

Mounting Structure of Baseboard

Detailed Description of the Invention

[Technical Field of the Invention]

- 5 The invention relates to a mounting structure of a baseboard mounted on a scaffold board in a longitudinal direction in a temporary structure for assembling a scaffold and support structure for various works.

Description of the Related Art

- 10 The inventors of the present invention have disclosed a technology related to a hand rail for preventing workers and construction materials from falling down in a temporary structure (for example corresponding patents 1 and 2).

- [Corresponding Patent 1] Japanese Patent Application
15 Laid-Open No. 2003-41766

 [Corresponding Patent 2] Japanese Patent Application
Laid-Open No. 2003-97055

Disclosure of the Invention

Problems to be Solved by the Invention

- 20 While the hand rail is mainly provided for preventing the workers from falling down, smaller tools and construction materials than workers cannot be expected to be protected from falling down. Furthermore, the worker may miss his step when only the hand rail is provided.

- 25 Accordingly, baseboards with a height corresponding to about the height of knee of the worker have been mounted at right and left edges of the scaffold board in order to prevent the tools and construction materials while

preventing the workers from missing their step by mistake.

By considering these situations, the object of the invention is to disclose a mounting structure of the baseboard that can be readily mounted without loosening and
5 careless falling while enabling small articles to be reliably prevented from falling down.

Means for Solving the Problems

For attaining the foregoing object, the invention provides a structure for mounting a baseboard along the
10 longitudinal direction of the scaffold board: the scaffold board comprising engagement holes on the upper face and side faces at near edges; and the baseboard comprising a raising board and a clamp provided below the raising board, the clamp comprising engagement pieces capable of engaging the
15 engagement holes at horizontal parts and vertical parts of a bent member, the horizontal part and vertical part being provided so as to fit each edge of the scaffold board. According to the present invention, since the baseboard is mounted with the engagement pieces provided with an angle of
20 90° apart to one another, the base board and engagement piece cooperate so as to prevent them to fall out.

The engagement hole is formed to be slender in the longitudinal direction of the scaffold board, and at least one of the engagement pieces has a fall-out preventing nail
25 with its lower end bent with an angle of 90° in the longitudinal direction. The fall-out preventing nail functions for reliably preventing the engagement piece from falling out by allowing the nail to be unable to detach by

sliding the nail after inserting the engagement piece into the engagement hole.

The clamp of the baseboard has a pin member elastically biased toward the side face of the scaffold board at the vertical portion of the bent member, and a circular hole for fitting the pin member at the side face of the scaffold board while the engagement piece is made to slide as described above. When the pin member fits the circular hole, a click sound informs that the fall-out preventing pin has engaged the engagement hole by sliding.

The raising board of the baseboard is constructed so that an upper part from the clamp raises on the same line as the side face of the scaffold board or at the inner side of the side face via a channel part inwardly bent toward the horizontal part from the vertical part of the bent member. Consequently, the raising board comes inside of the side face of the scaffold board.

Operation

According to the invention as hitherto described, the baseboard can be mounted on the scaffold board without loosening and fall down by mistake while mounting of the baseboard is simple, by employing the clamp that is able to simultaneously engage the baseboard on the upper face and side face of the scaffold board. Since the baseboard of the invention is able to mount on the scaffold board one floor up of the lower scaffold board in advance, the baseboard can be safely mounted. Since a structure in which the fall-out preventing nail engages the engagement hole by sliding after

fitting the engagement piece into the engagement hole, the fall-out preventing function of the engagement piece from the engagement hole is enhanced to enable the baseboard to be more tightly mounted. Work efficiency may be improved
5 since the click sound of the pin member elastically fit the circular hole informs that the fall-out preventing nail has engaged by sliding.

Furthermore, since the upper part of the baseboard from the lamp at the raising board comes on the same line as the
10 side face of the scaffold board or at the inside of the scaffold board, no gaps are formed between the scaffold board and raising board to enable smaller articles to be reliably prevented from falling down.

[Best Mode for Carrying Out the Invention]

15 Preferable embodiments of the present invention will be described hereinafter with reference to attached drawings. Figs. 1 and 2 show the baseboard according to one embodiment of the present invention. In the drawings, reference numeral 1 denotes a raising board, and reference numeral 2
20 denotes clamps provided at several sites (3 sites in this embodiment) at the lower part of the raising board. The raising board 2 comprises a horizontal part 4 of a bent member 3 with an inverse L-shape formed by bending the horizontal part 90°. The tip of the horizontal part 4 and
25 the lower end of the vertical part 5 are further bent 90° to form engagement pieces 6 and 7. While the clamp 2 is fixed at the lower part of the raising board 1 by welding at the back face of the vertical member 5 of the bent portion 3,

the raising board 1 is inwardly bent from the fixing position of the clamp 2 along the horizontal apart 4 of the bent member 3 to form a channel part 1a, and the raising board is constructed so that the upper part of the raising board 1 from the clamp 2 is located inside of the vertical portion 5 of the bent member 3. The lower part of the raising board 1 is bent in a U-shape to form a receiving part 1b, and a flat spring 8 with a J-shape (may be a U-shape depending on the depth of the receiving part) is housed in the receiving part 1b in order to bias the pin member 9 to be elastically protruded with the flat spring 8. As shown by a magnified drawing surrounded by a circle in Fig. 2, the tips of the engagement pieces 6 and 7 of the clamp 2 are bent 90° in the longitudinal direction of the baseboard to form fall-out preventing nails 10a and 10b. While the fall-out preventing nails 10a and 10b are formed at the engagement pieces 6 and 7, they may be formed at only one of the engagement pieces 6 and 7.

On the other hand, engagement holes 14 and 15 capable of fitting the engagement pieces 6 and 7 are formed with a space corresponding to the clamp 2 at three sites on the upper face 12 and side face 13 in close vicinity to edges 11. The engagement holes 14 and 15 are formed slender in the longitudinal direction so that the fall-out preventing nails 10a and 10b can be inserted. In other words, the fall-out preventing nails 10a and 10b engages the engagement holes 14 and 15 at the inside of the scaffold board by sliding the baseboard after inserting the engagement pieces 6 and 7 into

the engagement holes 14 and 15, and the clam 2 is locked by this construction. A circular hole 16 for fitting the pin member 9 after sliding is further formed on the side face 13 of the scaffold board, and the click sound generated by fitting the pin member 9 into the circular hole 16 informs that the clamp 2 has been locked.

For mounting the baseboard so constructed as described above, the baseboard is inclined aslant at first as shown in Figs. 4 to 6, and the engagement piece 6 at the horizontal part 4 side of the clamp 2 is inserted into the engagement hole 14 at the upper face 12 side of the scaffold board (Fig. 4). Since the scaffold board as well as the baseboard of the present invention is able to be mounted on the upper floor by the work from the lower floor in advance, safety of the construction work may be ensured. Then, the entire baseboard is rotated so that the raising board 1 raises (Fig. 5), and the engagement piece 7 at the vertical part 5 side of the clamp is inserted into the engagement hole 15 at the side face 13 side (Fig. 6). Since fall-out of the engagement piece 6 at the horizontal part 4 side may be restricted by the engagement piece 7 at the vertical part 5 side, and fall-out of the engagement piece 7 at the vertical part 5 side may be restricted by the engagement piece 6 at the horizontal part 4 side even when the fall-out preventing nails 10a and 10b have not been formed at the engagement pieces 6 and 7, the baseboard may be prevented from falling down to a certain extent.

However, since the fall-out preventing nails 10a and

10b are formed at the tips of the engagement pieces 6 and 7 in this embodiment, the fall-out preventing nails 10a and 10b engage the engagement holes 14 and 15 by sliding the baseboard after insertion. Therefore, the base board may be prevented from loosening and falling down by mistake. While the pin member 9 does not fit the circular hole 16 of the side face 13 of the scaffold board, and is retracted against the bias force of the flat spring 8 in contact with the side face 13 of the scaffold board, since Fig. 6 shows the pin member before sliding, it is needless to say that the pin member 9 can be elastically fit the circular hole 16 by sliding the baseboard toward the back of the drawing.

As shown in Fig. 6, since the channel part 1a of the raising board 1 absorbs the thickness of the vertical part 5 of the clamp 2 so that the upper part of the raising board 1 from the clamp 2 raises at the inside of the side face 13 of the scaffold board, no gaps are formed between the side face 13 of the scaffold board and the raising board 1 to enable small articles to be reliably prevented from falling down. Since an effective area of the upper face of the scaffold board decreases when the width of the channel part 1a is maintained to be large, the width is preferably determined to be minimum so that no gaps are formed between the raising board and the side face 13 of the scaffold board after mounting the base board.

While the baseboard and scaffold board are mounted by fixing at three sites, the numbers of the clamp 2 and engagement holes 14 and 15 are not restricted to three. For

example, they may be provided at one site or two sites at the center of the baseboard and scaffold board, or may be provided at four or more sites. The number of the clamp 2 and the number of the engagement holes 14 and 15 are not
5 always required to be the same to one another, and the number of the clamp 2 may be smaller than the number of the engagement holes 14 and 15.

While the engagement holes 14 and 15 should be formed on the left and right faces and on the upper face at both
10 edges of the scaffold board when the scaffold is constructed with one sheet of the scaffold board, it is sufficient to form the engagement holes 14 and 15 on one side face and on the upper face at one edge of the scaffold board located at the outermost side when a plurality of scaffold boards are
15 combined as shown in Fig. 7 (Fig. 7 shows a combination of two scaffold boards).

[Brief Description of the Drawings]

[Fig. 1] a side view of the baseboard according to one embodiment of the invention;

20 [Fig. 2] a front view of the baseboard;

[Fig. 3] a plane view and front view of the scaffold board according to the embodiment;

[Fig. 4] an end view showing the mounting procedure of the baseboard (first step);

25 [Fig. 5] an end view showing the mounting procedure of the baseboard (second step);

[Fig. 6] an end view showing the mounting procedure of the baseboard (third step); and

[Fig. 7] a plane view showing the mounting structure according to another embodiment.

What is claimed is:

Claim 1

A mounting structure of a baseboard for mounting the base
5 board along the longitudinal direction of a scaffold board:
the scaffold board comprising engagement holes on the upper
face and side faces at near edges; and the baseboard
comprising a raising board and a clamp provided below the
raising board, the clamp comprising engagement pieces
10 capable of engaging the engagement holes at horizontal parts
and vertical parts of a bent member, the horizontal part and
vertical part being provided so as to fit each edge of the
scaffold board.

15 Claim 2

The mounting structure of the baseboard according to Claim
1, wherein the engagement hole is formed as a slender hole
along the longitudinal direction of the scaffold board, at
least one of the engagement piece of the baseboard
20 comprising a fall-out preventing nail with a lower end being
bent at an angle of 90 in the longitudinal direction, the
fall-out preventing nail being unable to fall out of the
engaging hole by sliding after inserting the engagement
piece into the engagement hole.

25

Claim 3

The mounting structure of the baseboard according to Claim
2, wherein the clamp of the baseboard comprises a pin member

elastically biased toward the side face of the scaffold board at the vertical part of the bent member, a circular hole for fitting the pin member by sliding being provided at the side face of the scaffold board.

5

Claim 4

The mounting structure of the baseboard according to Claim 1, 2 or 3, wherein the raising board of the baseboard is constructed so that the upper part of the baseboard from the
10 clamp raises from the same line as the side face of the scaffold board or at an inner side of the side face of the scaffold board.

15