Fig 6 is a side view of parts of the inner frame in more detail;
Fig 7 is a plan view corresponding to Fig 6;
Fig 8 is a side view of parts of the outer frame in more detail;
Fig 9 is a cross-section on the line B-B of Fig 8;
Fig 10 is a cross-section on the line C-C of Fig 8;
Fig 11 is a plan view corresponding to Fig 8; and
Fig 11a is a cross-section on the line A-A of Fig 11 to an enlarged scale.

[0008] Referring to the drawings, there is illustrated a rolling platform 10. The rolling platform 10 comprises an outer static frame 11 and an inner movable frame 20. The outer static frame 11 is in the form of two I-sections 12a and 12b joined by a plate 14 to form a generally channel-shaped element. The inner movable frame 20 is in the form of two I-sections 21a and 21b joined by a plate 22 to form a generally channel-shaped element.

[0009] The inner movable frame 20 is telescopically slidable within the outer static frame 11 and can slide between an extended (see Fig. 1a) and a retracted position.

[0010] The rolling platform 10 is used in the building industry to provide an access platform which extends past the edge 15 of floors of a building during its construction.

[0011] The rolling platform 10 is clamped to the building by placing the platform 10 on the floor with a first end 16a flush with the edge 15 of the building. The platform 10 is then secured in the clamped position by way of a number of clamping pillars 17a and 17b (others not shown) which clamp between the outer static frame 11 and the ceiling (not shown).

[0012] The inner movable frame 20 slides within the outer static frame 11 by roller means in the form of a pair of first rollers 30 and pairs of second and third rollers 31a and 31b which are all positioned between the inner movable frame 20 and the outer static frame 11 and permit relative sliding movement between the respective frames 11, 20 thus allowing the inner movable frame 20 to telescopically move out of the outer static frame 11, thus providing an access platform which extends outwardly (away from the building) from the edge 15 of the floor.

[0013] A further roller means in the form of rollers 32 is fitted to the outer static frame 11 and is arranged to engage a track 40 provided on the inner movable frame 20 to provide support for the inner movable frame 20 when it is retracted and the rollers 31a and 31b no longer engage with the outer static frame 11 due to the outer static frame 11 being shorter in length than the inner movable frame 20.

[0014] Lateral guidance is provided by vertical rollers 33 located near the front of the outer static frame 11, and by axially spaced vertical rollers 34 and 35 located toward the rear of the inner movable frame 20. the rollers 35 being sufficiently inboard to remain in engagement when the inner movable frame 20 is fully retracted.

[0015] The rolling platform described above, provides a platform 10 which is positioned flush with the edge 15 of the floor and which permits the inner movable frame 20 to fully retract within the outer static frame 11 such that when fully retracted, no part of the rolling platform extends outwardly (away from the building) from the edge 15 of the floor.

Claims

1. A rolling platform for use in providing access platforms extending past the edge of floors of buildings during their construction, the platform comprising:

a first, static outer frame (11) which is securable to the building;

a second, movable inner frame (20) which is telescopically slidable within the first outer frame (11) between an extended and a retracted position;
first roller means (30, 31 a, 31 b) positioned between the frames (11, 20) comprising rollers (31 a, 31 b) at the rear of the inner frame (20) bearing on the outer frame (11), and rollers (30) at the front of the outer frame (11) bearing on the inner frame (20) to permit relative sliding movement between the frames (11, 20);
characterised in that
the second inner frame (20) is longer than the first outer frame (11); and
further roller means (32) are provided, said further roller means (32) comprising rollers arranged at the rear of the first, outer frame (11) to engage with a rail (40) at the rear of the second, inner frame (20) and support the second, inner frame (20) as it is moved toward and is in the fully retracted position.

2. A rolling platform according to claim 1 in which, when the second movable frame (20) is fully retracted, no part of the rolling platform extends outwardly (away from the building) from the edge of the floor.

Patentansprüche

1. Eine Rollplattform zur Verwendung beim Bereitstellen von Zugangsplattformen, welche sich über den Rand von Fußböden von Gebäuden, während diese gebaut werden, erstreckt, wobei die Plattform Folgendes beinhaltet:

einen ersten, statischen äußeren Rahmen (11), der am Gebäude befestigt werden kann;
einen zweiten, beweglichen inneren Rahmen (20), der sich im ersten, äußeren Rahmen (11) zwischen einer ausgestreckten und einer eingezogenen Stellung teleskopartig verschieben lässt;
erste Rollmittel (30, 31 a, 31 b), die zwischen den Rahmen (11, 20) positioniert sind und Rollen (31a, 31b) an der Hinterseite des inneren Rahmens (20), auf dem äußeren Rahmen (11) aufliegend, und Rollen (30) an der Vorderseite des äußeren Rahmens (11), auf dem inneren Rahmen (20) aufliegend, beinhalten, um eine relative Gleitbewegung zwischen den Rahmen (11, 20) zu ermöglichen;
dadurch gekennzeichnet, dass
der zweite, innere Rahmen (20) länger als der erste, äußere Rahmen (11) ist; und
weitere Rollmittel (32) bereitgestellt sind, wobei die weiteren Rollmittel (32) Rollen beinhalten, die an der Hinterseite des ersten, äußeren Rahmens (11) angeordnet sind, um in eine Schiene (40) an der Hinterseite des zweiten, inneren Rahmens (20) einzugreifen und den zweiten, inneren Rahmen (20) zu tragen, wenn er in die vollkommen eingezogene Stellung bewegt wird und sich in der vollkommen eingezogenen Stellung befindet.

2. Rollplattform gemäß Anspruch 1, wobei sich, wenn der zweite, bewegliche Rahmen (20) vollkommen eingezogen ist, kein Teil der Rollplattform vom Rand des Fußbodens nach außen (vom Gebäude weg) erstreckt.

Revendications

1. Une plate-forme roulante destinée à être utilisée pour fournir des plates-formes d'accès s'étendant au-delà du bord de planchers de bâtiments durant leur construction, la plate-forme comprenant :

un premier cadre externe statique (11) qui peut être assujetti au bâtiment ;
un deuxième cadre interne mobile (20) qui peut coulisser de façon télescopique au sein du premier cadre externe (11) entre une position étendue et une position rétractée ;
des premiers moyens formant rouleaux (30, 31 a, 31 b) positionnés entre les cadres (11, 20) comprenant des rouleaux (31a, 31b) à l'arrière du cadre interne (20) en appui sur le cadre externe (11), et des rouleaux (30) à l'avant du cadre externe en appui sur le cadre interne (20) pour permettre un déplacement coulissant relatif entre les cadres (11, 20) ;
caractérisée en ce que le deuxième cadre interne (20) est plus long que le premier cadre externe (11) ; et
des moyens formant rouleaux supplémentaires (32) sont fournis, lesdits moyens formant rouleaux supplémentaires (32) comprenant des rouleaux arrangés à l'arrière du premier cadre externe (11) pour se mettre en prise avec un rail (40) à l'arrière du deuxième cadre interne (20) et pour soutenir le deuxième cadre interne à mesure qu'il est déplacé en direction de la position pleinement rétractée et qu'il se trouve dans celle-ci.

2. Une plate-forme roulante selon la revendication 1 dans laquelle, lorsque le deuxième cadre mobile (20) est pleinement rétracté, aucune partie de la plate-forme roulante ne s'étend vers l'extérieur (à l'écart du bâtiment) à partir du bord du plancher.

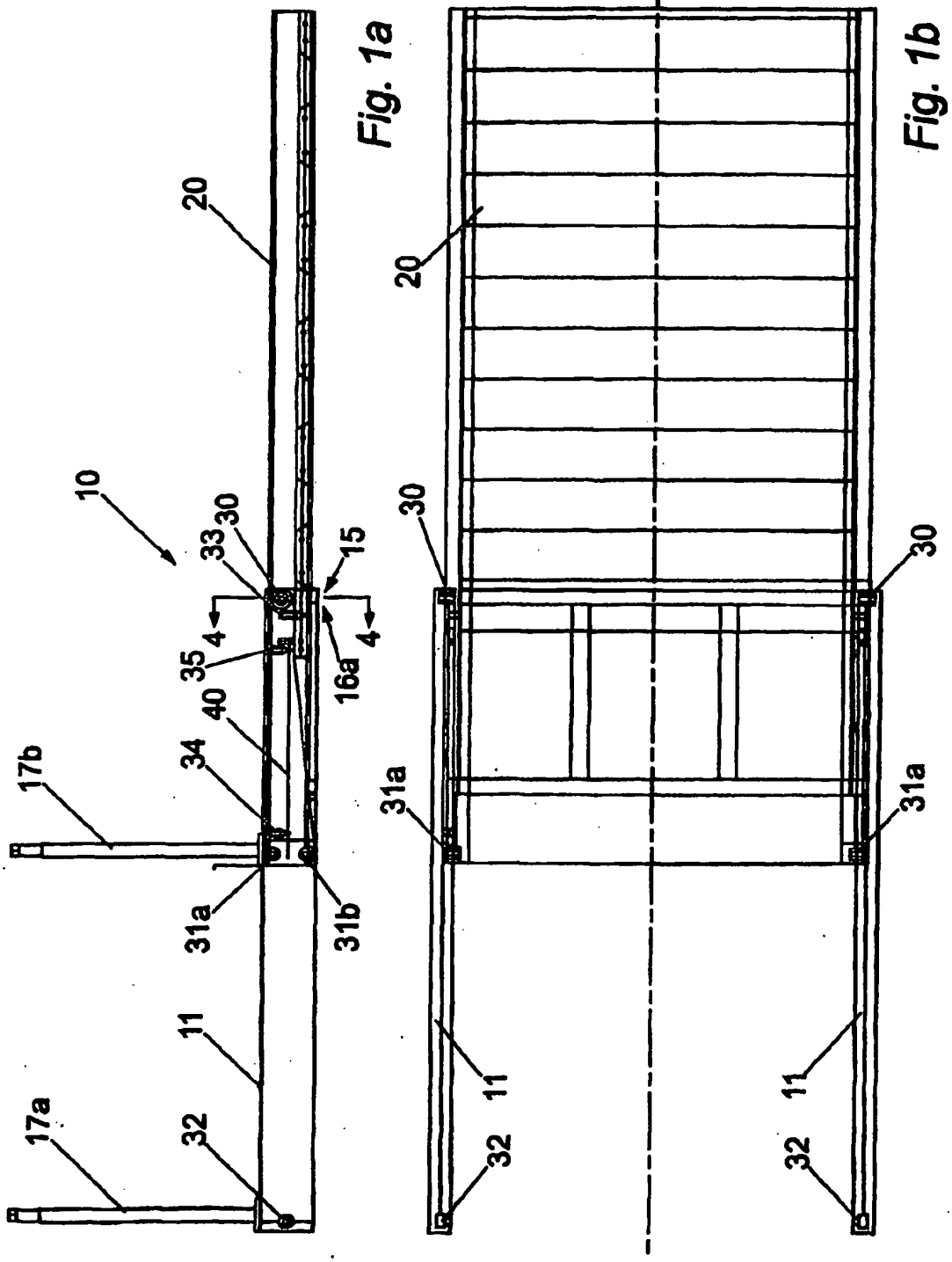

20
10
33
30
15
4
4
35
16a
40
34
17b
31a
31b
11
17a
32

Fig. 1a

20
30
30
31a
31a
11
11
32
32

Fig. 1b

Fig. 2

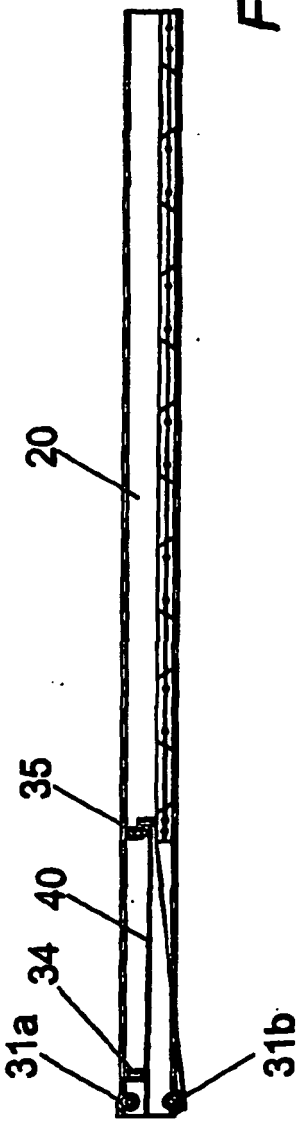
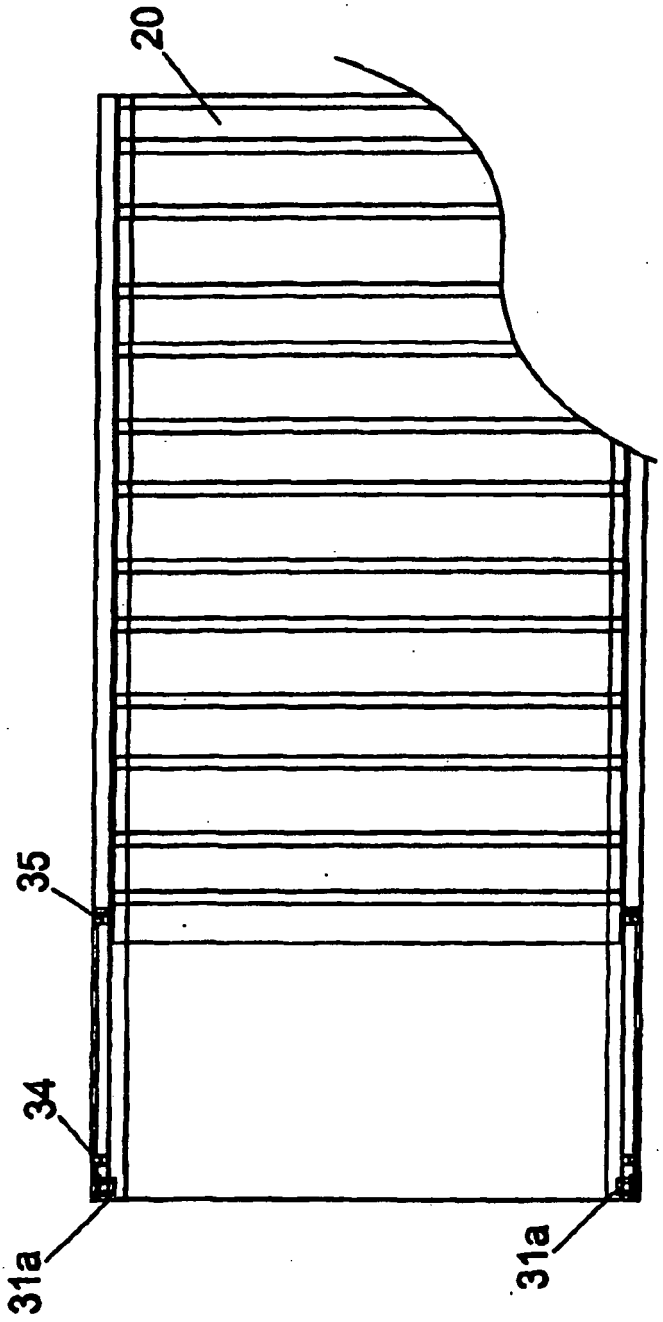


Fig. 3



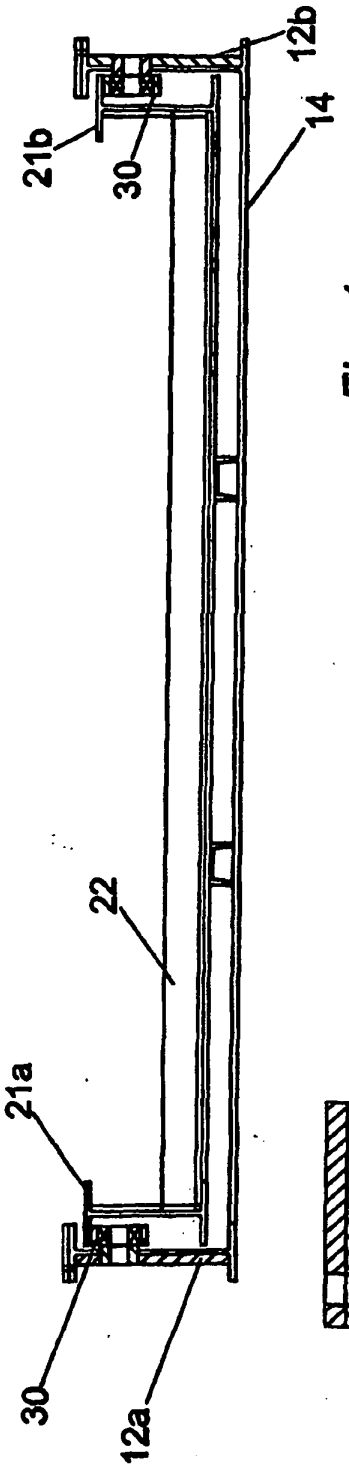


Fig. 4

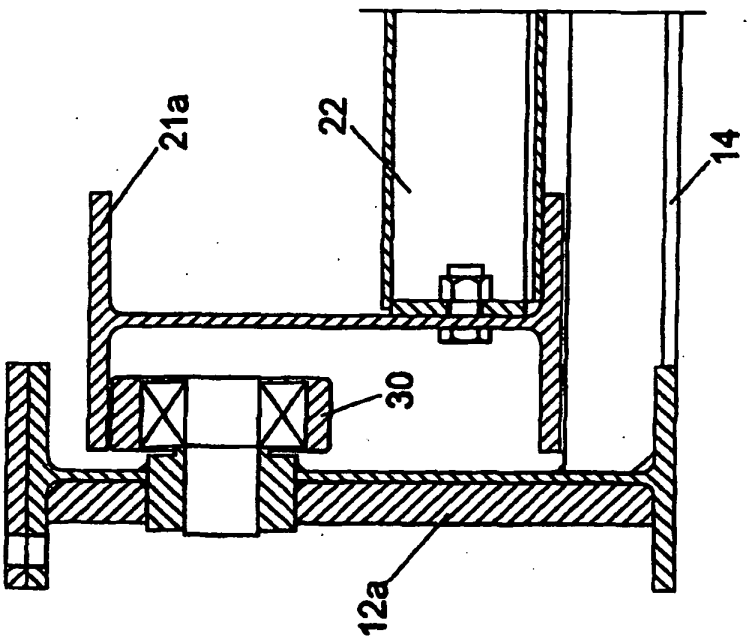


Fig. 5

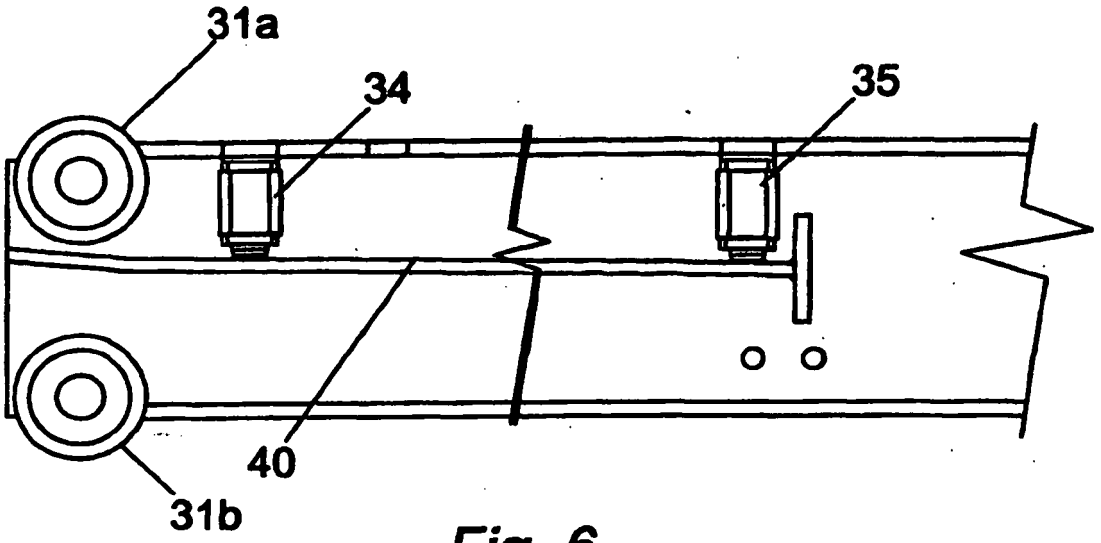


Fig. 6

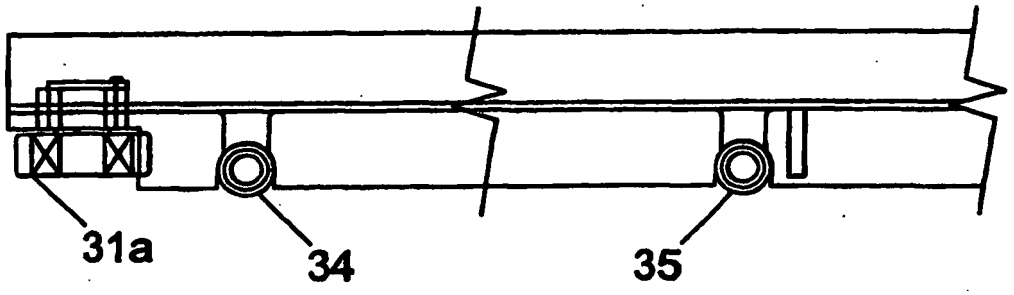


Fig. 7

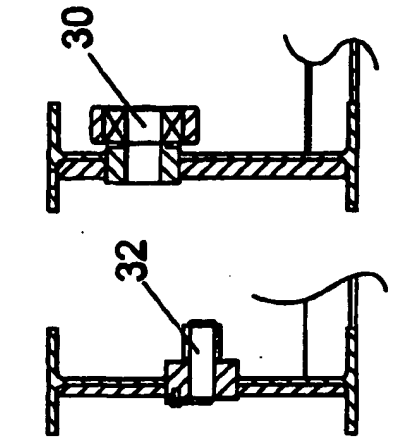


Fig. 10

Fig. 9

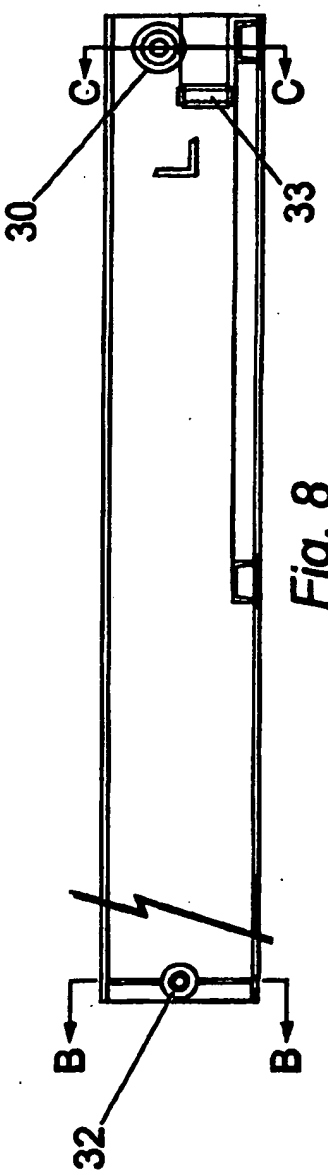


Fig. 8

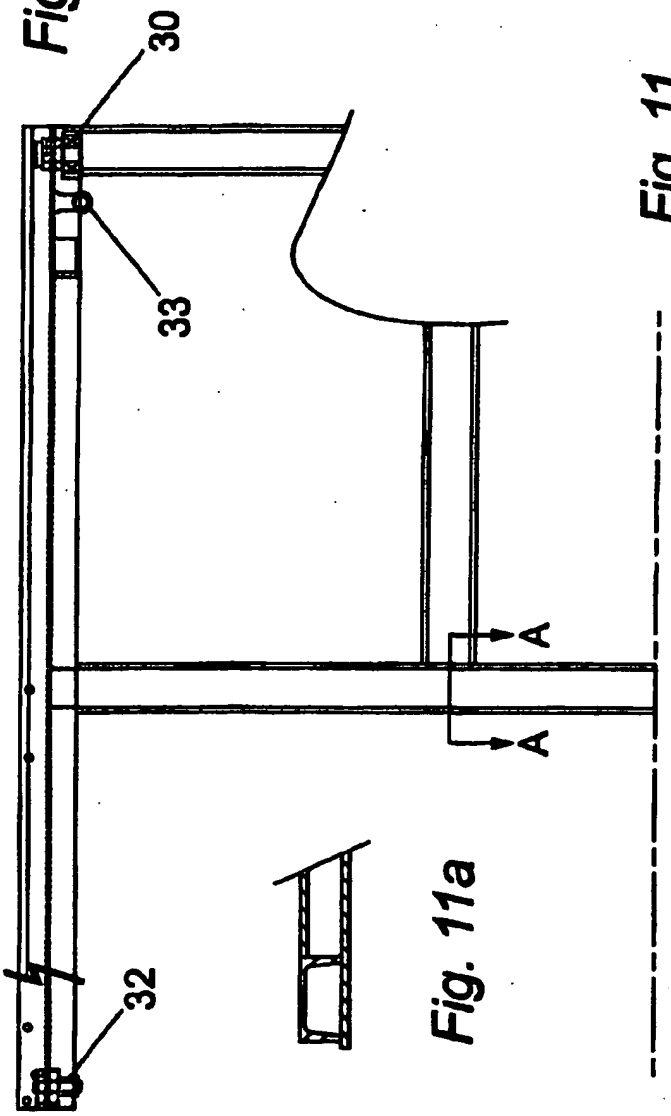


Fig. 11

Fig. 11a

REFERENCES CITED IN THE DESCRIPTION

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