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(54) **Working method and protection system for passenger conveyer**

Arbeitsmethode und Schutzsystem für PERSONENFÖRDER anlage

Méthode de travail et système de protection pour trottoir roulant

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- **PATENT ABSTRACTS OF JAPAN** vol. 0164, no. 26 (M-1306), 8 September 1992 (1992-09-08) -& JP 04 144900 A (TOSHIBA CORP), 19 May 1992 (1992-05-19)
- **PATENT ABSTRACTS OF JAPAN** vol. 1995, no. 10, 30 November 1995 (1995-11-30) & JP 07 179284 A (EAST JAPAN RAILWAY CO), 18 July 1995 (1995-07-18)
- **PATENT ABSTRACTS OF JAPAN** vol. 1998, no. 14, 31 December 1998 (1998-12-31) & JP 10 250965 A (HITACHI BUILDING SYST CO LTD; HITACHI LTD), 22 September 1998 (1998-09-22)
- **PATENT ABSTRACTS OF JAPAN** vol. 1998, no. 12, 31 October 1998 (1998-10-31) & JP 10 182047 A (HITACHI LTD), 7 July 1998 (1998-07-07)
- **PATENT ABSTRACTS OF JAPAN** vol. 1998, no. 14, 31 December 1998 (1998-12-31) -& JP 10 231082 A (HITACHI BUILDING SYST CO LTD), 2 September 1998 (1998-09-02)

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Description

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

[0001] The present invention relates to a working method for a passenger conveyer such as an escalator, a moving sidewalk and the like, and a curing system for a passenger conveyer used during installing or repairing the passenger conveyer.

BACKGROUND OF THE INVENTION

[0002] When a passenger conveyer, for example, an escalator is installed or an installed escalator is repaired, a curing system including sheets and panels has been arranged so as to surround the escalator in order to protect pedestrians around there from danger.

[0003] The conventional curing system of this kind is composed of, for example, a plurality of leg bodies capable of being set up on a floor surface where the escalator is to be installed, and the sheets and the panels described above which are fixed to the leg bodies in order to perform curing of the escalator.

[0004] Therefore, the conventional curing system has a problem in that a large amount of curing members is required, the whole curing structure is complex and large, and the handling at transporting and managing is complicated. Further, there is a problem in that an additional area is required around the installation area because the leg bodies are set up on the floor near the installation area of the escalator, and accordingly the area occupied by the escalator during installing or repairing becomes so large as to restrict the pedestrian zone.

[0005] JP 04-144900 A shows a passenger conveyer with the features included in the first part of each of claims 1 and 5. More specifically, the document describes an outdoor-use escalator having a plurality of small roofs provided on the balustrade of the escalator.

[0006] JP 07-179284 A describes a passage system of a construction where an inclined passenger conveyer or escalator is newly installed over an existing stairway having a roof.

SUMMARY OF THE INVENTION

[0007] An object of the present invention is to provide a working method for a passenger conveyer and a curing system for a passenger conveyer by which curing of the passenger conveyer can be performed without leg bodies specifically used for curing and to be set up on a floor surface where the escalator is to be installed.

[0008] The above-mentioned object is met by the working method defined in claim 1, the passenger conveyer defined in claim 5, and the curing system defined in claim 6.

[0009] According to the invention, the working position

of the passenger conveyer can be covered to perform desired curing without the specifically used leg bodies to be set up on the floor surface. Further, since the specifically used leg bodies are unnecessary, number of the members and installation area for the curing part can be reduced, the structure can be simplified, and the area around the passenger conveyer can be kept relatively wider.

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BRIEF DESCRIPTION OF DRAWINGS

[0010]

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FIG. 1 is a side view showing a first embodiment of a curing system for a passenger conveyer in accordance with the present invention.

FIG. 2 is an enlarged cross-sectional view showing the I-portion of FIG. 1.

FIG. 3 is a view showing the state that the curing system shown in FIG. 2 is attached to a frame composing the main body of the passenger conveyer.

FIG. 4 is a side view showing a second embodiment in accordance with the present invention.

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FIG. 5 is an enlarged cross-sectional view showing the II-portion of FIG. 4.

FIG. 6 is a cross-sectional view showing a main portion of a third embodiment in accordance with the present invention.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

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[0011] An embodiment of a curing system for a passenger conveyer in accordance with the present invention will be described below, referring to FIG. 1 to FIG. 3.

[0012] In the first embodiment shown in FIG. 1 to FIG. 3, the curing system 6 composing the first embodiment is arranged so as to cover over the whole side area in one side of the passenger conveyer, for example, the escalator to be cured.

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[0013] The escalator 1 comprises a frame 2 forming the main body rising up, for example, to a position of a balustrade 3, steps 4, hand rails 5 and so on. There are an upper floor 20 and a lower floor 21 in a building where the escalator 1 is to be installed, and there is a staircase 22 between the upper floor 20 and the lower floor 21. That is, the escalator 1 is an escalator which is installed on one side of the staircase 22, for example, an escalator installed in a railway station.

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[0014] The curing system 6 covering the whole side area in one side portion of the escalator comprises a frame body 7; a sheet-shaped body, for example, a net body 8 attached to the frame body 7; and projecting parts 9, 10 by which the frame body 7 is fixed to, the frame 2 of the escalator 1. Holes 11, 12 provided in the projecting parts 9, 10 are fit to holes 13, 14 provided in the frame 2, respectively, and the curing system 6 is supported by the escalator 1 by inserting a bolt 15 into the holes 11, 13 and a bolt 16 into the holes 12, 14 and fastening the

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bolts 15, 16.

[0015] A holding means for holding the curing system 6 to the passenger conveyer 1 itself, that is, a fixing means for fixing the curing system 6 to the frame 2 composing the main body of the escalator 1 is composed of the projecting parts 9, 10; the holes 11, 12 in the projecting parts 9, 10; the holes 13, 14 formed in the frame 2; and the bolts 15, 16.

[0016] During installation work or repairing work of the escalator 1, the first embodiment constructed as described above restricts equipment, machines, work tools to project from the outside of the escalator 1, and accordingly it is possible to protect the environment around the escalator 1. Therefore, during the installation work or the repairing work, it is possible to secure the safety and the protection to pedestrians walking, for example, on the staircase 22.

[0017] Particularly, the curing system 6 can be formed in a simple structure with less number of members since the leg bodies need not to be set up on the floor surface of the upper floor 20, the floor surface of the lower floor 21 and the staircase 22. Further, it is possible to reduce the total volume of the curing system by the amount of the leg bodies, and it is easy to handle the curing system in transportation and management. Furthermore, the area around the escalator 1 can be kept relatively wider, and the restriction to the pedestrian zone can be moderated.

[0018] Although the first embodiment described above comprises the holes 11, 12 in the frame 2, the holes 13, 14 formed in the frame 2 and bolts 15, 16 as the fixing means for fixing the curing system 6 to the frame 2, the curing system 6 may be fixed to the frame 2 by welding the projecting parts 9, 10 to the frame 2 without providing the holes 11, 12, 13, 14 and the bolts 15, 16.

[0019] Further, number of the projecting parts 9, 10 in the frame body 7 may be appropriately determined depending on necessity.

[0020] Furthermore, although the first embodiment described above basically comprises only the curing system 6, a lighting fixture, a ventilation unit and so on may be added.

[0021] A second embodiment in accordance with the present invention will be describe below, referring to FIG. 4 and FIG. 5.

[0022] In the second embodiment, the passenger conveyer to be cured is also an escalator 1 installed on a staircase 22 arranged between an upper floor 20 and a lower floor 21 in a building, similarly to the first embodiment described above, and the second embodiment has a curing system 30 covering over the whole side area in one side of the escalator 1.

[0023] The curing system 30 comprises a frame body 31, plate-shaped bodies, that is, panels 32 having solidity to be attached to the frame body 31, and extension parts 39 extending the panels 32 up to near a ceiling part 23 of a building.

[0024] As shown in FIG. 5, the curing system compris-

es projecting parts 33, 34 in the frame body 31, holes 35, 36 provided in the projecting parts 33, 34, holes formed in the frame 2 so as to fit to the holes 35, 36 and bolts 37, 38 to be inserted into the corresponding holes.

[0025] A holding means for holding the curing system 30 to the passenger conveyer 1 itself, that is, a fixing means for fixing the curing system 30 to the frame 2 composing the main body of the escalator 1 is composed of the projecting parts 33, 34 in the frame body 31; the holes 35, 36 and so on; and the bolts 37, 38.

[0026] The second embodiment constructed as described above can also perform curing of the escalator 1 without any leg bodies to be set up on the upper floor 20, the lower floor 21 and the staircase 22, and has the operation and the effects similar to those of the first embodiment described above. Particularly in the second embodiment, since the extension parts 39 of the curing system 30 cover the wider range extending up to near a ceiling part 23 of a building, it is possible to more certainly protect the environment around the escalator 1 during installation work or repairing work of the escalator 1. Therefore, it is possible to more certainly secure the safety and the protection to pedestrians walking on the staircase 22.

[0027] FIG. 6 shows a third embodiment in accordance with the present invention. In the third embodiment, the frame body 31 comprises a hook-shaped hooking part 41 as well as the projecting part 33. A hole 35 is formed in the projecting part 33, and a hole fit to the hole 35 is formed at the corresponding position in the frame 2. A bolt 37 is inserted into the hole 35 and the hole. Further, a hook-shaped hooking part 40 for hooking the above-mentioned hooking part 41 is provided in the frame 2. The other structures are similar to those in the second embodiment described above.

[0028] The above-mentioned hooking part 41 in the frame body 31 and the hooking part 40 in the frame 2 compose a holding means for holding the curing system 30 to the escalator 1 itself, that is, a hooking means for hooking the curing system 30 to the frame 2.

[0029] When the curing system 30 is attached to the escalator 1 in the third embodiment, the hooking part 41 in the frame body 31 is initially hooked to the hooking part 40 in the frame 2, and the hole 35 of the projecting part 33 in the frame body 31 is fit to the hole formed in the frame 2, and then the bolt 37 is inserted the hole 35 and the hole and fastened.

[0030] Similarly to the second embodiment, the third embodiment constructed as described above can also perform curing of the escalator 1 without any leg bodies to be set up on the upper floor 20, the lower floor 21 and the staircase 22, and has the operation and the effects similar to those of the second embodiment described above. Particularly in the third embodiment, since the bolt 37 is fastened, for example, by hand work after hooking the hooking part 41 in the frame body 31 to the hooking part 40 in the frame 2, manpower of the fastening work using the bolts can be reduced. Therefore, the at-

taching work of the curing system 30 can be efficiently performed.

[0031] The third embodiment has the projecting part 33, and the projecting part 33 is fastened to the frame 2 through the bolt 37. However, it is also possible to employ the structure that a hooking part similar to the hooking part 41 is provided instead of the projecting part 33, and a hooking part to be hooked with the hooking part is provided in the frame 2.

[0032] In each of the above-mentioned embodiments, the curing system 6 or 30 is arranged so as to cover over the whole side area in one side of the escalator 1. The present invention is not limited that the curing system 6 or 30 is arranged in such a manner. For example, the curing system may be arranged so as to cover a part, for example, a half of the a side area in one side of the escalator 1, or may be arranged so as to cover over the whole side area in both side of the escalator 1, or may be arranged so as to cover over the landings in the upper and the lower floors of the escalator 1, if necessary.

[0033] In each of the above-mentioned embodiments, the escalator 1 is taken as an example of the passenger conveyer to be cured. However, the escalator 1 may be a generally used escalator, or may be a recently developed thin escalator of which the total height is lower than that of the general escalator by 20 to 30 %. Further, the curing system may be employed for a moving sidewalk instead of the escalator 1.

[0034] Each of the above-mentioned embodiments has described on the curing system. The procedure of attaching the above-mentioned curing system will be described below.

[0035] For example, in a case where the passenger conveyer is installed in a staircase in a railway station, as the first step performed during a time slot when passengers are not in the railway station, civil work is performed to excavate an installation place such as part of the upper and the lower floors and the staircase where the passenger conveyer is to be installed. After completion of the excavation work, a simple fence or cover is put up around the working zone so as to prevent the passengers in the railway station from entering in there. As the second step during the time slot when passengers are not in the railway station, the passenger conveyer is brought in to be temporarily installed in the excavated portion. After the temporary installation work, as the third step the curing system is held with the frame of the passenger conveyer to surround the working zone. In this state, as the fourth step, assembling of the remaining parts of the passenger conveyer and accurate positioning of the passenger conveyer are performed. Further, after the fourth step, the fifth step is performed to remove the curing system and to attach the exterior features of the passenger conveyer. Thus, the installation of the passenger conveyer is completed.

[0036] The work from the first step to the fifth step described above is a procedure for newly installing a passenger conveyer. However, when a passenger conveyer

already installed is repaired or modified, the curing system described above is not always necessary to be supported with the frame of the passenger conveyer and the curing system may be supported using the balustrade or the like.

[0037] Further, in each of the above-mentioned embodiments, the total weight of the curing system described above is completely supported by the passenger conveyer side. However, when the curing system is huge, the curing system may be set up on the floors in the upper and the lower floors and on the staircase where the passenger conveyer is installed. Thereby, the weight of the curing system is sustained by the floors and the staircase, and the passenger conveyer side only prevents the set-up curing system from falling down.

[0038] As having been described above, according to the present invention, curing of the passenger conveyer can be performed without the specifically used leg bodies to be set up on the floor surface, number of the members for the curing system can be reduced compared to the conventional curing system, and the structure of the curing system can be simplified. Thereby, the manufacturing cost can be reduced. Further, the total volume of the curing system can be reduced compared to that of the conventional curing system by the amount of eliminating the leg bodies, and the handling at transporting and managing can be easily performed. Furthermore, the area around the passenger conveyer can be kept wider compared to the conventional curing system, and accordingly the restrictions to the pedestrian zone and so on can be moderated.

Claims

1. A working method for a passenger conveyer (1), which comprises a balustrade (3), a frame (2) constituting a main body of said conveyer (1) and holding said balustrade (3), steps (4), and a hand rail (5) provided on said balustrade (3),
characterized in that
said frame (2) supports a curing system (6), the curing system (6) comprising a frame body (7), a sheet-shaped body, for example a net body (8), and projecting parts (9,10) provided with holes (11,12) by which the frame body (7) is fixed to the frame (2) of the conveyer (1), for covering a working area of said conveyer (1) when the conveyer is under installation or repair;
said curing system (6) is removed on completion of said installation or repair work; and
exterior equipment for said conveyer (1) is installed thereafter.
2. The method of claim 1, wherein said frame body (7) is fixed at upper and lower portions of said frame (2) to prevent said curing system (6) from falling down.

3. The method of any preceding claim wherein, for installing the passenger conveyer (1) in a staircase (22) of a railway station, the following steps are performed in this order:

1. excavating an installation place for installing said frame (2),
2. installing said frame (2) in the excavated site,
3. using said frame (2) for supporting a curing system (6), which comprises a sheet, net (8), or panel,
4. assembling said conveyer (1),
5. removing said curing system (6), and
6. attaching exterior equipment of said conveyer (1).

4. A passenger conveyer (1) comprising a balustrade (3), a frame (2) constituting a main body of said conveyer (1) and holding said balustrade (3), steps (4), and a hand rail (5) provided on said balustrade (3), **characterised in that** said frame (2) has a supporting portion for supporting a curing system (6) via holding means (11 ... 14; 40, 41) provided on the curing system (6), the curing system (6) comprising a frame body (7), a sheet-shaped body, for example a net body (8), and projecting parts (9,10) provided with holes (11,12) by which the frame body (7) is fixed to the frame (2) of the conveyor (1), for covering a working area of said conveyer (1) when said conveyer (1) is under installation or repair.

5. A curing system (6) for installation or repair work on a passenger conveyer (1), the conveyer (1) comprising a balustrade (3), a frame (2) constituting a main body of said conveyer (1) and holding said balustrade (3), steps (4), and a hand rail (5) provided on said balustrade (3), wherein said curing system (6) is secured to a frame body (7) comprising holding means for holding said frame body (7) on said frame (2), said curing system (6) comprising a frame body (7), a sheet-shaped body, for example a net body (8), and projecting parts (9,10) provided with holes (11,12) by which the frame body (7) is fixed to the frame (2) of the conveyor (1), for covering a working area of said installation or repair work.

6. The system of claim 5, wherein said holding means comprises a hook-shaped attaching means (40, 41) for attaching said curing system (6) to said frame (2) to prevent the curing system (6) from falling off.

7. The system of any one of claims 5 to 6, wherein said curing system (6) comprises an extension part (39) adapted to extend from a lower floor (21) in a building up to near a ceiling (23) thereof.

8. The system of any one of claims 5 to 7, wherein said

conveyer (1) is an escalator.

Patentansprüche

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1. Arbeitsverfahren für einen Personenförderer (1), der ein Geländer (3), einen einen Hauptteil des Förderers (1) bildenden und das Geländer (3) haltenden Rahmen (2), Stufen (4) und einen an dem Geländer (3) vorgesehenen Handlauf (5) aufweist, **dadurch gekennzeichnet, dass**

der Rahmen (2) ein Schutzsystem (6) trägt, das einen Rahmenaufbau (7), ein folienförmiges Teil, beispielsweise ein Netzteil (8), und vorspringende Teile (9, 10) mit Löchern (11, 12) aufweist, über die der Rahmenaufbau (7) an dem Rahmen (2) des Förderers (1) befestigt ist, um den Arbeitsbereich des Förderers (1) beim Einbau oder bei Reparaturen abzudecken, das Schutzsystem (6) nach Beendigung der Einbau- oder Reparaturarbeiten entfernt wird, und danach die äußere Ausrüstung für den Förderer (1) eingebaut wird.

2. Verfahren nach Anspruch 1, wobei der Rahmenaufbau (7) an oberen und unteren Teilen des Rahmens (2) befestigt wird, um zu verhindern, dass das Schutzsystem (6) abfällt.

3. Verfahren nach einem der vorhergehenden Ansprüche, wobei beim Einbau des Personenförderers (1) in ein Bahnhofstreppenhaus (22) folgende Schritte in dieser Reihenfolge durchgeführt werden:

1. Freiräumen eines Einbauraums für den Einbau des Rahmens (2),
2. Einbauen des Rahmens (2) in den freigeäumten Raum,
3. Verwenden des Rahmens (2) zur Aufnahme eines Schutzsystems (6), das eine Folie, ein Netz (8) oder eine Platte aufweist,
4. Zusammenbauen des Förderers (1),
5. Entfernen des Schutzsystems (6) und
6. Anbringen der äußeren Ausrüstung des Förderers (1).

4. Personenförderer (1) mit einem Geländer (3), einem einen Hauptteil des Förderers (1) bildenden und das Geländer (3) haltenden Rahmen (2), Stufen (4) und einem an dem Geländer (3) vorgesehenen Handlauf (5),

dadurch gekennzeichnet, dass der Rahmen (2) ein Stützteil zur Aufnahme eines Schutzsystems (6) über an dem Schutzsystem (6) vorgesehene Halteinrichtungen (11... 14, 40, 41) aufweist, um einen Arbeitsbereich des Förderers (1) beim Einbau oder bei Reparaturen abzudecken.

5. Schutzsystem (6) für Einbau- oder Reparaturarbeiten an einem Personenförderer (1), der ein Geländer (3), einen einen Hauptteil des Förderers (1) bilden und einen das Geländer (3) haltenden Rahmen (2), Stufen (4) und einen an dem Geländer (3) vorgesehenen Handlauf (5) aufweist, wobei das Schutzsystem (6) an einem Rahmenaufbau (7) mit Halteeinrichtungen zum Halten des Rahmenaufbaus (7) an dem Rahmen (2) befestigt ist und einen Rahmenaufbau (7), ein folienförmiges Teil, beispielsweise ein Netzteil (8), und vorspringende Teile (9, 10) mit Löchern (11, 12) aufweist, über die der Rahmenaufbau (7) an dem Rahmen (2) des Förderers befestigt ist, um den Arbeitsbereich des Förderers (1) beim Einbau oder bei Reparaturen abzudecken.
6. System nach Anspruch 5, wobei die Halteeinrichtungen eine hakenförmige Befestigungseinrichtung (40, 41) zum Anbringen des Schutzsystems (6) an dem Rahmen (2) aufweisen, um zu verhindern, dass das Schutzsystem (6) abfällt.
7. System nach Anspruch 5 oder 6, wobei das Schutzsystem (6) ein Verlängerungsteil (39) aufweist, das so gestaltet ist, dass es sich von einem unteren Boden (21) in einem Gebäude bis hinauf nahe dessen Decke (23) erstreckt.
8. System nach einem der Ansprüche 5 bis 7, wobei der Förderer (1) eine Rolltreppe ist.

Revendications

1. Procédé de travail pour un transporteur de passagers (1), lequel comporte un garde-fou (3), un châssis (2) constituant un corps principal dudit transporteur de passagers (1) et maintenant ledit garde-fou (3), des marches (4), et une main courante (5) prévue sur ledit garde-fou (3),
caractérisé en ce que
ledit châssis (2) supporte un système de traitement (6), le système de traitement (6) comportant un corps de châssis (7), un corps en forme de feuille, par exemple un corps de type filet (8), et des parties en saillie (9, 10) munies de trous (11, 12) par l'intermédiaire desquels le corps de châssis (7) est fixé au châssis (2) du transporteur de passagers (1), pour couvrir une zone de travail dudit transporteur de passagers (1) lorsque le transporteur de passagers est en cours d'installation ou de réparation, ledit système de traitement (6) est retiré à la fin dudit travail d'installation ou de réparation, et un équipement extérieur pour ledit transporteur de passagers (1) est installé par la suite.
2. Procédé selon la revendication 1, dans lequel ledit

corps de châssis (7) est fixé au niveau de parties supérieure et inférieure dudit châssis (2) afin d'empêcher le système de traitement (6) de tomber.

3. Procédé selon l'une quelconque des revendications précédentes dans lequel, pour installer le transporteur de passagers (1) dans une cage d'escalier (22) d'une gare, les étapes suivantes sont exécutées dans cet ordre :
1. l'excavation d'un lieu d'installation pour installer ledit châssis (2),
 2. l'installation dudit châssis (2) dans le site excavé,
 3. l'utilisation dudit châssis (2) pour supporter un système de traitement (6), lequel comporte une feuille, un filet (8), ou un panneau,
 4. l'assemblage dudit transporteur de passagers (1),
 5. le retrait dudit système de traitement (6), et
 6. la fixation de l'équipement extérieur dudit transporteur de passagers (1).
4. Transporteur de passagers (1) comportant un garde-fou (3), un châssis (2) constituant un corps principal dudit transporteur de passagers (1) et maintenant ledit garde-fou (3), des marches (4), et une main courante (5) prévue sur ledit garde-fou (3),
caractérisé en ce que ledit châssis (2) dispose d'une partie de support pour supporter un système de traitement (6) via des moyens de maintien (11 - 14 ; 40, 41) agencés sur le système de traitement (6), le système de traitement (6) comportant un corps de châssis (7), un corps en forme de feuille, par exemple un corps de type filet (8), et des parties en saillie (9, 10) munies de trous (11, 12) par l'intermédiaire desquels le corps de châssis (7) est fixé au châssis (2) du transporteur de passagers (1), pour recouvrir une zone de travail dudit transporteur de passagers (1) lorsque ledit transporteur de passagers (1) est en cours d'installation ou de réparation.
5. Système de traitement (6) pour un travail d'installation ou de réparation sur un transporteur de passagers (1), le transporteur de passagers (1) comportant un garde-fou (3), un châssis (2) constituant un corps principal dudit transporteur de passagers (1) et maintenant ledit garde-fou (3), des marches (4), et une main courante (5) prévue sur ledit garde-fou (3), dans lequel ledit système de traitement (6) est fixé à un corps de châssis (7) comportant des moyens de maintien pour maintenir ledit corps de châssis (5) sur ledit châssis (2), ledit système de traitement (6) comportant un corps de châssis (7), un corps en forme de feuille, par exemple un corps de type filet (8), et des parties en saillie (9, 10) munies de trous (11, 12) par l'intermédiaire desquels le corps de châssis (7) est fixé au châssis (2) du transporteur de passagers (1).

gers, pour recouvrir une zone de travail dudit travail d'installation ou de réparation.

6. Système selon la revendication 5, dans lequel lesdits moyens de maintien comportent des moyens de fixation en forme de crochet (40, 41) pour fixer ledit système de traitement (6) audit châssis (2) afin d'empêcher le système de traitement (6) de tomber. 5
7. Système selon l'une quelconque des revendications 5 à 6, dans lequel ledit système de traitement (6) comporte une partie d'extension (39) adaptée pour s'étendre depuis un sol inférieur (21) dans une construction jusqu'à proximité d'un plafond (23) correspondant. 10 15
8. Système selon l'une quelconque des revendications 5 à 7, dans lequel ledit transporteur de passagers (1) est un escalier mécanique. 20

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FIG. 1

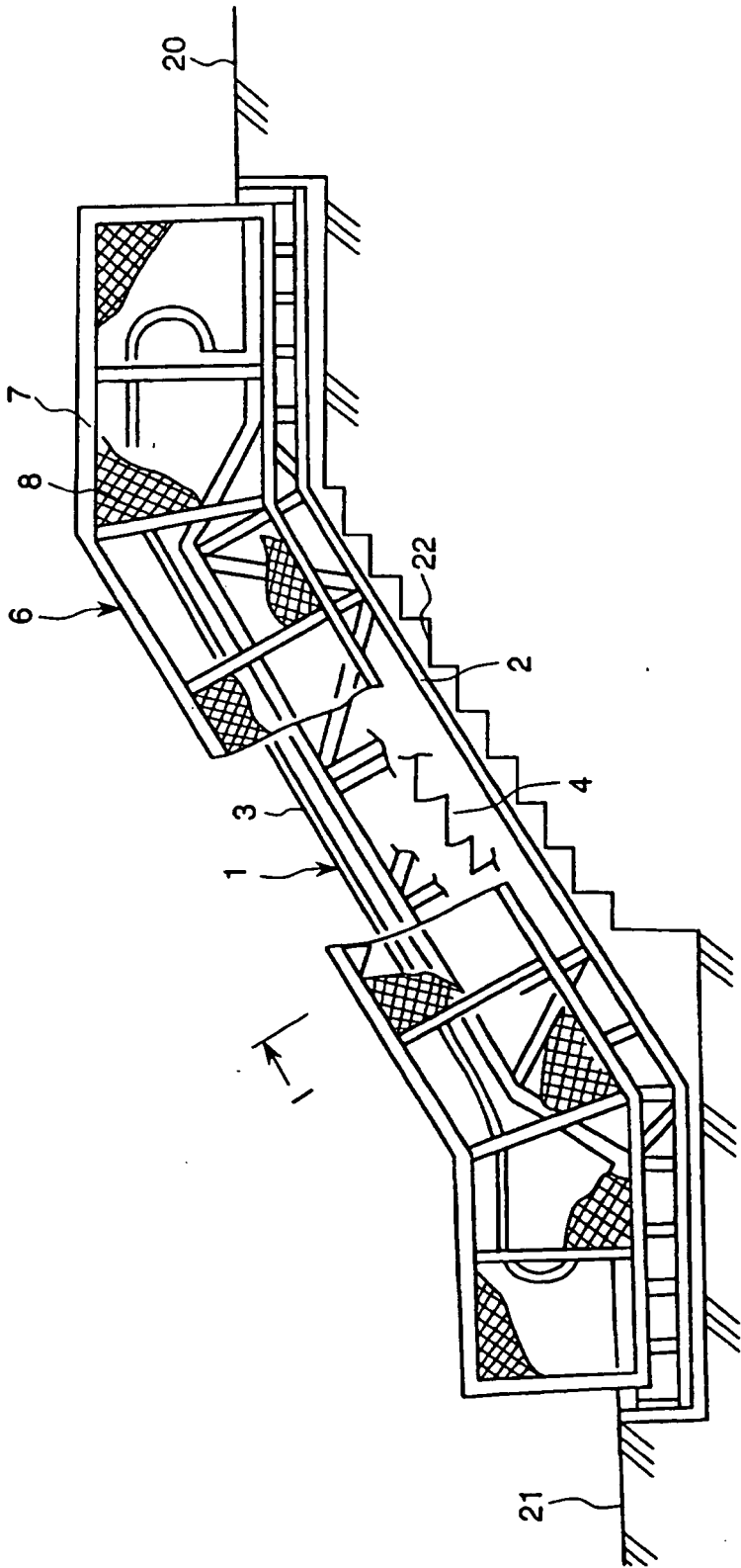


FIG. 2

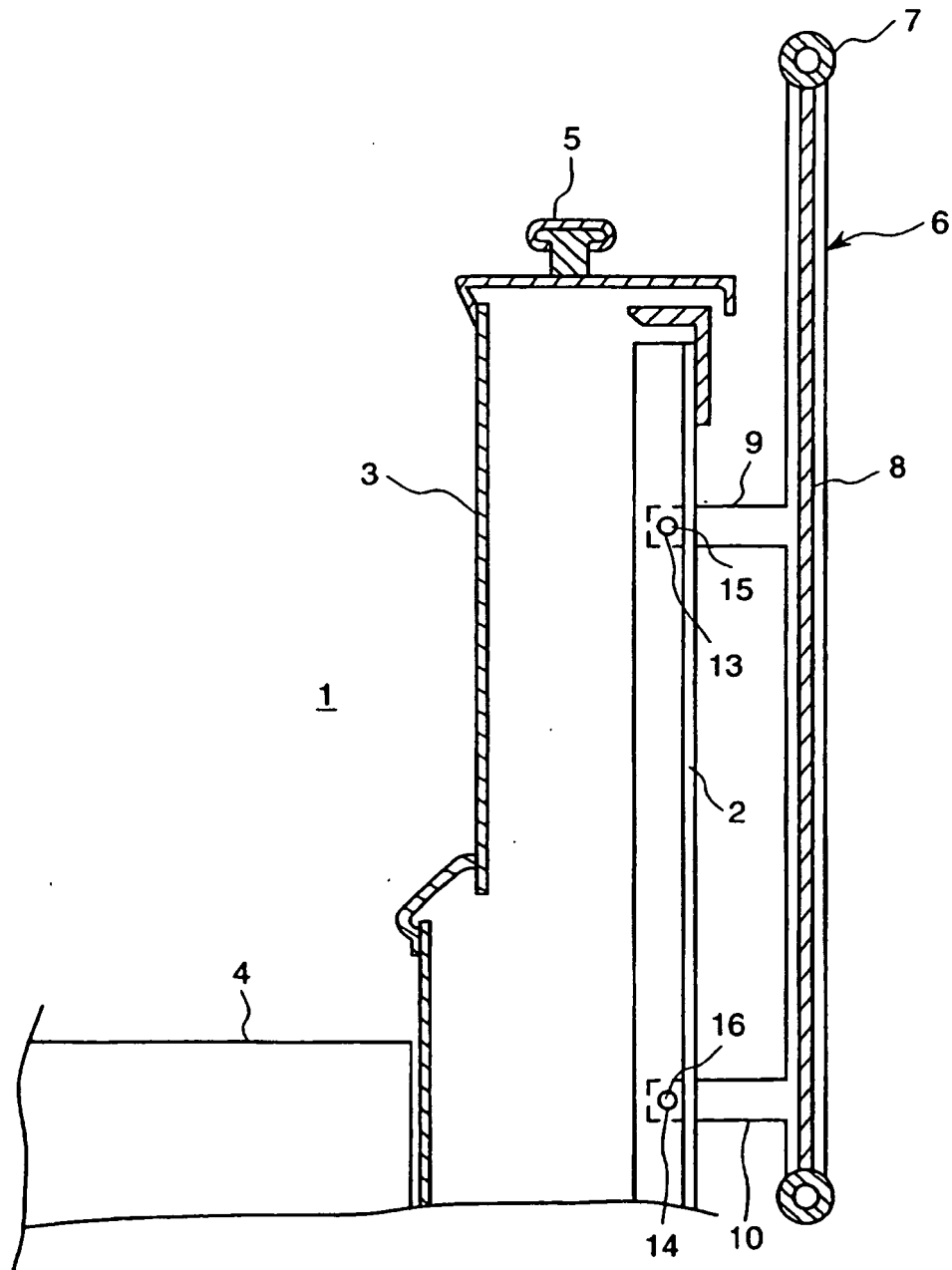


FIG. 3

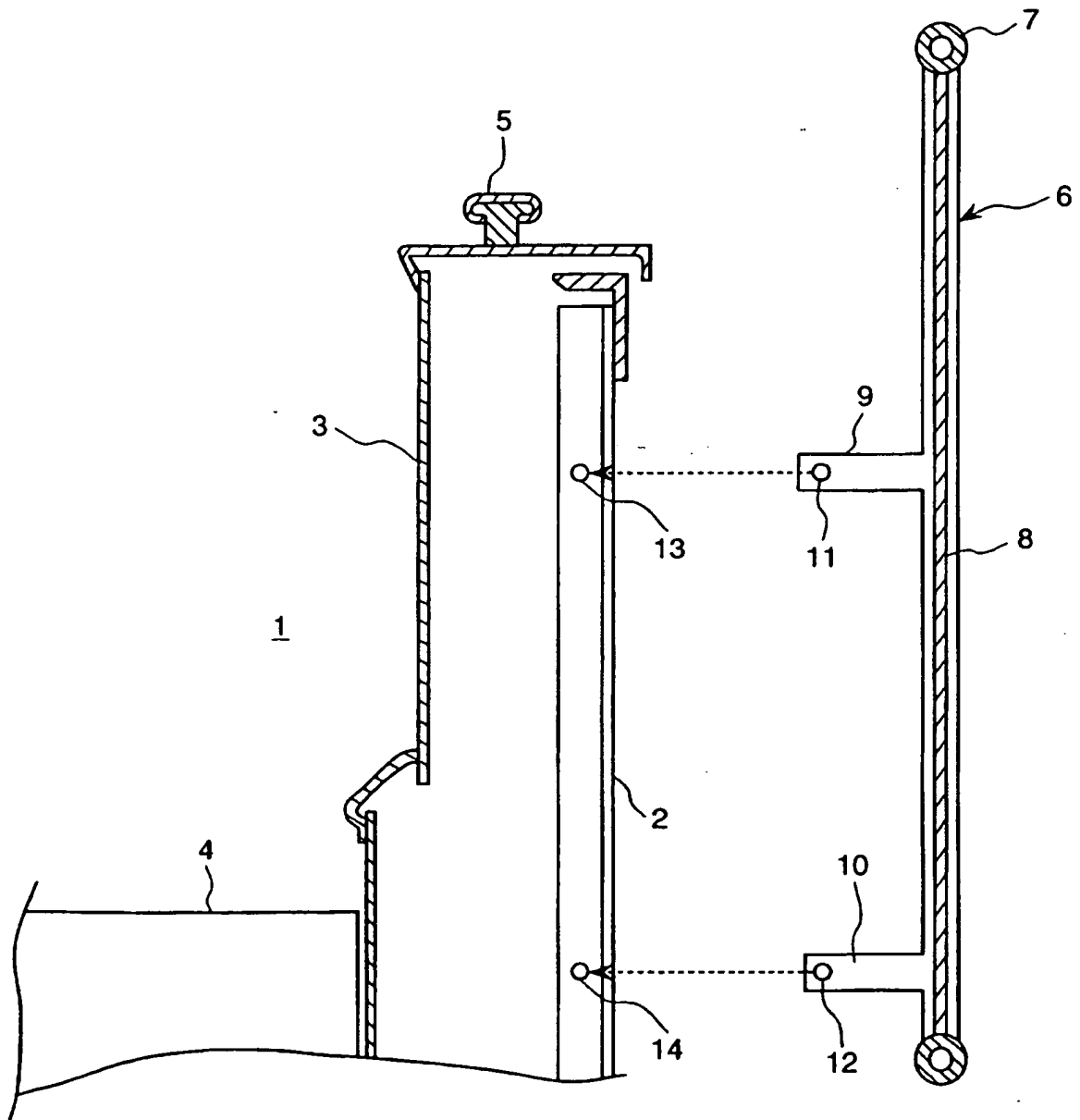


FIG. 4

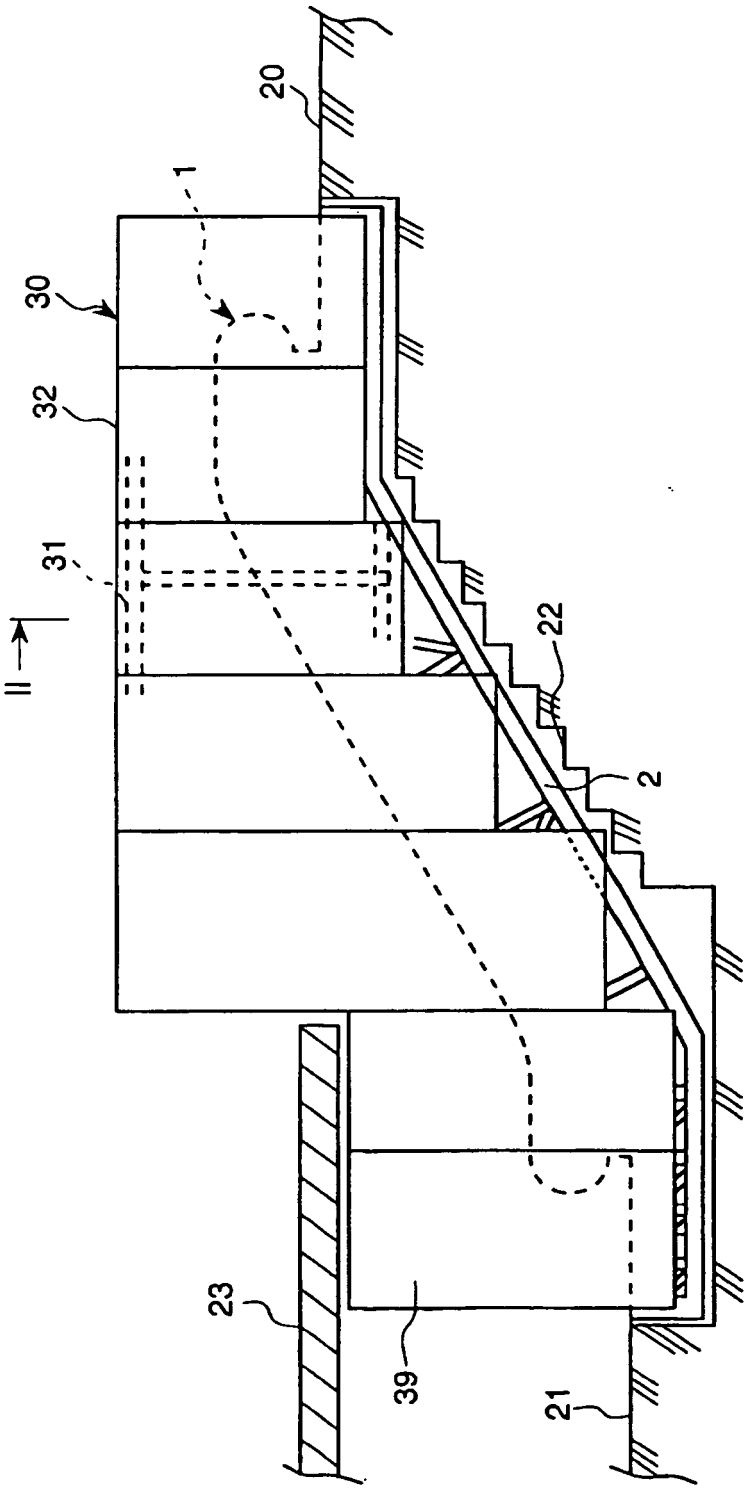


FIG. 5

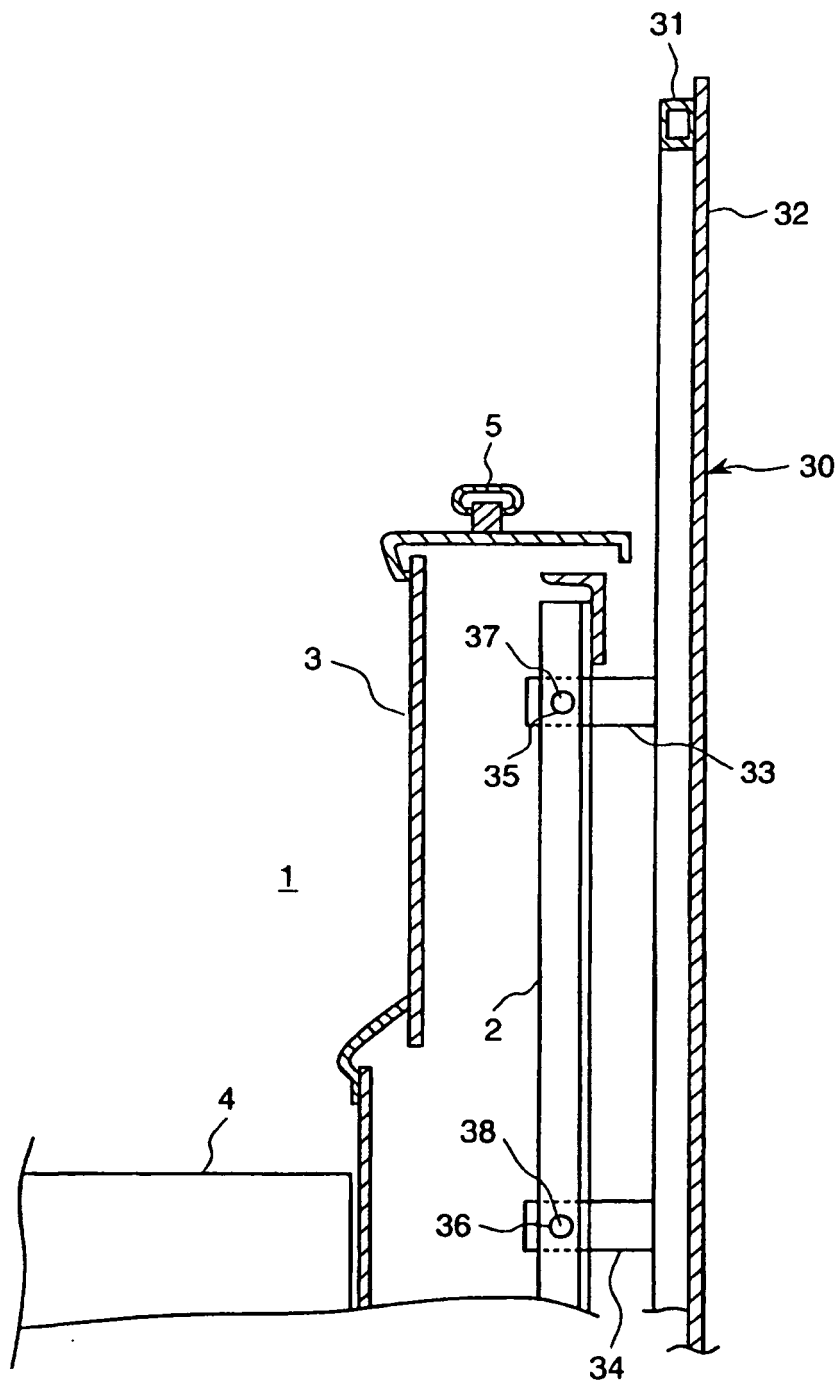
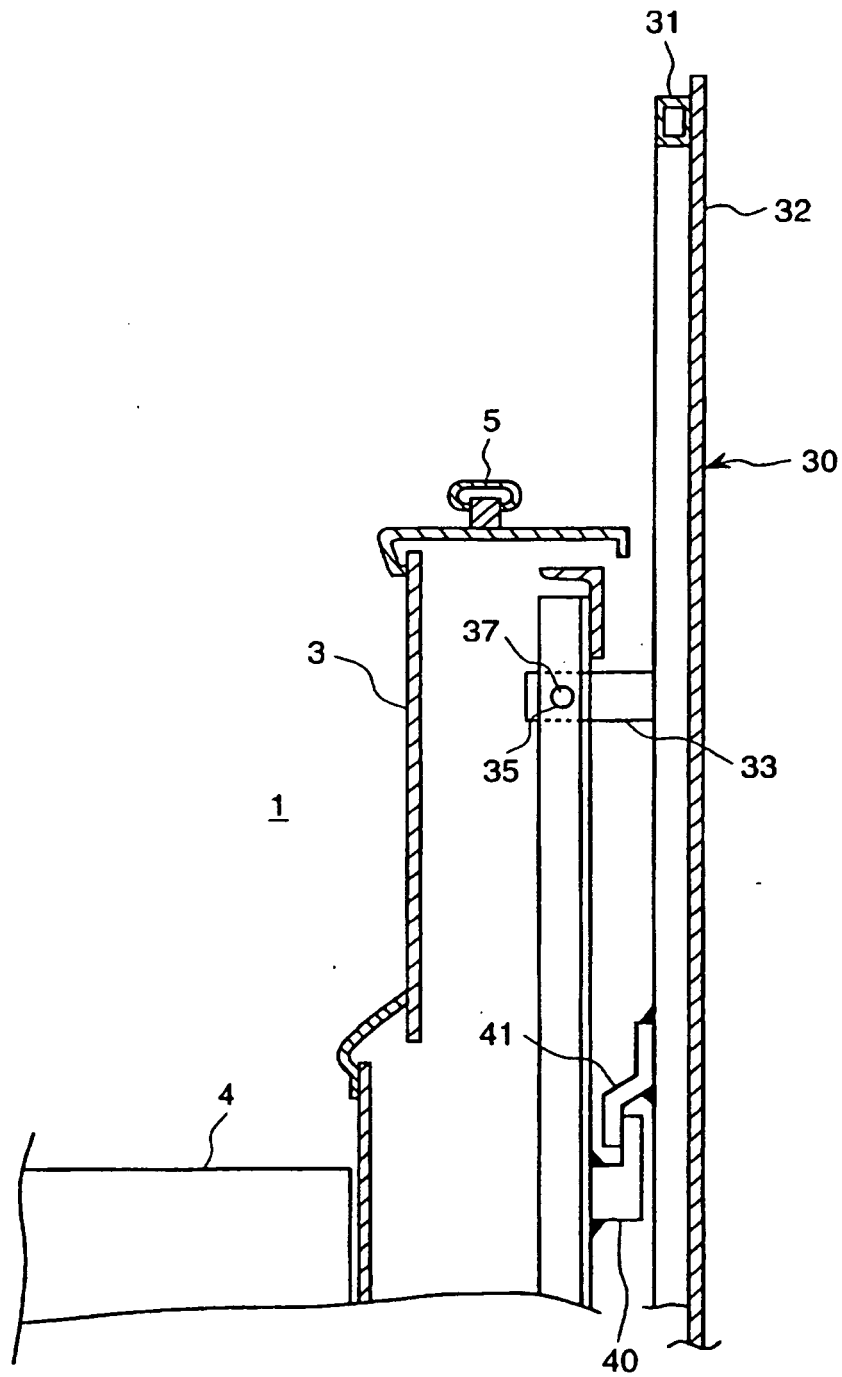


FIG. 6



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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