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(54) IMPROVEMENTS IN OR RELATING TO BUILDERS' SCAFFOLDING

(71) We, KWIKFORM LIMITED, a British Company, of Waterloo Road, Birmingham, B25 8LE, in the County of Warwick, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to builders' scaffolding and is concerned with transom elements for use in such scaffolding and comprising a transom member provided at at least one end thereof with a dependent spigot member adapted to be inserted within a socket provided on an upright scaffold member, the transom element adjacent the or each dependent spigot member embodying the means guiding a downwardly tapered wedge member for movement relative to the adjacent spigot member between an upper inoperative position allowing the spigot member by a substantially vertical movement to be freely inserted within or removed from the socket and a lower operative position in which in use the downwardly tapered wedge member has wedge engagement both with a wedge engaging face of the spigot member and with an interior face of the socket to retain the spigot member there. Such transom elements are herein referred to as being of the kind specified.

The transom element may comprise merely a bracket adapted to project cantilever fashion from the upright scaffold member, in which case the spigot member, the wedge member guide means and associated wedge member would be provided at one end only of the transom element.

Usually, however, the transom element would be adapted to extend between two spaced apart upright scaffold members, e.g. scaffold tubes, each provided with a spigot member receiving socket, in which case each end of the transom element would be

provided with a spigot member, wedge member and associated guide means.

Hitherto, the guide means for the wedge member has been constructed separately from the transom member irrespective of whether this has been formed as a bar, e.g. of inverted "T" shape in cross section, or as a length of metal tube, the guide means in every case being formed as a pair of metal plates disposed in side by side parallel relationship, with the major axis of cross section of each plate parallel to the length of the spigot member, the two plates being spaced from one another by a distance sufficient to accommodate the wedge member therebetween, with one end of each plate being welded to the adjacent end of the transom member, and the other end of each plate being welded to the spigot.

According to the present invention, the or each end of the transom member which is provided with a dependent spigot member is formed with two opposed longitudinally extending slots in respect in use upper and lower portions of the transom member which are spaced apart longitudinally of the spigot member, and the slots extend substantially perpendicular to the length of the spigot member and away from the adjacent extremity of the transom member, with the end of each slot furthest from said extremity being closed, the spigot member extending within the two slots and being secured to said slotted upper and lower portions, and the guide means for the wedge member being formed by the edge portions of the two slots, with the wedge member being received within the two slots to a position between the wedge member engaging face of the spigot member and the closed ends of the two slots.

The present invention in its broadest form as above recited provides the following advantages over the prior construction above mentioned:—

(1) Insofar as the separate guide plates

[Price 33p]

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for each wedge member are now eliminated, there is a significant saving in the manufacturing cost of each transom element.

- 5 (2) Insofar as the transom member itself provides both the guide for the wedge member and the anchorage for the spigot member, the construction is believed to possess a greater strength in addition to being of an inherently sounder design.

10 Preferably the two slots extend fully up to the adjacent extremity of the transom member, and the end of each slot at such extremity is closed by a part of the spigot member anchored within each of the two slot ends.

This arrangement possesses the further advantage that:—

- 20 (3) The two slots can be formed in a particularly simple manner by merely slitting the end of the transom member at vertically spaced positions thereof.

- 25 (4) The end of each so formed slot is closed in a simple manner to retain the wedge member therein namely by the said spigot member, with the closure at the same time providing the required anchorage for the spigot member.

30 In accordance with a further important feature of this invention, the upper slot in each end of the transom member is of such a greater length along the length of the transom member than that of the lower slot that the inner and closed ends of the two slots are adapted to engage with and retain the wedge member releasably in an inoperative position, and in an orientation in which in situ in the direction of its length it is inclined to the vertical, with its lower end at a higher level than that of the lower extremity of the dependent spigot member.

45 The advantage of this further feature of this invention is that:

- 50 (5) The wedge member is releasably held in a simple manner, namely, merely by the above relative dimensions of the two slots in a position which greatly facilitates the positioning and removal of the adjacent spigot member in relation to a selected socket on the upright scaffold member.

55 The upper and lower portions at the or each end of the transom member may be formed by the vertically spaced apart horizontally extending flanges of a channel, the web of which in use is vertical.

60 Preferably however said portions are afforded by the upper and lower sides of a square, round or other section tube.

65 To enable the wedge member to be more effectively driven into wedge engagement

with the interior of the socket, preferably each spigot member has its wedge engaging face, when the transom element is assembled on the scaffold member, inclined to the vertical such that the overall dimension of the spigot member, as measured in a direction along the length of the slots between its wedge engaging face and the opposite side of the spigot member, is less adjacent the upper slot than adjacent the lower slot.

In one arrangement embodying such a form of spigot member, the latter may be formed as a metal pressing of substantially channel section in planes transverse to the length of the spigot member with the open mouth of the channel directed away from the closed end of each of the two slots, the free edges of the sides of which channel are adapted for clamping engagement with the adjacent side of the upright member, and with the outer face of the web portion of the channel forming the wedge engaging face, the channel section metal pressing being of progressively decreasing depth in a direction upwardly of the spigot member so that its wedge member engaging face is inclined as aforesaid while maintaining, in a direction along the length of the dependent spigot member, direct clamping engagement between the edges of the channel sides and the upright scaffold member when the wedge member is fully driven.

Such an arrangement possesses the advantage that the spigot member by being made as a pressing can be formed in a particularly inexpensive manner and because it is of channel form in cross section it possesses the required resistance to distortion when in pressure clamping engagement with the upright scaffold member. Also it is of a particularly small mass so as to be economical in weight of material thus reducing manufacturing cost and facilitating the transportation or handling of the transom element.

110 Preferably each spigot member is secured to the upper and lower slotted portions of the end of the transom member by welding along each of the two edges of each slot.

However, with the above described pressed metal construction of spigot member, because this is pressed to channel form in cross-section with the open side of the channel directed away from the closed ends of these two slots and the channel web in a direction upwardly of the spigot member is inclined towards the outer ends of the two slots, the maximum overall depth in a direction along the upper slot of that part of the spigot member therein is severely limited. This is because if such depth were not so limited then by reason of the inclined disposition of the spigot member web, the combined overall depth along the lower slot of the spigot and 130

wedge members would become so large as to require the upright member sockets to project an unduly large distance from the periphery thereof if they are to accommodate both the spigot and wedge members.

This limitation in the depth of the spigot member along the length of the upper slot may so reduce the overall length of the weld between the spigot member and the upper wall-like portion of the transom member as undesirably to weaken the connection between the spigot member and the upper wall-like portion of the transom member.

The foregoing may be taken care of according to a further feature of this invention that each spigot member, where it is within at least the upper of the two slots, is at the side thereof nearest to the closed end of the slots of channel configuration with the mouth of the channel directed towards the closed end of the upper slot, and with the base of the channel forming the, or part of the, inclined wedge member engaging face, the opposed inner faces of the sides of the channel receiving therebetween the adjacent part of the wedge member and the outer sides of the channel being welded to the edges of the or each slot within which said channel-like part of the spigot member extends.

In a construction embodying this further feature of the invention, by reason of the just described channel-like configuration of the spigot member, the depth of the spigot member where it is received within the upper of the two slots can be made as great as is necessary adequately to secure this part of the spigot member to the adjacent part of the transom member.

The just described feature of this invention is most conveniently obtained by forming the spigot member as a forging or a casting as opposed to a pressing. Where as is preferred, this channel-like part of the spigot member is secured to the upper of the two wall-like portions by welding it along each edge of the upper slot therein, the length of the weld along each of the two slot edges can be made considerably greater, for example twice as great for the same size and shape of wedge member and for the same spacing of the inclined wedge engaging face of the spigot member from its upright scaffold engaging face so that the spigot member is more securely anchored to the upper wall-like portion of the transom member than is possible with a construction in which the spigot member is formed as a pressing of channel section with the mouth of the channel directed away from the closed end of the two slots.

Preferably the opposed inner faces of the two sides of the channel-like part of the

spigot member according to this further feature of the invention are spaced from one another by a distance corresponding to the thickness in such direction of the part of the wedge member therebetween so as, together with the edges of the slots, to provide the means for guiding the wedge member against undesired lateral movement relative to the transom member.

Insofar as the wedge member engaging face of the spigot member is downwardly inclined to the vertical in a direction towards the closed ends of the slots, the overall depth of the spigot member as measured to such inclined face at a position adjacent the lower of the two slots may be great enough to provide a sufficiently secure anchorage, e.g. by welding between the spigot member and the edges of the lower slot without it being necessary for this part of the spigot to be of the aforementioned channel configuration. Thus, preferably the channel in a direction downwardly of the spigot member would be of progressively decreasing depth with the channel-like part of the spigot possibly terminating at a level above that of the lower of the two slots.

Whatever form of spigot member is provided, desirably the transverse width of the spigot member which is accommodated within each of the two slots is substantially greater than the thickness in the same direction of the wedge member, and insofar as the wedge member is guided against lateral movement by the two slots, the foregoing requires that each of the two slots must be made of a greater width where they accommodate the spigot member than is the case with that part thereof which merely receives the wedge member.

Where the spigot member is formed as earlier described as a pressing, by reason of the downwardly inclined disposition of the wedge member engaging face of the spigot member, the depth in a direction along the length of the transom member of the wider part of the upper slot is less than that of the wider part of the lower slot and this difference in depth increases the cost of manufacture.

With an arrangement according to the further feature of this invention last described, insofar as the part of the spigot member which is accommodated within the upper slot is of channel configuration with the channel mouth facing the closed end of such slot, then, irrespective of the inclination to the vertical of the wedge member engaging face, the overall depth of the spigot member in a direction along the length of each of the two slots may be the same, so that the widened portions of each slot may be of the same identical configura-

tion thereby facilitating manufacture and reducing manufacturing cost.

Where the spigot member is formed as a forging or a casting as opposed to a pressing, the overall configuration of the spigot member may be easily formed to at least partly square or rectangular as viewed in plan, instead of where it is a pressing being of part-circular or other convexly curved configuration. Thus the widened portion of each slot may be formed as a simple square or other rectangular shaped notch which can readily be made to conform closely to the adjacent configuration of the spigot member, thereby facilitating the welding thereof in position.

A further advantage of making a spigot member as a casting or forging is that unlike the channel like pressing earlier mentioned, it can present to the upright member an engaging face which is substantially continuous over the entire depth, thus providing a more efficient engagement with the exterior of the upright member when the wedge member is in the driven position.

The invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of one form of transom element according to this invention and depicted extending between and connected to a pair of upright scaffold members so that each of the wedge members are in their operative position.

Figure 2 is a side elevation to a larger scale of one end portion of the transom element as depicted in Figure 1.

Figure 3 is a cross sectional view of the end of the transom element depicted in Figure 2, showing the adjacent wedge member in its inoperative position.

Figure 4 is a plan view of the end of the transom element shown in Figure 2 depicting the adjacent wedge member in its operative position.

Figure 5 is an inverted plan view on the line 5—5 of Figure 2, of part of the transom element.

Figure 6 is a perspective view of one end of a transom element depicting a further embodiment of this invention with the wedge member being disposed in its operative position.

Figure 7 is a part sectional side elevation of the construction shown in Figure 6.

Figure 8 is a perspective view of a modified form of spigot member applicable to the embodiment of Figures 6 and 7.

Figure 9 is a perspective view similar to Figure 6 but showing a further modification.

Referring first to Figures 1 to 5 of the drawings, in Figure 1 there is illustrated two upright scaffold members 10, each in the form of a length of metal tube and forming part of a builders' scaffolding, each

member being provided at different heights along its length with a number of, preferably four, equi-angularly spaced sockets 11 of "V" form as viewed in plan with their arms secured as by welding to the exterior of the member 10. The sets of sockets on the one upright member are disposed at the same horizontal levels as those of the other upright member.

The transom element 12 depicted in Figure 1 comprises a transom member 13 in the form of a length of scaffold tube and further comprises a dependent spigot member 14 provided at end end of the tube 13 for extending downwardly within one of the sockets 11 so that the transom element extends between the two upright members 10.

Each spigot member 14 is formed as a sheet or strip metal pressing of channel form in cross section so as to be open at the side thereof which is directed away from the associated transom member tube 13, with the depth of the channel increasing in a direction downwardly of the spigot member to a short distance above the lower extremity thereof. Thus the web 15 of the channel is inclined at a small angle, e.g. about 5° to the vertical considering the spigot in the assembled position depicted in Figure 1 and the tube 13 horizontal, the direction of inclination being away from the adjacent end of the tube 13 in a direction downwardly of the spigot. The face 15a of the inclined spigot member web 15 which is directed towards the associated transom member tube 13 accordingly constitutes a wedge member engaging face, inclined as above described.

Adjacent the lower extremity 16 of the spigot the web 15 is inclined in a direction opposite to that just mentioned, so that the lower extremity 16 of the spigot member is downwardly tapered to facilitate its insertion within the sockets 11.

As shown in Figure 3, each end of the transom member tube 13 in the upper and lower wall portions of the tube formed by its upper and lower sides, is formed with a slot 17, 18 respectively. The two slots are arranged diametrically opposite to one another so that their centres lie in a vertical plane passing diametrically through the longitudinal axis of the tube 13, with the two slots extending up to the adjacent end face 19 of the tube. Thus, each slot can be formed by piercing, pressing or slitting the tube in a direction inwardly from its end face 19.

The outer end of each slot is made of a width larger than that of the remainder of the slot, namely by forming the outer end portion 17a of slot 17 to semi-circular configuration and the outer end 18a of slot 18 to "U" configuration, the depth along

the length of the slot of the portion 18a being greater than that of the portion 17a.

These enlarged portions are adapted to receive and thus provide an anchorage for the upper part of the spigot 14, which part is welded to the edges of the outer portions 17a, 18a of the two slots, thereby closing the ends thereof.

The opposed edges 17b, 18b of the remaining portions of the two slots 17, 18 respectively are parallel to one another and constitute guide means for guiding within the slot a wedge member 20 in the form of an elongated flat metal plate of thickness slightly less than the distance between the two opposed edges 17b and 18b.

The inner end 17c, 18c of the respective slots, i.e. the end opposite that of the outer portions 17a, 18a, is closed.

The guiding of the wedge member 20 by the slots 17, 18 is such that the wedge member 20 is displaceable within the two slots between an upper inoperative position depicted in Figure 3, and a lower operative position shown in Figure 2. In the latter position one of the two longer edges 20a of the elongated wedge member extends perpendicularly transverse to the length of the tube 13 so as to engage with the inner face of the web 11a of one of the "V" shaped sockets with the opposite longer edge 20b which is inclined to the edge 20a forming a wedging face and which has wedge engagement with the outer and inclined face 15a of spigot web 15. In this position the outer edges 21 of the sides of the channel shaped spigot member are throughout the length thereof brought into load transmitting engagement with the adjacent side of the corresponding upright member 10.

When the wedge member 20 is in its raised inoperative position depicted in Figure 3, its edge 20a is in engagement with the upper corner 17d, 18d of the inner closed end 17c, 18c of each of the slots 17, 18 respectively. The length of the slot 17 is made so much greater than the length of the slot 18 that with the wedge member 20 in the inoperative position just mentioned its centre of gravity G is spaced in a horizontal direction from the end face 19 of tube 13 by a distance greater than the spacing from such end face of the corner 18d of slot 18. The difference in distance is such that the weight of the wedge serves to retain this in the inclined raised position depicted in Figure 3, by the wedge member, when raised and displaced from the vertical towards such inclined position, tending to pivot by its weight about the above mentioned corner 18d. In this inoperative position in which, as shown, the edge 20a of the wedge member is inclined at about 55° to the vertical, the fric-

tional engagement between such edge and corner 18d which is of sharp rightangle configuration effectively retains the wedge against downward movement.

Such retention is preferably further effectively ensured by the fact that as shown in Figure 3, with the longer edge 20a of the wedge member in simultaneous engagement with the two slot inner end corners 17d and 18d, the bottom corner 20c of the wedge member which is nearest to the spigot 14, then engages with the wedging face 15a of the spigot web 15, thus in effect wedging the wedge member in its upper inoperative position from which it can only be displaced by first swinging the wedge member about fulcrum corner 18d so as to effect simultaneous disengagement from corners 17d, 18d and spigot web 15.

The arrangement just described ensures that the wedge member 20 is self-retaining in its raised inoperative position with its lower end raised well above the downwardly tapered portion 16 of the spigot member 14, thus facilitating the engagement of the latter within the selected socket 11 without such engagement being interfered in any way by the lower projecting end of the wedge member 20.

Complete withdrawal of the wedge member upwardly beyond the Figure 3 position is prevented by forming one of the two faces of the wedge member with a projecting dimple 22 adapted to engage with one of the edges 18b of slot 18.

The wedge member 20 is further prevented from falling through the two slots in a downward direction by making the length of the parallel sided inner portion of slot 18 less than the length of the upper, i.e. driving edge 20d of wedge member 20 the difference in length being such as to ensure that at all times this driving edge 20d is projected above the upper side of tube 13. The arrangement is accordingly such that it is unnecessary to form the wedge member with more than the one dimple 22 to ensure that the wedge member cannot be separated from the remaining parts of the transom element 12 once these, including the wedge member, have been assembled to form the complete transom element.

A further important feature of the arrangement just described is that, as shown in Figure 2, the weld metal which secures the spigot 14 within the enlarged outer end 18a of slots 18 projects below the underside of the adjacent part of the tube 13 over a width great enough as to abut against the adjacent upper edge of each of the sides 11b of the socket 11 in which the spigot 14 is engaged.

The arrangement ensures that the vertical load is transmitted from the end of the transom element 12 to the corresponding

socket 11 at a position as near as possible to the upright member 10, thus subjecting the connection between the socket and the upright member to the minimum of bending moment.

In operation, with each wedge member 20 in the raised inoperative position earlier described and shown in Figure 3, the spigots 14 are inserted in a downward direction in their respective sockets 11 so that the transom element extends between the two upright members 10, whereupon each wedge member 20 in turn would be swung upwardly from the inclined to the vertical position and then hammer driven downwardly into the operative position depicted in Figure 1, in which the inclined edge 20b of the wedge member is brought into wedging engagement with the wedging face 15a of the spigot web 15, thus bringing the opposite and now vertical wedge member edge 20a into pressure engagement with the socket 11a, with the two edges 21 of spigot 14 over the entire depth thereof in load transmitting engagement with the adjacent side of the upright 10. Disengagement of each wedge member is effected by striking its lower edge in an upward direction.

Referring now to the modified construction depicted in Figures 6 and 7 of the drawings, this is similar to that just described except for the form of the spigot members 14, which are of square or rectangular form peripherally on three of their four sides and are of solid as opposed to hollow configuration being made as a forging or casting as opposed to a hollow pressing.

To accommodate such a form of spigot member the above mentioned notches 17a 18a at the ends of the slots 17, 18 nearest the extremity of transom member 13 are of square or rectangular form peripherally as viewed in plan, with the overall cross section being the same at each of the two notches.

The upper part of the spigot member 14 at the side thereof nearest to the closed end 17c of upper slot 17 is of channel configuration, with the base 23 of the channel being inclined away from the adjacent extremity 13a of tube 13 in a direction downwardly of the spigot member 14, with the channel as shown in Figure 7 continuing over the major part of the vertical dimension of the spigot member but of progressively decreasing depth in a direction longitudinally of the tube 13. This inclined base 23 forms the wedging face of the spigot member for wedging engagement with the wedge member 20, which is accommodated within the two slots 17, 18 in the manner already described in reference to Figures 1 to 5 and is also accommodated

between the opposed inner faces 24a of the two sides 24 of the channel like portion of the spigot member. These faces are spaced from one another by a distance corresponding to the thickness of the wedge member 20 for the purpose earlier described.

The lower portion 14a of the spigot member is at the side 16 thereof adjacent to the wedge member 20 inclined in a direction opposite to that of the channel base 23, so that the lower extremity of the spigot member is downwardly tapered, to facilitate its insertion within the upright member sockets in like manner to the preceding construction.

Insofar as the spigot member 14 as earlier mentioned is formed as shown as a forging or casting, the upright member engaging face thereof 14c is continuous over the entire transverse width of the spigot member and is formed to concave configuration viewing the arrangement in plan, so as to conform to the configuration of the upright member tube 10 and to have engagement therewith over the entire transverse width of the spigot member.

The spigot member is secured within each of the notches 17a, 18a by welds 25 extending for the full depth of the spigot member in a direction along the length of the tube 13, so as more effectively to secure the spigot member to the tube than with the arrangement of Figures 1 to 5.

Apart from the foregoing and the configuration of the spigot member 14, the construction and mode of operation of the arrangement illustrated in Figures 6 and 7 is the same as that earlier described in connection with Figures 1 to 5 and in particular the present arrangement possesses the important advantage No. 5 above mentioned.

Instead of forming the spigot member 14 to square or rectangular configuration in plan over its entire periphery, it may be of outwardly chamfered or tapered form at the side thereof nearest the closed end of each slot with the channel being in the tapered or chamfered side as shown in Figure 8. Such an arrangement reduces to a minimum the depth of the notched or wider portion of at least the upper slot thus minimising consequent weakening of the associated tube while reducing the mass of the spigot member.

Also as shown in Figure 8, to facilitate insertion of the spigot member 14 within the upright member sockets, it may be tapered downwardly away from the upright member on each of two lateral portions 26 of its lower end 14a and which are opposite to tapered side 16.

In Figure 9 there is depicted part of one embodiment of a further construction in which the two vertically spaced wall-like

portions at the depicted end of the transom member 13 are provided by the two vertically spaced mutually parallel horizontal upper and lower flanges 27, 28 of a transom member 13 of rectangular channel form in cross-section disposed with its web 29 vertical.

Each of the flanges 27, 28 are formed with spigot and wedge member receiving slots 17, 18 in like manner to the constructions earlier described with the upper slot 17 similarly having a length greater than that of the lower slot 18 and the spigot member 14 may as shown be similar to that of Figures 6 and 7, or the form depicted in Figures 1 to 5 or 8 and secured in the manner respectively described in connection with these various Figures.

The construction of Figure 9 is to be preferred to those of Figures 1 to 5 or Figures 6 and 7 where it is desired to utilise the transom element at one edge of a platform in that the ends of the timber or other boards forming the platform can be received and located between the two flanges 27 and 28 of the transom member which flanges would then extend for the full length of the member.

If desired however with each of the above described constructions illustrating this invention, the transom element 13 may be of channel or tubular form only at each of its two ends, with the channels or tubes forming each end being carried on the end portion of an intermediate part of the transom element which may be of inverted "T" form. Such an arrangement enables the transom element to be disposed in the known manner between two sets of platform forming boards, with the juxtaposed ends of the two sets of boards resting on the corresponding one of the two oppositely extending flanges of the "T" section transom member.

WHAT WE CLAIM IS:—

1. A transom element of the kind specified, wherein the or each end of the transom member which is provided with a dependent spigot member is formed with two opposed longitudinally extending slots in respective in use upper and lower portions of the transom member which are spaced apart longitudinally of the spigot member, and the slots extend substantially perpendicular to the length of the spigot member and away from the adjacent extremity of the transom member, with the end of each slot furthest from said extremity being closed, the spigot member extending within the two slots and being secured to said slotted upper and lower portions, and the guide means for the wedge member being formed by the edge portions of the two slots, with the wedge member being

received within the two slots at a position between the wedge member engaging face of the spigot member and the closed ends of the two slots.

2. A transom element according to Claim 1, wherein the upper slot in each end of the transom member is of such a greater length along the length of the transom member than that of the lower slot that the inner and closed ends of the two slots are adapted to engage with and retain the wedge member releasably in an inoperative position, and in an orientation in which in situ in the direction of its length is inclined to the vertical, with its lower end at a higher level than of the lower extremity of the dependent spigot member.

3. A transom element according to Claims 1 or 2, wherein each spigot member has its wedge engaging face, when the transom element is assembled on the scaffold member, inclined to the vertical such that the overall dimension of the spigot member, as measured in a direction along the length of the slots between its wedge engaging face and the opposite side of the spigot member, is less adjacent the upper slot than adjacent the lower slot.

4. A transom element according to any of Claims 1 to 3, wherein each spigot member is secured to the upper and lower slotted portions of the end of the transom member by welding along each of the two edges of each slot.

5. A transom element according to Claims 3 or 4, wherein each spigot member is formed as a metal pressing of substantially channel section in planes transverse to the length of the spigot member with the open mouth of the channel directed away from the closed end of each of the two slots, the free edges of the sides of which channel are adapted for clamping engagement with the adjacent side of the upright member, and with the outer face of the web portion of the channel forming the wedge engaging face, the channel section metal pressing being of progressively decreasing depth in a direction upwardly of the spigot member so that its wedge member engaging face is inclined as aforesaid while maintaining, in a direction along the length of the dependent spigot member, direct clamping engagement in use between the edges of the channel sides and the upright scaffold member when the wedge member is fully driven.

6. A transom element according to Claim 4, wherein each spigot member, where it is within at least the upper of the two slots, is at the side thereof nearest to the closed end of the slots of channel configuration with the mouth of the channel directed towards the closed end of the upper



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portions at the depicted end of the transom member 13 are provided by the two vertically spaced mutually parallel horizontal upper and lower flanges 27, 28 of a transom member 13 of rectangular channel form in cross-section disposed with its web 29 vertical.

Each of the flanges 27, 28 are formed with spigot and wedge member receiving slots 17, 18 in like manner to the constructions earlier described with the upper slot 17 similarly having a length greater than that of the lower slot 18 and the spigot member 14 may as shown be similar to that of Figures 6 and 7, or the form depicted in Figures 1 to 5 or 8 and secured in the manner respectively described in connection with these various Figures.

The construction of Figure 9 is to be preferred to those of Figures 1 to 5 or Figures 6 and 7 where it is desired to utilise the transom element at one edge of a platform in that the ends of the timber or other boards forming the platform can be received and located between the two flanges 27 and 28 of the transom member which flanges would then extend for the full length of the member.

If desired however with each of the above described constructions illustrating this invention, the transom element 13 may be of channel or tubular form only at each of its two ends, with the channels or tubes forming each end being carried on the end portion of an intermediate part of the transom element which may be of inverted 'T' form. Such an arrangement enables the transom element to be disposed in the known manner between two sets of platform forming boards, with the juxtaposed ends of the two sets of boards resting on the corresponding one of the two oppositely extending flanges of the 'T' section transom member.

WHAT WE CLAIM IS:—

1. A transom element of the kind specified, wherein the or each end of the transom member which is provided with a dependent spigot member is formed with two opposed longitudinally extending slots in respective in use upper and lower portions of the transom member which are spaced apart longitudinally of the spigot member, and the slots extend substantially perpendicular to the length of the spigot member and away from the adjacent extremity of the transom member, with the end of each slot furthest from said extremity being closed, the spigot member extending within the two slots and being secured to said slotted upper and lower portions, and the guide means for the wedge member being formed by the edge portions of the two slots, with the wedge member being

received within the two slots at a position between the wedge member engaging face of the spigot member and the closed ends of the two slots.

2. A transom element according to Claim 1, wherein the upper slot in each end of the transom member is of such a greater length along the length of the transom member than that of the lower slot that the inner and closed ends of the two slots are adapted to engage with and retain the wedge member releasably in an inoperative position, and in an orientation in which in situ in the direction of its length is inclined to the vertical, with its lower end at a higher level than of the lower extremity of the dependent spigot member.

3. A transom element according to Claims 1 or 2, wherein each spigot member has its wedge engaging face, when the transom element is assembled on the scaffold member, inclined to the vertical such that the overall dimension of the spigot member, as measured in a direction along the length of the slots between its wedge engaging face and the opposite side of the spigot member, is less adjacent the upper slot than adjacent the lower slot.

4. A transom element according to any of Claims 1 to 3, wherein each spigot member is secured to the upper and lower slotted portions of the end of the transom member by welding along each of the two edges of each slot.

5. A transom element according to Claims 3 or 4, wherein each spigot member is formed as a metal pressing of substantially channel section in planes transverse to the length of the spigot member with the open mouth of the channel directed away from the closed end of each of the two slots, the free edges of the sides of which channel are adapted for clamping engagement with the adjacent side of the upright member, and with the outer face of the web portion of the channel forming the wedge engaging face, the channel section metal pressing being of progressively decreasing depth in a direction upwardly of the spigot member so that its wedge member engaging face is inclined as aforesaid while maintaining, in a direction along the length of the dependent spigot member, direct clamping engagement in use between the edges of the channel sides and the upright scaffold member when the wedge member is fully driven.

6. A transom element according to Claim 4, wherein each spigot member, where it is within at least the upper of the two slots, is at the side thereof nearest to the closed end of the slots of channel configuration with the mouth of the channel directed towards the closed end of the upper



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slot, and with the base of the channel forming the, or part of the, inclined wedge member engaging face, the opposed inner faces of the sides of the channel receiving therebetween the adjacent part of the wedge member and the outer sides of the channel being welded to the edges of the or each slot within which said channel-like part of the spigot member extends.

7. A transom element according to Claim 6 wherein each spigot member is formed as a forging or a casting.

8. A transom element according to Claim 6 or 7 wherein the opposed inner faces of the two sides of the channel-like part of the spigot member are spaced from one another by a distance corresponding to the thickness in such direction of the part of the wedge member therebetween so as, together with the edges of the slots, to provide the means for guiding the wedge member against lateral movement relative to the transom member.

9. A transom element according to Claim 7 or Claims 7 and 8, wherein each spigot member is formed at least partly to square or rectangular form as viewed in plan with the square or rectangular portion accommodated in a correspondingly shaped notch-like portion of each slot.

10. A transom element according to any of Claims 1 to 9 wherein the or each end thereof having the spigot member is formed as a length of tube the end of which is slit longitudinally of the tube to form the closed ended slots.

11. A transom element according to any of Claims 1 to 9 wherein the or each end

thereof having the spigot member is formed as a channel member disposed in situ with its web vertical, the upper and lower flanges of which channel form the upper and lower wall-like portions having the closed ended slots therein.

12. A transom element of the kind specified substantially as described with reference to and as shown in Figures 1 to 5 of the accompanying drawings.

13. A transom element of the kind specified substantially as described with reference to and as shown in Figures 6 and 7 of the accompanying drawings.

14. A transom element according to claim 13 modified to include a spigot member substantially as described with reference to and as shown in Figure 8 of the accompanying drawings.

15. A transom element of the kind specified substantially with reference to and as shown in Figure 9 of the accompanying drawings.

16. Builders' scaffolding comprising a plurality of upright scaffold members having peripheral sockets and connected together by transom elements as claimed in any of the preceding claims.

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