

A side member for a loading pallet

The invention relates to a side member for a loading pallet having at least one pivotable locking means for connecting the top of the side member with an adjoining side member, one of the locking means having a pin 5 which in a locked position extends downwardly from a carrier plate for a superimposed pallet and engages an aperture in the top edge of the adjoining side member, the other end of the locking means being pivotally journaled at the top of the side member.

- 10 The known locking means are pivotable between said locking position and a position in which the locking pin is at least clear of the aperture in the top edge of the adjoining side member. Owing to the ever increasing use of pallet side frames in the form of four inter-
15 connected side members, there is a growing need for an arrangement which allows the empty frames to be returned as compact as possible; it is therefore a natural choice to place disused side members on a pallet which is provided with a side frame. Normally, this causes
20 no difficulties as the locking means can just be pivoted away from the locking position so that the locking pins clear the top edge of the side frame.

However, in consequence of the increasing use of such side frames, the side frames have been arranged
25 to support a superimposed pallet, cf. the carrier plate previously referred to. The above-mentioned storing of the known side frames is no longer possible because the locking means extend upwardly and prevent reliable positioning and support of the superimposed pallet.

The object of the invention is to provide a side member where the locking means is so positioned that in case of storing it does not prevent a pallet from being stacked on a side frame containing loose side members.

- 5 This object is achieved in that the top edge of the side member is so arranged as to allow the locking means to be pivoted in the plane of the side member to a storing position in which the means is disposed completely below the level assumed by the carrier plate in its
10 locking position.

The subclaims define preferred details of the locking means of the invention, which will be explained in the following description with reference to the accompanying drawings, in which

- 15 fig. 1 shows a pallet with a known side frame,

figs. 2A and 2B show embodiments of the side member of the invention, while

figs. 3 and 4 show some details of the preferred embodiments.

- 20 Fig. 1 shows a pallet 1 on which a side frame is mounted, there being provided a pair of opposite side members 3 with base members 2 for attachment to the pallet. Between the side members 3 there are disposed two opposite side members 4 which are provided
25 with pivotable locking means 5, 6, the means 6 of which is shown in an open position, the other means being shown in a closed position.

As mentioned before, the object of the invention is to solve the problem which arises when a plurality of

side members 4 are to be disposed in parallel with one another in the side frame shown in fig. 1, e.g. in connection with return transport of the empty side frames. As the locking means protrude vertically (either
 5 as shown at 6, or because the locking means ride on the top edge of the side members 3), it is impossible to stack an additional pallet on top of the side frame shown in fig. 1. This problem is solved by the side frame of the invention, and figs. 2A and 2B show a
 10 pair of embodiments of a side frame which can be compared to the side frames 4 shown in fig. 1.

In the embodiment shown in fig. 2A the side member is provided with a bracket 7 whose top edge is disposed at the same level as the top edge of the known side
 15 members in fig. 1. The transom 8 of the side member is thus lowered in relation to the previously known ones, so that the new locking means 9 can be pivoted backwards (clockwise) to the position shown in fig. 2A in which it is disposed completely below the
 20 level assumed by a carrier plate 10 in the locking position towards which the locking means 9 is pivoted anti-clockwise to the position shown at 5 (fig. 1). Fig. 2B shows another embodiment in which the locking means 13 is journaled in a bracket 30 extending
 25 from a corner post 11, whose length corresponds to the length of the corner posts known from fig. 1. Details of the mounting of the locking means in the bracket will be explained below with reference to figs. 3 and 4.

30 Fig. 3 is a top view of a locking means 14 comprising a carrier plate 15 which mounts a pin 16 arranged to engage an aperture in the top edge of the adjoining side frame, and a yoke 17 having legs 18, which extend beyond the carrier plate 15. A pin 20 extends
 35 through the legs 18, 19 and a bracket 21 protruding

from the transom 22 of the side member. It will then be appreciated that the position shown in Fig. 2A or Fig. 2B can be obtained, provided that the distance b from the point 23 on the carrier plate 15 measured at right angles down to the pin 20 is greater than the distance a from the pin 20 to any point on the bracket 21 which the carrier plate 15 is to clear during its pivoting movement.

Fig. 4 shows a variant of the locking means shown in Fig. 3. Here, the carrier plate 15 is secured to a plate member 24, which is parallel with the plane of the side member. A pin 25 extends through the plate member 24 and through a slitted bracket 26 so that the plate 15 can be pivoted without the edge 31 of the carrier plate, which faces the pin, hitting the bracket.

In respect of the embodiments shown in Figs. 3 and 4 it is noted that the guide wings 28, 29 of the carrier plate 15 are positioned in another manner than the one shown in Fig. 1. The guide wings shown in Fig. 1 are arranged to cooperate with the outer edge of the corner blocks of a superimposed pallet, while the carrier plates 15 are so arranged that the guide wings 28 abut an exterior edge of the corner block, while the guide wings 29 abut an interior edge of the corner blocks. This ensures that the carrier plates will not extend beyond the outer side of the side frame (downwardly in Figs. 3 and 4).

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C L A I M S

1. A side member for a loading pallet, having at least one pivotable locking means for connecting the top of the side member with an adjoining side member, one end of the locking means having a pin which in a locking position extends downwardly from a carrier plate for a superimposed pallet and engages an aperture in the top edge of the adjoining side member, the other end of the locking means being pivotally journaled at the top of the side member, wherein the top edge of the side member is so arranged as to allow the locking means to be pivoted in the plane of the side member to a storing position in which the locking means is disposed below the level assumed by the carrier plate in its locking position.
2. A side member according to Claim 1, wherein the other end of the locking means is fork-shaped and is journaled on a bracket protruding from the top edge of the side frame by means of a pin positioned to allow the locking means to pivot freely between the locking position and the storing position without the carrier plate hitting any part of the bracket.
3. A side member according to Claim 1, wherein the other end of the locking means is a plate, parallel with the plane of the side member and the plate is journaled in a slit in a bracket which protrudes from the top edge of the side member by means of a pin positioned to allow the locking means to pivot freely between the locking position and the storing position without the carrier plate hitting any part of the bracket.



4. A side member as shown and explained in the drawings and associated description.
