

Description

Background of the Invention

This invention relates to a frame structure for a curved escalator including a plurality of truss units connected to each other to define an arc in plan, said frame structure having upper and lower horizontal sections and a sloped section between the upper and lower sections.

The escalator may have a circular stairway path that has a circular horizontal projection.

Curved escalators include a frame structure defining therein a stairway path along which a plurality of segment steps travel. The stairway path includes upper and lower horizontal landing sections and an intermediate inclined section connected between the upper and lower landing sections.

As illustrated in Figs. 1 and 2, a curved escalator 1 has a stairway path 2 of a spiral or circular in horizontal projection along which a plurality of segment steps 3 travel. The steps 3 are connected to an endless belt 5 mounted within a frame structure 4 and are driven by a drive unit 6. Endless moving handrails 7 are also disposed for synchronized movement with the steps 3 on the endless belt 5. One of the proposed structures for the main frame structure 4 of a curved escalator utilizes a plurality of truss units, each of which is comprise of upper and lower chord members and vertical members, connected to each other to define a curved or circular frame structure 40 as shown in Fig. 3, in which the frame structure 40 is illustrated in a plan view. As shown in the Figure, the frame structure 40 comprises truss units 40a, 40b, 40c . . . 40n which are connected to each other and arranged along a curve formed by smoothly connected arcs having radii of curvature R_1 to R_n with respect to the centres O_1 to O_n to form a polygonal truss structure. The frame structure 40 has upper and lower horizontal sections along which the upper and lower landing sections of the stairway path are defined, and an intermediate, inclined section along which the sloped section of the stairway path is defined. The trusses have outer and inner, upper and lower nodal points $A_1, B_1, D_1, E_1, \dots, A_n, B_n, D_n, E_n$.

However, according to the proposed design as described above, the upper and lower horizontal sections of the frame structure and the inclined section of the frame structure are directly connected with a single folded point therebetween. That is, the horizontal section of the frame structure abruptly changes into the inclined section, and the chord member of the horizontal section must be folded at a relatively large angle to change into the chord member of the inclined section. The chord members have mounted thereon vertical members which carries cross members extending between outer and inner side members, and guide rails for guiding the steps of the escalator are mounted to the cross members to extend along the stairway path of the escalator.

With the above arrangement, since the chord members are connected at the folded point or the

connecting point between the horizontal section and the sloped section, the vertical distance between the top face of the truss and the tread of the guide rail is not constant at the position at which the vertical member is mounted, requiring much time and money in accurately positioning the guide rails.

Further, since the truss members have varying cross sections, mounting brackets to be supported from the truss members must be formed accordingly, resulting in an increased number of parts and cost.

Also, since the positioning of the vertical member is very complicated, the assembly of the vertical member that is vertically disposed between the upper and the lower chord members is complicated and difficult. The positioning of the truss members is also difficult. Further, the positioning the guide rails in the radial direction within truss units arranged along a curve is difficult because the truss units themselves are constructed of straight truss members.

Summary of the Invention

Accordingly, an object of the present invention is to provide a frame structure for a curved escalator in which the positioning and aligning of the guide rails are relatively easy.

Another object of the present invention is to provide a frame structure for a curved escalator in which the assembling of the vertical truss members between the upper and the lower chord members is easy.

Still another object of the present invention is to provide a frame structure for a curved escalator in which the connecting and positioning of the truss units can be easily achieved.

Still another object of the present invention is to provide a frame structure for a curved escalator in which the positioning of the guide rails in the radial direction, manufacturing of the truss units, and assembly of the truss are facilitated.

Still a further object of the present invention is to provide a frame structure for a curved escalator in which the truss unit may be manufactured using the end faces at which they are connected as a reference position whereby the assembly of the main frame structure is facilitated, and in which the connecting accuracy of the respective truss units is improved.

With the above objects in view, a frame structure for a curved escalator of the present invention includes a plurality of truss units with vertical members; connected to each other to define an arc in plan, and the frame structure has upper and lower horizontal sections and a sloped section between the upper and lower sections. The frame structure comprises an upper transition section including at least one truss unit connected between the upper horizontal section and the sloped section, and a lower transition section including at least one truss unit connected between the lower horizontal section and the sloped section, each transition section having a slope less than that of the sloped section.

Brief Description of the Drawings

The present invention will become more readily apparent from the following detailed description of the preferred embodiment taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side view of a curved escalator to which the present invention is applicable;

Fig. 2 is a plan view of the curved escalator shown in Fig. 1;

Fig. 3 is a plan view of a frame structure to which the present invention is applicable;

Fig. 4 is an extended schematic side view of the outer truss of an embodiment of the present invention;

Fig. 5 is an extended schematic side view of the inner truss of an embodiment of the present invention;

Fig. 6 is a cross sectional view taken along a vertical plane across the frame structure of the escalator;

Fig. 7 is a partial plan view of the frame structure of the present invention;

Fig. 8 is a partial side view of the outer truss structure of one embodiment of the present invention;

Fig. 9 is a partial side view of the inner truss structure of one embodiment of the present invention;

Fig. 10 is a partial enlarged plan view of a folded chord member of one embodiment of the present invention; and

Fig. 11 is a partial enlarged side view of the folded chord member shown in Fig. 10.

Description of the Preferred Embodiment

Referring now to Figs. 4 to 11 in which a preferred embodiment of the present invention is illustrated, a frame structure for a curved escalator of the present invention comprises a truss structure 40 comprised of a plurality of truss units 40a, 40b, 40c, ... 40n each including upper chord members 41, lower chord members 42, vertical members 43 disposed between the upper and the lower chord members 41 and 42, and diagonal members 44 disposed along a diagonal line of parallelogram defined by the chord and vertical members. It is to be noted that the truss structure 40 includes an outer side shown in Fig. 4 and an inner side shown in Fig. 5 which are similar but are different in their length and inclination. According to the present present invention, the truss structure 40 comprises horizontally extending upper and lower landing sections H, an intermediate sloped section S, and upper and lower transition sections B that smoothly connect the respective ends of the sloped section S to the horizontal sections H. In the illustrated embodiment, the upper and lower horizontal sections H each include four truss units which are identical rectangular parallelepipeds, and the intermediate sloped section S includes eight truss units which are identical parallelepipeds, and the upper and the lower transition sections B each includes two truss units which are parallelepipeds having varying slope angles. It is to be understood that the

numbers of the truss units contained in the respective sections may be modified in accordance with the design requirement of the particular curved escalator to be built.

As is best seen from Figs. 4 and 5, the frame structure of the present invention comprises two transition sections B that smoothly connect the horizontal sections H to the sloped section S. Further, the folded points in the transition sections B are provided with vertical truss members 43. More particularly, as shown in Fig. 6, in which a cross-sectional view of the truss structure 40 is illustrated, the vertical truss members 43 are connected in a vertical position between the upper chord member 41 and the lower chord member 42, and between respective of these vertical truss members 43 is connected a transverse cross beam 45. The cross beam 45 has mounted thereon an upper guide rail 47 and a lower guide rail 48 via rail brackets 46. Disposed on the guide rail 47 for providing a rolling movement therealong is a drive roller 49 mounted on a step axle 50 having mounted thereon a step (not shown) and connected by an endless sprocket chains as is well known in the art.

Another guide rail 51 is positioned in an opposing relationship relative to the lower guide rail 48 by a mounting bracket 52 secured to the vertical truss member 43, which is arranged in accordance with the rate of curvature of the truss structure 40. A follower roller 54 mounted on an axle 53 is disposed between the lower guide rail 48 and the rail 51 for providing a guided rolling movement along the rails 48 and 51. In Fig. 6, a vertical distance between the top face of the upper chord member 41 and the top face of the upper guide rail 47 is shown by symbol L_1 , and the vertical distance between the bottom face of the lower chord member 42 and the top face of the rail 51 is shown by symbol L_2 .

With the above described embodiment of the present invention, since each of the truss units 40a to 40n includes a vertical truss member 43 and since the truss structure 40 has its folded points in registry with the vertical truss member 43, the vertical distance L_1 and L_2 shown in Fig. 6 can be made constant and the folded points can be used as a reference point for the positioning of the guide rails. This is a significant improvement over the conventionally proposed frame structure for a curved escalator in which it has been believed to be difficult to provide a positioning reference point for accurately positioning guide rails that have complex curved shapes.

Further, the mounting brackets for the guide rails or the like secured to the vertical truss member can be made identical, reducing the number of the types of parts and the number of assembly steps required, thereby decreasing the manufacturing cost of the escalator.

Also, since the vertical truss member 43 is arranged in accordance with the curves of the truss structure, the rail brackets 46 and 52 may be positioned with the outside or the inside vertical truss member 43 being used as a positioning

reference, thereby facilitating the positioning of the rails 47, 48 and 51.

In this embodiment, the upper and the lower chord truss members 41 and 42 of the outer and the inner sides of the respective truss units 40a to 40n are folded at the positions at which the vertical truss members 43 are secured to form a portion of a polygon. The angles at which the truss members 41 and 42 are folded are such that the straight sections of the chord truss members 41 and 42 extend substantially along the arcs having centers O_1 to O_5 and radii R_1 to R_5 as shown in Fig. 3. Since the chord members 41 and 42 are folded as described above, the vertical members 43 can be easily secured at the folded points b_1 to b_3 and c_1 to c_3 as shown in Figs. 7 to 9. Further, since the cross members 45 on which the rails are secured are mounted on the vertical members 43, these cross members 45 are automatically positioned in parallel to straight lines l_1 , l_2 , and l_3 passing through the outer and inner folding points b_1 — b_1 , b_2 — b_2 , and b_3 — b_3 as shown in Fig. 7.

In this embodiment, since the vertical truss members are disposed at the folding points in the upper and the lower chord truss members of the truss units, and since the vertical members are aligned on the lines passing through the center of curvature of the escalator, the cross members for supporting the guide rails are positioned in parallel to the straight lines passing through the center of curvature. Therefore, the positioning of the guide rails can be easily and accurately achieved by utilizing any of the positions along the vertical truss members as a reference point for positioning the guide rails, thereby facilitating the positioning of the guide rails.

The folding points b_1 — c_1 , b_2 — c_2 , and b_3 — c_3 shown in Figs. 8 and 9 may be vertical cut portions cut along vertical lines rather than the vertical folded portions. The vertical cut portions do not have to extend along vertical straight lines but may be sufficient when the positions at which the ends of the vertical truss members 43 fall on vertical straight lines.

Figs. 10 and 11 illustrate in enlarged plan and side views a vertical folded portion or a vertical cut portion of a chord truss member 41. The upper end of the vertical truss member 43 is rigidly secured to the upper chord member 41 with reference to the vertical folded portion or the vertical cut portion 41a, and the lower end of the vertical truss member 43 is similarly secured to the lower chord truss member 42 at the position of the vertical folded or cut portion.

With this arrangement, since the vertical truss members 43 can be positioned with the vertical folded or cut portions of the upper and lower chord truss members used as positioning reference points, the positioning and assembly of the vertical truss members 43 is easy and the positioning and the assembly of the cross members 45 secured to the vertical members 43 are also facilitated.

Further, as shown in Fig. 7, since vertical mem-

bers 43' are disposed at the opposite circumferential ends of truss units 40a, these vertical truss members 43' are also automatically positioned on a diameter passing through one of the centers of curvature O_1 to O_5 previously described when the vertical members 43' are secured at the ends of the folded chord truss members as described previously. Therefore, the cross truss members 45 extending between the vertical members 43' are also placed in parallel with lines l_m passing through one of the centers of curvature O_1 or O_5 . A connecting piece 60 is provided on each of the vertical truss members 43 for connecting the associated truss unit 40a to the adjacent truss units. It is to be noted that the abutting surfaces of the connecting pieces 60 are arranged to be positioned on the same plane as a vertical plane passing through the line l_m . This arrangement facilitates the connection between the adjacent truss units. While four connecting pieces 60 are provided in the vertical plane at the ends of the truss units 40a, any number of the connecting pieces 60 may be used. Also, the truss unit 40a itself may be a polygonal unit as illustrated or may be a straight unit. The connecting pieces 60 are placed in an abutting relationship with the mating connecting pieces 60 of the adjacent truss unit to be connected and may be secured by any securing means such as bolts and nuts.

In this embodiment, since the connecting faces of the opposite ends of the truss unit are arranged on the same vertical plane passing through a center of curvature of the curved escalator, the following advantages are obtained:

- (1) The connecting faces of the ends of the truss unit can be used as reference faces for the assembly of the truss unit.
- (2) The connection accuracy between the respective truss units can be improved.
- (3) The manufacture of the truss unit is facilitated due to the presence of the reference face.
- (4) The installation of the curved escalator system is facilitated by aligning the reference face of the truss units with the centers of curvature of the escalator.

Claims

1. A frame structure for a curved escalator including a plurality of truss units (40a ... 40n) with vertical members (43) connected to each other to define an arc in plan, said frame structure having upper and lower horizontal sections (H) and a sloped section (S) between the upper and lower sections, characterised in that the frame structure comprises an upper transition section (B) including at least one transition truss unit and connected between said upper horizontal section and said sloped section; and a lower transition section (B) including at least one transition truss unit and connected between said lower horizontal section and said sloped section, each transition section (B) having a slope less than that of the sloped section (S).

2. A frame structure for a curved escalator as



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reference, thereby facilitating the positioning of the rails 47, 48 and 51.

In this embodiment, the upper and the lower chord truss members 41 and 42 of the outer and the inner sides of the respective truss units 40a to 40n are folded at the positions at which the vertical truss members 43 are secured to form a portion of a polygon. The angles at which the truss members 41 and 42 are folded are such that the straight sections of the chord truss members 41 and 42 extend substantially along the arcs having centers O_1 to O_5 and radii R_1 to R_5 as shown in Fig. 3. Since the chord members 41 and 42 are folded as described above, the vertical members 43 can be easily secured at the folded points b_1 to b_3 and c_1 to c_3 as shown in Figs. 7 to 9. Further, since the cross members 45 on which the rails are secured are mounted on the vertical members 43, these cross members 45 are automatically positioned in parallel to straight lines l_1 , l_2 , and l_3 passing through the outer and inner folding points b_1 — b_1 , b_2 — b_2 , and b_3 — b_3 as shown in Fig. 7.

In this embodiment, since the vertical truss members are disposed at the folding points in the upper and the lower chord truss members of the truss units, and since the vertical members are aligned on the lines passing through the center of curvature of the escalator, the cross members for supporting the guide rails are positioned in parallel to the straight lines passing through the center of curvature. Therefore, the positioning of the guide rails can be easily and accurately achieved by utilizing any of the positions along the vertical truss members as a reference point for positioning the guide rails, thereby facilitating the positioning of the guide rails.

The folding points b_1 — c_1 , b_2 — c_2 , and b_3 — c_3 shown in Figs. 8 and 9 may be vertical cut portions cut along vertical lines rather than the vertical folded portions. The vertical cut portions do not have to extend along vertical straight lines but may be sufficient when the positions at which the ends of the vertical truss members 43 fall on vertical straight lines.

Figs. 10 and 11 illustrate in enlarged plan and side views a vertical folded portion or a vertical cut portion of a chord truss member 41. The upper end of the vertical truss member 43 is rigidly secured to the upper chord member 41 with reference to the vertical folded portion or the vertical cut portion 41a, and the lower end of the vertical truss member 43 is similarly secured to the lower chord truss member 42 at the position of the vertical folded or cut portion.

With this arrangement, since the vertical truss members 43 can be positioned with the vertical folded or cut portions of the upper and lower chord truss members used as positioning reference points, the positioning and assembly of the vertical truss members 43 is easy and the positioning and the assembly of the cross members 45 secured to the vertical members 43 are also facilitated.

Further, as shown in Fig. 7, since vertical mem-

bers 43' are disposed at the opposite circumferential ends of truss units 40a, these vertical truss members 43' are also automatically positioned on a diameter passing through one of the centers of curvature O_1 to O_5 previously described when the vertical members 43' are secured at the ends of the folded chord truss members as described previously. Therefore, the cross truss members 45 extending between the vertical members 43' are also placed in parallel with lines l_m passing through one of the centers of curvature O_1 or O_5 . A connecting piece 60 is provided on each of the vertical truss members 43 for connecting the associated truss unit 40a to the adjacent truss units. It is to be noted that the abutting surfaces of the connecting pieces 60 are arranged to be positioned on the same plane as a vertical plane passing through the line l_m . This arrangement facilitates the connection between the adjacent truss units. While four connecting pieces 60 are provided in the vertical plane at the ends of the truss units 40a, any number of the connecting pieces 60 may be used. Also, the truss unit 40a itself may be a polygonal unit as illustrated or may be a straight unit. The connecting pieces 60 are placed in an abutting relationship with the mating connecting pieces 60 of the adjacent truss unit to be connected and may be secured by any securing means such as bolts and nuts.

In this embodiment, since the connecting faces of the opposite ends of the truss unit are arranged on the same vertical plane passing through a center of curvature of the curved escalator, the following advantages are obtained:

(1) The connecting faces of the ends of the truss unit can be used as reference faces for the assembly of the truss unit.

(2) The connection accuracy between the respective truss units can be improved.

(3) The manufacture of the truss unit is facilitated due to the presence of the reference face.

(4) The installation of the curved escalator system is facilitated by aligning the reference face of the truss units with the centers of curvature of the escalator.

Claims

1. A frame structure for a curved escalator including a plurality of truss units (40a ... 40n) with vertical members (43) connected to each other to define an arc in plan, said frame structure having upper and lower horizontal sections (H) and a sloped section (S) between the upper and lower sections, characterised in that the frame structure comprises an upper transition section (B) including at least one transition truss unit and connected between said upper horizontal section and said sloped section; and a lower transition section (B) including at least one transition truss unit and connected between said lower horizontal section and said sloped section, each transition section (B) having a slope less than that of the sloped section (S).

2. A frame structure for a curved escalator as

claimed in claim 1, characterised in that each of said upper and lower transition truss units includes chord truss members folded at a predetermined position.

3. A frame structure for a curved escalator as claimed in claim 1, characterised in that each of said upper and lower transition truss units includes chord truss members folded into a polygonal shape in the horizontal projection and vertical truss members vertically disposed at the fold points of said upper and lower chord truss members.

4. A frame structure for a curved escalator as claimed in claim 1, wherein each of said upper and lower transition truss units includes chord truss members that are vertically cut at a predetermined position.

5. A frame structure for a curved escalator as claimed in claim 1, characterised in that each of said upper and lower transition truss units includes chord truss members and vertical truss members connected to said chord truss members, and said upper and lower chord truss members are folded into a polygonal shape at the positions at which said vertical truss members are secured.

6. A frame structure for a curved escalator as claimed in any preceding claim characterised in that said truss unit comprises connecting faces at its opposing ends, said connecting faces being disposed on a vertical plane passing through a centre of curvature of the escalator.

7. A frame structure for a curved escalator as claimed in any preceding claim, wherein the sloped section (S) is uniformly sloped.

8. A frame structure for a curved escalator as claimed in any preceding claim, wherein one or each transition section (B) includes a plurality of transition truss units.

9. A frame structure for a curved escalator as claimed in claim 8, characterised in that the slope varies progressively from one transition truss unit to the next.

10. A frame structure for a curved escalator as claimed in any preceding claim wherein each truss unit (40a ... 40n) is a parallelepiped.

Patentansprüche

1. Rahmenwerk für eine bogenförmige Rolltreppe, mit einer Vielzahl von Fachwerkeinheiten (40a, ..., 40n) mit vertikalen Teilen (43), die miteinander verbunden sind und in der Ebene einen Bogen bilden, wobei das Rahmenwerk obere und untere horizontale Bereiche (H) und einen Neigungsbereich (S) zwischen den oberen und unteren Bereichen aufweist, dadurch gekennzeichnet, daß das Rahmenwerk einen oberen Übergangsbereich (B) mit mindestens einer Übergangsfachwerkeinheit, die zwischen den oberen horizontalen Bereich und den Neigungsbereich geschaltet ist, sowie einen unteren Übergangsbereich (B) mit mindestens einer Übergangsfachwerkeinheit aufweist, die zwischen den unteren horizontalen Bereich und

den Neigungsbereich geschaltet ist, wobei jeder Übergangsbereich (B) eine geringere Neigung als die der Neigungsbereiche (S) besitzt.

2. Rahmenwerk für eine bogenförmige Rolltreppe nach Anspruch 1, dadurch gekennzeichnet, daß jede der oberen und unteren Übergangsfachwerkeinheiten Gurtfachwerkträger aufweist, die an einer vorgegebenen Stelle abgekantet sind.

3. Rahmenwerk für eine bogenförmige Rolltreppe nach Anspruch 1, dadurch gekennzeichnet, daß jeder der oberen und unteren Übergangsfachwerkeinheiten Gurtfachwerkträger, die in der horizontalen Projektion zu einer polygonalen Form angekantet sind, und vertikale Fachwerkträger aufweist, die an den Abkantpunkten der oberen und unteren Gurtfachwerkträger vertikal angeordnet sind.

4. Rahmenwerk für eine bogenförmige Rolltreppe nach Anspruch 1, dadurch gekennzeichnet, daß jeder der oberen und unteren Übergangsfachwerkeinheiten Gurtfachwerkträger aufweist, die an einer vorgegebenen Stelle vertikal geschnitten sind.

5. Rahmenwerk für eine bogenförmige Rolltreppe nach Anspruch 1, dadurch gekennzeichnet, daß jeder der oberen und unteren Übergangsfachwerkeinheiten Gurtfachwerkträger und vertikale Fachwerkträger aufweist, die mit den Gurtfachwerkträgern verbunden sind, und daß die oberen und unteren Gurtfachwerkträger an den Stellen, an denen die vertikalen Fachwerkträger befestigt sind, zu einer polygonalen Form abgekantet sind.

6. Rahmenwerk für eine bogenförmige Rolltreppe nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Fachwerkeinheit an ihren gegenüberliegenden Enden Verbindungsflächen aufweist, wobei die Verbindungsflächen in einer vertikalen Ebene angeordnet sind, die durch ein Krümmungszentrum der Rolltreppe hindurchgeht.

7. Rahmenwerk für eine bogenförmige Rolltreppe nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß der Neigungsbereich (S) gleichmäßig geneigt ist.

8. Rahmenwerk für eine bogenförmige Rolltreppe nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß ein oder jeder Übergangsbereich (B) eine Vielzahl von Übergangsfachwerkeinheiten aufweist.

9. Rahmenwerk für eine bogenförmige Rolltreppe nach Anspruch 8, dadurch gekennzeichnet, daß die Neigung sich von einer Übergangsfachwerkeinheit zur nächsten fortschreitend ändert.

10. Rahmenwerk für eine bogenförmige Rolltreppe nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß jede Fachwerkeinheit (40a, ..., 40n) ein Parallelepiped ist.

Revendications

1. Charpente d'escalier roulant courbe comprenant un certain nombre d'unités de ferme (40a ... 40n) avec des organes verticaux (43)





connectés pour définir un arc en plan, ladite charpente ayant des sections horizontales supérieure et inférieure (H) et une section en pente (S) entre les sections supérieure et inférieure, caractérisée en ce que la charpente comprend une section supérieure de transition (B) comprenant au moins une unité de ferme de transition et connectée entre ladite section horizontale supérieure et ladite section en pente; et une section inférieure de transition (B) comprenant au moins une unité de ferme de transition et connectée entre ladite section horizontale inférieure et ladite section en pente, chaque section de transition (B) ayant une pente plus faible que celle de la section en pente (S).

2. Charpente d'escalier roulant courbe selon la revendication 1, caractérisée en ce que chacune des unités de ferme de transition supérieure et inférieure comprend des organes de ferme en corde pliés à une position prédéterminée.

3. Charpente d'escalier roulant courbe selon la revendication 1, caractérisée en ce que chacune des unités de ferme de transition supérieure et inférieure comprend des organes de ferme en corde pliés en une forme polygonale en projection horizontale et des organes verticaux de ferme disposés verticalement aux points de pliure desdits organes supérieure et inférieure de ferme en corde.

4. Charpente d'escalier roulant courbe selon la revendication 1, où chacune des unités de ferme de transition supérieure et inférieure comprend des organes de ferme en corde qui sont verticalement coupés à une position prédéterminée.

5. Charpente d'escalier roulant courbe selon la revendication 1, caractérisée en ce que chacune des unités de ferme de transition supérieure et inférieure comprend des organes de ferme en corde et des organes verticaux de ferme qui sont connectés auxdits organes de ferme en corde et lesdits organes supérieure et inférieure de ferme en corde sont pliés en une forme polygonale aux positions auxquelles sont fixés les organes verticaux de ferme.

6. Charpente d'escalier roulant courbe selon l'une quelconque des revendications précédentes, caractérisée en ce que ladite unité de ferme comprend des faces de connexion à ses extrémités opposées, lesdites faces de connexion étant disposées sur un plan vertical passant par un centre de courbure de l'escalier roulant.

7. Charpente d'escalier roulant courbe selon l'une quelconque des revendications précédentes, où la section en pente (S) est un pente uniforme.

8. Charpente d'escalier roulant courbe selon l'une quelconque des revendications précédentes, où l'une ou chaque section de transition (B) comprend un certain nombre d'unités de ferme de transition.

9. Charpente d'escalier roulant courbe selon la revendication 8, caractérisée en ce que la pente varie progressivement d'une unité de ferme de transition à la suivante.

10. Charpente d'escalier roulant courbe selon l'une quelconque des revendications précédentes, où chaque unité de ferme (40a... 40n) est un parallélépipède.

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