

【DESCRIPTION】**【Invention Title】**

STRUCTURE FOR FIXING A DECK FORM

【Technical Field】

5 The present invention relates to a structure for fixing
a deck form that is configured to allow the lightweight
permanent deck form having strong rigidity to be simply
coupled to main reinforcements or shape steel members in
concrete, thereby achieving constructability improvement,
10 construction duration reduction, and construction cost
reduction.

【Background Art】

A form is a structure temporarily installed to make
concrete having fluidity to a given shape and a given size
15 during a short period of time in which the concrete is cured
to some degree, and formwork is necessarily needed in a
concrete structure like a reinforced concrete structure, a
steel framed reinforced concrete structure, and so on.

Basically, the formwork is temporary work for finishing
20 a desired building or structure, and so as to perform the
formwork, the form includes sheathing boards coming into
contact with concrete, beams for supporting sheathing boards,
wales, ties, and so on (Korean Patent Registration No.10-
0540641). Accordingly, a great number of materials for the
25 formwork are required, and in addition, a lot of time and
cost for assembling and disassembling the form or support
have been consumed.

As a size of structure is large, particularly, there is
a big possibility that safety accidents of workers may occur
30 due to the weight of the form itself when temporary materials
are installed or removed.

The increment of the materials and construction quantities required for the formwork causes construction cost and construction duration to be increased, and accordingly, the installation and removal of the form are inconvenient
5 processes because they raise the whole concrete construction cost and occupy a large portion of construction processes.

As a result, there is a need for development of a permanent form capable of solving the above-mentioned problems and improving constructability and economical
10 advantages.

【Disclosure】

【Technical Problem】

Accordingly, the present invention has been made in view of the above-mentioned problems occurring in the prior art,
15 and it is an object of the present invention to provide a structure for fixing a deck form that is capable of providing the deck form as a permanent form, thereby avoiding construction cost and duration increment caused by formwork as conventional temporary work.

20 **【Technical Solution】**

To accomplish the above-mentioned object, according to a first aspect of the present invention, there is provided a structure for fixing a deck form, including: a deck form serving as a permanent form of a concrete structure and
25 having a base plate and a plurality of protrusions formed in columns from one side of the base plate along a longitudinal direction of the base plate, each protrusion having a connection portion protruding vertically to the base plate from one side of the base plate and an enlarged portion
30 protruding from one side or both sides of the end portion of the connection portion; and fixing bars coupled to the deck form in a width direction of the deck form, one side of each

fixing bar being coupled to the enlarged portions to fix the deck form to the fixing bar and the other side thereof being coupled to main reinforcements or shape steel members of the concrete structure, wherein each fixing bar includes a web and one side flange and the other side flange bent vertically from both ends of the web, the web having locking slots formed thereon to insert the enlarged portions of the protrusions of the deck form thereinto, and one side flange having incised portions formed thereon to insert the connection portions of the protrusions of the deck form thereinto in such a manner as to communicate with the locking slots so that the protrusions of the deck form are insertedly coupled to the locking slots and the incised portions of the fixing bar.

To accomplish the above-mentioned object, according to a second aspect of the present invention, there is provided a structure for fixing a deck form, including: a deck form serving as a permanent form of a concrete structure and having a base plate and a plurality of protrusions formed in columns from one side of the base plate along a longitudinal direction of the base plate, each protrusion having a connection portion protruding vertically to the base plate from one side of the base plate and an enlarged portion protruding from one side or both sides of the end portion of the connection portion; and fixing bars coupled to the deck form in a width direction of the deck form, one side of each fixing bar being coupled to the enlarged portions to fix the deck form to the fixing bar and the other side thereof being coupled to main reinforcements or shape steel members of the concrete structure, wherein each fixing bar includes a first fixing bar and a second fixing bar, the first fixing bar having a web and one side flange and the other side flange

bent vertically from both ends of the web, the other side flange being coupled to main reinforcements or shape steel members of the concrete structure, and the second fixing bar having one side flange coupled to the enlarged portions of the protrusions of the deck form, a web bent vertically from the end portion of one side flange, the other side flange bent vertically from the end portion of the web, and a space portion formed between the other side flange and the enlarged portions in such a manner as to allow one side flange of the first fixing bar to be fitted to the space portion to couple the first fixing bar to the second fixing bar.

According to the present invention, desirably, the enlarged portions are coupled to one side flange of the second fixing bar by means of welding or fastening members.

According to the present invention, desirably, the web of the second fixing bar has locking slots formed thereon to insert the enlarged portions of the protrusions of the deck form thereinto, and one side flange of the second fixing bar has incised portions formed thereon to insert the connection portions of the protrusions of the deck form thereinto in such a manner as to communicate with the locking slots, so that the protrusions of the deck form are insertedly coupled to the locking slots and the incised portions of the second fixing bar.

According to the present invention, desirably, the structure further includes connection plates located on top or underside of the deck form to have the same shapes as the spaces between the protrusions, the connection plates being fitted to the spaces between the protrusions to connect the deck form to a deck form adjacent to the deck form in the longitudinal direction of the deck form.

According to the present invention, desirably, the enlarged portions located on the outermost edges of the deck form are vertically bent inwardly from tops of the connection portions and then bent outwardly by an angle of 180° , one side outermost enlarged portion having an end shorter inwardly than the location of the connection portion by a given length, and the other side outermost enlarged portion having an end protruding outwardly by a given length from the connection portion.

10 【Advantageous Effects】

The structure for fixing the deck form according to the present invention has the following advantages.

Firstly, the lightweight deck form having strong rigidity is simply coupled to the main reinforcements or shape steel members in the concrete by means of the fixing bars, so that the deck form can be used as the permanent form, and accordingly, the deck form is installed with a simple process, thereby achieving reduction in the number of temporary materials, constructability improvement, construction duration reduction, and construction cost reduction.

Secondly, the lightweight deck form is used to reduce delivering and lifting load.

Thirdly, if the fixing bar has the locking slots and the incised portions, the enlarged portions and the connection portions of the deck form are slidingly guided to enable the deck form and the fixing bar to be stably coupled to each other, without any deviation.

Fourthly, the first fixing bar coupled to the main reinforcements or shape steel members is coupled to the second fixing bar coupled to the deck form, so that the deck form and the fixing bar can be freely coupled to each other

on a construction site, without any trouble in the spare space on the end portion of the deck form.

Fifthly, the connection plates serve to connect the deck forms adjacent to each other in their longitudinal direction and to close the connected portions of the adjacent deck forms to prevent the leakage of concrete paste.

Lastly, one side outermost enlarged portion and the other side outermost enlarged portion have the ends adjusted in length, thereby covering a construction error between the adjacent deck forms and preventing the leakage of concrete paste.

【Description of Drawings】

FIG.1 is a perspective view showing a structure for fixing a deck form according to a first embodiment of the present invention.

FIG.2 is a perspective view showing the deck form.

FIGS.3a and 3b are plan sectional views showing the deck form.

FIG.4 is a sectional view showing the structure for fixing the deck form after concrete is cast.

FIG.5 is a perspective view showing an example of a fixing bar.

FIGS.6a and 6b are perspective views showing a coupled relation between the fixing bar and the deck form according to the first embodiment of the present invention.

FIG.7 is a plan view showing the deck form coupled to the fixing bar according to the first embodiment of the present invention.

FIGS.8a and 8b are side views showing a coupled relation between a fixing bar and a deck form in a structure for fixing the deck form according to a second embodiment of the present invention.

FIG.9 is a perspective views showing a coupled relation between the fixing bar and the deck form according to the second embodiment of the present invention.

FIG.10 is a side view showing a coupled relation between the fixing bar and the deck form according to an example of a second fixing bar.

FIG.11 is a perspective view showing another example of the second fixing bar.

FIGS.12a and 12b are perspective views showing a coupled relation between the fixing bar and the deck form according to another example of the second fixing bar.

FIG.13 is a perspective view showing yet another example of the second fixing bar.

FIG.14 is a perspective view showing a connection plate.

FIGS.15a and 15b are perspective views showing deck forms coupled by the connection plates.

FIG.16 is a perspective view showing the deck forms coupled by the connection plates having shear connectors.

FIGS.17a and 17b are plan sectional views showing another example of the deck form.

【Best Mode for Invention】

To achieve the above-mentioned object, a structure for fixing a deck form according to the present invention includes: a deck form serving as a permanent form of a concrete structure and having a base plate and a plurality of protrusions formed in columns from one side of the base plate along a longitudinal direction of the base plate, each protrusion having a connection portion protruding vertically to the base plate from one side of the base plate and an enlarged portion protruding from one side or both sides of the end portion of the connection portion; and fixing bars coupled to the deck form in a width direction of the deck

form, one side of each fixing bar being coupled to the enlarged portions to fix the deck form to the fixing bar and the other side thereof being coupled to main reinforcements or shape steel members of the concrete structure.

5 **【Mode for Invention】**

Hereinafter, preferred embodiments of the present invention will be explained with reference to the attached drawings.

10 FIG.1 is a perspective view showing a structure for fixing a deck form according to a first embodiment of the present invention, FIG.2 is a perspective view showing the deck form, FIGS.3a and 3b are plan sectional views showing the deck form, and FIG.4 is a sectional view showing the structure for fixing the deck form after concrete is cast.

15 As shown in FIG.1, a structure for fixing a deck form according to a first embodiment of the present invention includes: a deck form 3 serving as a permanent form of a concrete structure and having a base plate 31 and a plurality of protrusions 32 formed in columns from one side of the base
20 plate 31 along a longitudinal direction of the base plate 31, each protrusion 32 having a connection portion 321 protruding vertically to the base plate 31 from one side of the base plate 31 and an enlarged portion 322 protruding from one side or both sides of the end portion of the connection portion
25 321; and fixing bars 4 coupled to the deck form 3 in a width direction of the deck form 3, one side of each fixing bar 4 being coupled to the enlarged portions 322 to fix the deck form 3 to the fixing bar 4 and the other side thereof being coupled to main reinforcements or shape steel members 2 of
30 the concrete structure.

The deck form 3 is used as a permanent form of a concrete structure like a reinforced concrete structure, a

steel framed reinforced concrete structure, and so on and is simply coupled to the main reinforcements or shape steel members 2 of the concrete structure by means of the fixing bars 4 as will be discussed later.

5 The deck form 3 has the base plates 31 and the protrusions 32.

Each base plate 31 has the other side flattenedly located on the external surface of the structure, thereby providing a good outer appearance.

10 The protrusions 32 protrude in columns from one side of the base plate 31 along the longitudinal direction of the base plate 31, and each protrusion 32 includes the connection portion 321 and the enlarged portion 322.

15 The connection portion 321 protrudes vertically to the base plate 31 from one side of the base plate 31. As shown in FIGS.3a and 3b, the enlarged portion 322 protrudes from one side or both sides of the end portion of the connection portion 321.

20 Through the formation of the protrusions 32, geometrical moment of inertia of the deck form 3 is increased to improve the rigidity of the deck form 3, and accordingly, the directions of the protrusions 32 correspond to the longitudinal direction of the deck form 3, thereby permitting the deck form 3 to be resistant well to a lateral pressure of
25 concrete 1.

30 As shown in FIG.4, the protrusions 32 are buried integrally into the concrete 1 after the concrete 1 is cast, and accordingly, the deck form 3 is fixedly bonded to the concrete 1, thereby improving the structural performance thereof.

Each protrusion 32 may have various shapes, such as a shape of T as shown in FIG.2, a shape of Γ as shown in

FIG.3a, and a shape of Y as shown in FIG.3b, and the like, and the enlarged portion 322 is made of a steel pipe having a shape of an inverted triangle as shown in FIG.3b or a circle.

The deck form 3 is made by bending a single plate. The deck form 3 is lightweight to reduce the self weight of the permanent form and is handled and installed more easily than the existing forms to thus reduce construction duration. Accordingly, a labor force consumed on a construction site is decreased to reduce a construction cost.

The fixing bars 4 are coupled to the deck form 3 in the width direction of the deck form 3. One side of each fixing bar 4 is coupled to the enlarged portions 322 to fix the deck form 3 thereto and the other side thereof is coupled to the main reinforcements or shape steel members 2 of the concrete structure.

The fixing bars 4 are spaced apart from each other in the width direction of the deck form 3 and are then coupled to the deck form 3.

The fixing bars 4 are coupled to the main reinforcements or shape steel members 2 by means of any one selected from riveting, bolting, welding.

The fixing bars 4 are made of beams like Z-beam, $\square$ -beam, and so on or lightweight steel frames.

The first embodiment of the present invention as shown in FIGS.1 to 4 describes the deck form 3 coupled to the shape steel members 2 of a column by means of the fixing bars 4, but according to the present invention, of course, the deck form 3 may be applicable to other members like a beam, a wall body, and so on.

The deck form 3 may be in advance attached in a factory to the fixing bars 4 coupled to the main reinforcements or shape steel members 2 of the concrete structure, and further,

the deck form 3 may be attached thereto on a construction site.

FIG.5 is a perspective view showing an example of a fixing bar, FIGS.6a and 6b are perspective views showing a coupled relation between the fixing bar and the deck form according to the first embodiment of the present invention, and FIG.7 is a plan view showing the deck form coupled to the fixing bar according to the first embodiment of the present invention.

As shown in FIGS.5 to 7, each fixing bar 4 has a web 41 and one side flange 42 and the other side flange 43 bent vertically from both ends of the web 41.

The web 41 has locking slots 411 formed thereon to insert the enlarged portions 322 of the protrusions 32 of the deck form 3 thereinto, and one side flange 42 has incised portions 421 formed thereon to insert the connection portions 321 of the protrusions 32 of the deck form 3 thereinto in such a manner as to communicate with the locking slots 411, so that the protrusions 32 of the deck form 3 are insertedly coupled to the locking slots 411 and the incised portions 421 of the fixing bar 4.

In this case, the main reinforcements or shape steel members 2 and the fixing bars 4 are in advance assembled to each other in a factory, and after that, as shown in FIG.6a, the protrusions 32, that is, the enlarged portions 322 and the connection portions 321 of the deck form 3 are slidably inserted into the locking slots 411 and the incised portions 421 of the fixing bar 4, thereby coupling the deck form 3 and the fixing bar 4 to each other (See FIG.6b).

As a result, as shown in FIGS.6b and 7, the enlarged portions 322 of the deck form 3 are lockedly inserted into the locking slots 411 of the fixing bar 4, so that the deck

form 3 is slidably guided to prevent the deck form 3 and the fixing bar 4 from being deviated from each other after they are coupled to each other.

FIGS.8a and 8b are side views showing a coupled relation between a fixing bar and a deck form in a structure for fixing the deck form according to a second embodiment of the present invention, FIG.9 is a perspective views showing a coupled relation between the fixing bar and the deck form according to the second embodiment of the present invention, and FIG.10 is a side view showing a coupled relation between the fixing bar and the deck form according to an example of a second fixing bar.

As shown in FIGS.8a to 10, the fixing bar 4 includes a first fixing bar 4a and a second fixing bar 4b. The first fixing bar 4a has a web 41a and one side flange 42a and the other side flange 43a bent vertically from both ends of the web 41a, and the other side flange 43a is coupled to main reinforcements or shape steel members 2 of a concrete structure. The second fixing bar 4b has one side flange 42b coupled to the enlarged portions 322 of the protrusions 32 of the deck form 3, a web 41b bent vertically from the end portion of one side flange 42b, the other side flange 43b bent vertically from the end portion of the web 41b, and a space portion 44 formed between the other side flange 43b and the enlarged portions 322 in such a manner as to allow one side flange 42a of the first fixing bar 4a to be fitted to the space portion 44 to couple the first fixing bar 4a to the second fixing bar 4b.

In a factory, in this case, the first fixing bar 4a is coupled to the main reinforcements or shape steel members 2, and also, the second fixing bar 4b is in advance coupled to the deck form 3, so that in a factory or on a construction

site, the second fixing bar 4b is coupled to the first fixing bar 4a to allow the deck form 3 and the fixing bar 4 to be coupled to each other.

5 The enlarged portions 322 of the deck form 3 are coupled to one side flange 42b of the second fixing bar 4b by means of welding or fastening members.

At this time, welding may include tack welding, and the fastening members may include self drilling screws, coil nails, bolts, and so on.

10 In a factory, generally, unit members like columns, beams, and so on are independently separated from each other, and accordingly, the deck form 3 can be fitted to the end portion of each member.

15 However, in case where the deck form 3 is installed after the column or beam has been installed on the construction site, no spare space exists on the end portion of each member, so that it is actually impossible to fit the end portion of the deck form 3 to the locking slots 411 and the incised portions 421 of the fixing bar 4.

20 Accordingly, the second fixing bar 4b is in advance fixed to the deck form 3, and on the construction site, next, the second fixing bar 4b is coupled to the first fixing bar 4a, so that the deck form 3 is coupled to the fixing bar 4.

25 Moreover, as shown in FIG.10, the second fixing bar 4b has a pressurizing protrusion 431b protruding from the inner side of the other side flange 43b to pressurize one side flange 42a of the first fixing bar 4a inserted into the space portion 44 thereagainst.

30 Further, the end portion of the other side flange 43b of the second fixing bar 4b is inclinedly bent outwardly to allow one side flange 42a of the first fixing bar 4a to be easily inserted into the space portion 44.

FIG.11 is a perspective view showing another example of the second fixing bar, FIGS.12a and 12b are perspective views showing a coupled relation between the fixing bar and the deck form according to another example of the second fixing bar, and FIG.13 is a perspective view showing yet another example of the second fixing bar.

As shown in FIGS.11 to 13, the web 41b of the second fixing bar 4b has locking slots 411b formed thereon to insert the enlarged portions 322 of the protrusions 32 of the deck form 3 thereinto, and one side flange 42b of the second fixing bar 4b has incised portions 421b formed thereon to insert the connection portions 321 of the protrusions 32 of the deck form 3 thereinto in such a manner as to communicate with the locking slots 411b, so that the protrusions 32 of the deck form 3 are insertedly coupled to the locking slots 411b and the incised portions 421b of the second fixing bar 4b.

In case where the second fixing bar 4b is separately located from the first fixing bar 4a, the protrusions 32, that is, the enlarged portions 322 and the connection portions 321 of the deck form 3 are slidably inserted into the locking slots 411b and the incised portions 421b of the second fixing bar 4b.

Even after the pre-fabricated frame like a column, beam, and so on has been installed on the construction site, the deck form 3 can be coupled easily to the second fixing bar 4b, and further, the enlarged portions 322 of the deck form 3 are lockedly inserted into the locking slots 411b of the second fixing bar 4b, thereby preventing the deck form 3 from being deviated from the second fixing bar 4b.

As shown in FIG.11, one side flange 42b of the second fixing bar 4b is bent downwardly from one side of the web 41b,

and as shown in FIG.13, one side flange 42b of the second fixing bar 4b is bent upwardly from one side of the web 41b.

FIG.14 is a perspective view showing a connection plate, FIGS.15a and 15b are perspective views showing the deck forms coupled by the connection plates, and FIG.16 is a perspective view showing the deck forms coupled by the connection plates having shear connectors.

As shown in FIGS.14 to 16, the structure for fixing the deck form according to the present invention further includes connection plates 5 located on top or underside of the deck form 3 to have the same shapes as the spaces between the protrusions 32, and the connection plates 5 are fitted to the spaces between the protrusions 32 to connect the deck form 3 to a deck form 3' adjacent to the deck form 3 in a longitudinal direction of the deck form 3.

FIG.14 is a perspective view showing a use example of the connection plates 5, and the connection plates 5 have the same shapes as the spaces between the protrusions 32 to connect the deck forms 3 and 3' adjacent to each other in their longitudinal direction and also to close the connected portions of the deck forms 3 and 3' to prevent the leakage of concrete paste.

As shown in FIG.15a, the connection plates 5 are inserted into the spaces between the protrusions 32 of one side deck form 3, and as shown in FIG.15b, the other side deck form 3' is located on tops of the connection plates 5, so that the connection plates 5 connect the deck form 3 and the deck form 3' adjacent to each other in their longitudinal direction.

Moreover, as shown in FIG.16, the connection plates 5 have shear connectors 51 coupled to the inner surfaces thereof to improve the integration with the concrete 2.

FIGS.17a and 17b are plan sectional views showing another example of the deck form.

As shown in FIG.17a, the enlarged portions 322a and 322b located on the outermost edges of the deck form 3 are
5 vertically bent inwardly from tops of the connection portions 321a and 321b and then bent outwardly by an angle of 180° . In this case, one side outermost enlarged portion 322a has an end shorter inwardly than the location of the connection portion 321a by a given length, and the other side outermost
10 enlarged portion 322b has an end protruding outwardly by a given length from the connection portion 321b.

Accordingly, as shown in FIG.17b, the deck forms 3 and 3" adjacent to each other in their transverse direction have the outermost enlarged portions 322a and 322a" adjacent to
15 each other when they abut each other in such a manner as to be laid on each other to cover a contacted portion between the connection portion 321a and 321a".

Even in case where a gap between the adjacent deck forms 3 and 3" is increased due to construction errors, accordingly,
20 the enlarged portions 322a and 322a" cover the gap to remove the construction errors and also to prevent the leakage of concrete paste.

【Industrial Applicability】

According to the present invention, the structure for
25 fixing the deck form is configured to allow the lightweight deck form having strong rigidity to be simply coupled to the main reinforcements or shape steel members in the concrete by means of the fixing bars, so that the deck form can be used as the permanent form, and further, the structure can install
30 the deck form with a simple process to achieve reduction in the number of temporary materials, constructability improvement, construction duration reduction, and

construction cost reduction, so that it is usefully applicable in industrial fields.

【CLAIMS】**【Claim 1】**

A structure for fixing a deck form, comprising:

5 a deck form 3 serving as a permanent form of a concrete structure and having a base plate 31 and a plurality of protrusions 32 formed in columns from one side of the base plate 31 along a longitudinal direction of the base plate 31, each protrusion 32 having a connection portion 321 protruding vertically to the base plate 31 from one side of the base
10 plate 31 and an enlarged portion 322 protruding from one side or both sides of the end portion of the connection portion 321; and

fixing bars 4 coupled to the deck form 3 in a width direction of the deck form 3, one side of each fixing bar 4
15 being coupled to the enlarged portions 322 to fix the deck form 3 to the fixing bar 4 and the other side thereof being coupled to main reinforcements or shape steel members 2 of the concrete structure,

wherein each fixing bar 4 comprises a web 41 and one
20 side flange 42 and the other side flange 43 bent vertically from both ends of the web 41, the web 41 having locking slots 411 formed thereon to insert the enlarged portions 322 of the protrusions 32 of the deck form 3 thereinto, and one side flange 42 having incised portions 421 formed thereon to
25 insert the connection portions 321 of the protrusions 32 of the deck form 3 thereinto in such a manner as to communicate with the locking slots 411 so that the protrusions 32 of the deck form 3 are insertedly coupled to the locking slots 411 and the incised portions 421 of the fixing bar 4.

30 【Claim 2】

A structure for fixing a deck form, comprising:

a deck form 3 serving as a permanent form of a concrete structure and having a base plate 31 and a plurality of protrusions 32 formed in columns from one side of the base plate 31 along a longitudinal direction of the base plate 31, each protrusion 32 having a connection portion 321 protruding vertically to the base plate 31 from one side of the base plate 31 and an enlarged portion 322 protruding from one side or both sides of the end portion of the connection portion 321; and

fixing bars 4 coupled to the deck form 3 in a width direction of the deck form 3, one side of each fixing bar 4 being coupled to the enlarged portions 322 to fix the deck form 3 to the fixing bar 4 and the other side thereof being coupled to main reinforcements or shape steel members 2 of the concrete structure,

wherein each fixing bar 4 comprises a first fixing bar 4a and a second fixing bar 4b, the first fixing bar 4a comprising a web 41a and one side flange 42a and the other side flange 43a bent vertically from both ends of the web 41a, the other side flange 43a being coupled to the main reinforcements or shape steel members 2 of the concrete structure, and the second fixing bar 4b comprising one side flange 42b coupled to the enlarged portions 322 of the protrusions 32 of the deck form 3, a web 41b bent vertically from the end portion of one side flange 42b, the other side flange 43b bent vertically from the end portion of the web 41b, and a space portion 44 formed between the other side flange 43b and the enlarged portions 322 in such a manner as to allow one side flange 42a of the first fixing bar 4a to be fitted to the space portion 44 to couple the first fixing bar 4a to the second fixing bar 4b.

【Claim 3】

The structure according to claim 2, wherein the enlarged portions 322 are coupled to one side flange 42b of the second fixing bar 4b by means of welding or fastening members.

【Claim 4】

5 The structure according to claim 2, wherein the web 41b of the second fixing bar 4b has locking slots 411b formed thereon to insert the enlarged portions 322 of the protrusions 32 of the deck form 3 thereinto, and one side flange 42b of the second fixing bar 4b has incised portions
10 421b formed thereon to insert the connection portions 321 of the protrusions 32 of the deck form 3 thereinto in such a manner as to communicate with the locking slots 411b, so that the protrusions 32 of the deck form 3 are insertedly coupled to the locking slots 411b and the incised portions 421b of
15 the second fixing bar 4b.

【Claim 5】

The structure according to any one of claims 1 to 4, further comprising connection plates 5 located on top or underside of the deck form 3 to have the same shapes as the
20 spaces between the protrusions 32, the connection plates 5 being fitted to the spaces between the protrusions 32 to connect the deck form 3 to a deck form 3' adjacent to the deck form 3 in the longitudinal direction of the deck form 3.

【Claim 6】

25 The structure according to claim 1, wherein the enlarged portions 322a and 322b located on the outermost edges of the deck form 3 are vertically bent inwardly from tops of the connection portions 321a and 321b and then bent outwardly by an angle of 180°, one side outermost enlarged portion 322a
30 having an end shorter inwardly than the location of the connection portion 321a by a given length, and the other side

outermost enlarged portion 322b having an end protruding outwardly by a given length from the connection portion 321b.