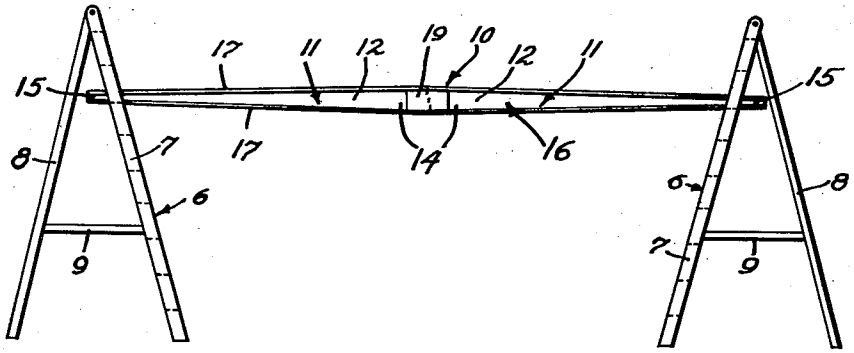
Oct. 1, 1957 T. G. STINSON 2,808,296

SCAFFOLD PLANK

Original Filed April 21, 1951

FIG-1



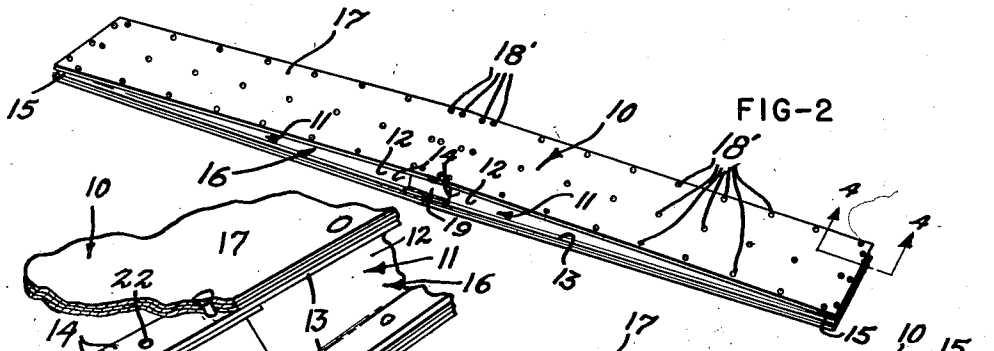


FIG-2

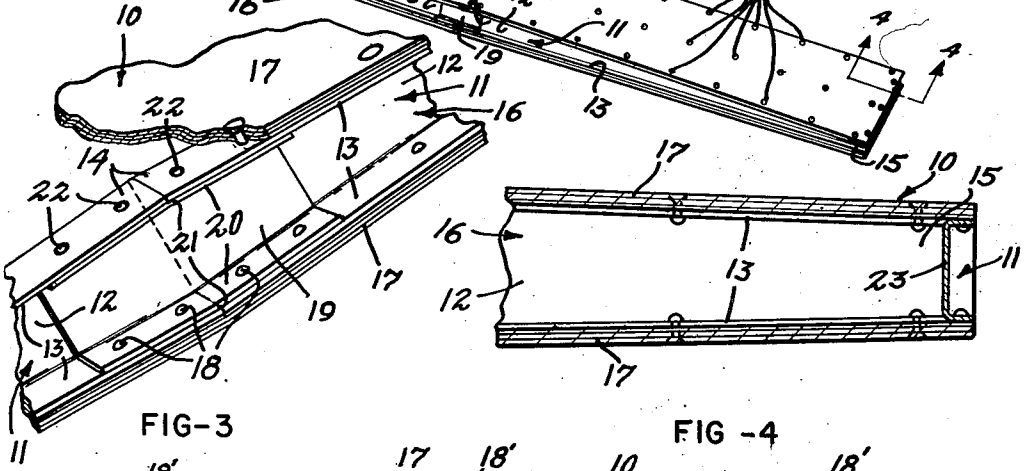


FIG-3

FIG -4

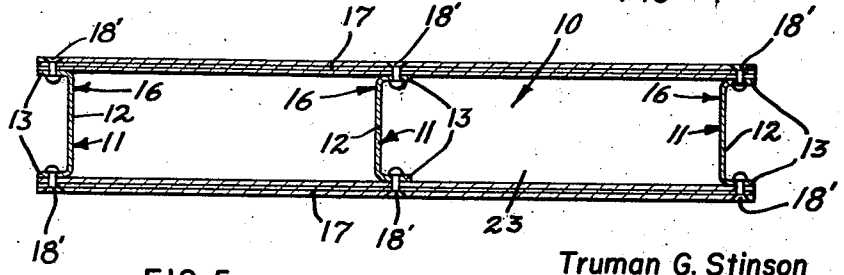


FIG-5

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SCAFFOLD PLANK

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Continuation of abandoned application Serial No. 222,189, April 21, 1951. This application November 9, 1956, Serial No. 621,474

6 Claims. (Cl. 304—38)

This invention relates to scaffolds and more particularly to a plank forming a part of a scaffold. This application is a continuation of my application, Ser. No. 222,189, filed April 21, 1951, for Scaffold Plank, now abandoned.

One object of the invention is to provide a scaffold plank formed of upper and lower sheets of plywood which are held in proper spaced relation to each other by longitudinally extending light metal rails, channel shaped and tapering to effectively secure the boards bowed longitudinally so that they are spaced from each other at a point midway the length of the plank and converge toward the ends of the plank.

Another object of the invention lies in the provision of a scaffold plank which is very light for ease in handling and yet very strong and not liable to sag between supports upon which its ends rest when in use.

Another object of the invention lies in the provision of a scaffold plank having sectional metal channels which butt in end to end relation and are secured by a metal splicing member at the adjoining ends thus greatly reducing the expense of manufacture and also enhancing the simplicity and ease of construction.

Another object of the invention lies in the provision of a scaffold plank comprising two thin sheets of light weight fibrous material, such as plywood forming opposed surfaces, both of which have unobstructed outer surfaces to be walked upon, the sheets being separated by longitudinally extending rails comprising light weight channels having webs tapering from a maximum width midway between the ends of the sheets to a minimum width at the ends of the sheets, the channels having flanges through which rivets may be passed to secure the plywood sheets to the rails.

Another object of the invention lies in the provision of a scaffold plank so constructed that when supported it may have either face disposed upwardly.

Another object of the invention lies in the provision of a scaffold plank which is simple in construction, very strong, light, and not liable to become damaged by rough usage.

In the accompanying drawings, forming a part of this specification and in which like numerals are employed to designate like parts,

Figure 1 is a side elevation of a scaffold which includes my improved plank supported on spaced supports;

Figure 2 is a view of the improved scaffold plank in perspective;

Figure 3 is a fragmentary perspective view of one joint of the longitudinally extending rails;

Figure 4 is a fragmentary cross section of an end portion of the plank as at line 4—4 of Figure 2; and

Figure 5 is a transverse cross section taken through the improved scaffold plank.

Referring now more particularly to the drawing, I have shown spaced step-ladder type supports 6—6 which have the usual spaced side bars 7 with multiple horizontally disposed steps secured therebetween and a downwardly

spreading rear leg 8 pivotally secured at the top end of the side bars 7. The rear leg 8 is secured against further spreading by a suitable brace or strap 9.

My improved plank, indicated in general by the numeral 10, is positioned with each end resting upon a selected step of the spaced supports 6 to dispose the plank in horizontal supported position and thus allow workmen to work therefrom.

The plank is constructed with longitudinally extending channel sections 11 formed preferably of light weight metal, but it will be understood that other suitable materials may be used which will effectively serve to form a strong, light weight scaffold plank. Each channel section 11 is provided with a tapered web 12 and flanges 13 which extend in the same direction from the web 12. When viewed in side elevation, it will be seen that each channel has a tapering configuration from its butt end 14, midway the length of the scaffold plank, to its outer or tip end 15. It can be plainly seen that the plank 10 is thus constructed to provide the greatest tensile strength in the scaffold plank at the point the greatest distance from the supports 6.

Two tapered channels 11 are secured together to form each rail 16 with the butt ends 14 in end to end relation, and the complete plank uses three rails, a central rail and two side rails.

The joints of the cooperating channels are reinforced by splicing members 19 which are also channel shaped in transverse cross section and have flanges 20 formed at right angles to the body. When viewed in side elevation, the splicing members each are formed with tapered webs so that the flanges 20 converge toward each other in the direction of the ends, and this provides a central upper and lower ridge 21. The splicing members are of a size adapting them to fit snugly in nested position within the flanges of the channels 11 where they join each other with the butt ends in end to end relation. Aligned holes 22 are drilled through the flanges 13 and 20 and rivets secure the splicing members 19 in place.

The center rail 16 is cut slightly shorter than the two side rails 16 to provide space for securing the channel-shaped end fillet 23 between the ends of the spaced side rails and across the end of the central rail. The fillet 23 strengthens the plank against twisting movement as well as to close the open end between the upper and lower sheets of plywood 17.

The skin or sheet 17 is applied to the top and bottom flanges 13 of the rails 16 and is secured thereto by rivets 18 which pass through the flanges 13 and the sheets 17 and the rivets are secured as in the usual manner with a flat head 18' being flush with the surface of the sheets 17. Plywood sheets have been shown in the drawings, but metal or composition materials would be effective for this purpose also.

Since the planks are of comparatively great length, it is necessary that the sheets be formed of multiple sections, and where one sheet or portion of sheet joins another portion of the sheet, the two edges are provided with cooperating bevelled edges, and secured by a strong adhesive.

The tapering configuration of the plank towards its ends cause the downward pressure to exert end to end pull on the lower sheet 17 and end to end compression on the upper sheet 17 thus relieving the bending pressure applied to the rails. This permits the rails to be formed of metal of thinner gauge, and in this way reduces the weight of the plank as well as the cost of manufacture.

The structure provides a light weight manually movable scaffold plank in which the longitudinally extending rails are thickened midway their lengths and taper toward each end. The word thickened as used herein means increased in distance or height from one tread

sheet engaging face of the rail to the face of the rail engaging the other tread sheet. This structure causes the tread sheets to diverge from each other from their ends inwardly when the sheets are secured to the rails as described hereinbefore.

The outer channel shaped rails **16** and the channel shaped end fillets **23** are positioned with their flanges facing outward so that it is easy to grasp the edge of the plank at the sides or ends for handling. The rails and fillets provide spacing between the sheets **17** throughout their entire length and width. They also provide the necessary support throughout the plank without any projections on the walking surfaces or the bottom surfaces for a workman to trip on. There is no exterior projection to catch on a support.

Having thus described my invention, I claim:

1. A light weight manually movable scaffold plank comprising longitudinally extending spaced apart rails, said rails being thickened midway their lengths and tapering toward each end, and spaced upper and lower elongated tread sheets one above the other secured to said rails, whereby the sheets are spaced from each other at their ends and diverge from each other from the ends inwardly.

2. A light weight manually movable scaffold plank comprising spaced upper and lower elongated tread sheets one above the other and bowed away from each other from the ends toward a point midway the length of the plank, tapering channels each having a relatively wide web at the middle of the plank and a narrow web at an end of the plank, pairs of said channels forming side rails and inner rails when positioned with the butt ends in end to end relation, splicing members channel-shaped in cross section and having flanges, each said splicing member having central transverse ridges on its flanges, said flanges converging toward the ends of said splicing member, said splicing member adapted to nest in said rails at the joint of the butt ends, rivets extending through aligned openings in said splicing members and cooperating pairs of channels rigidly securing said pairs of channels to form said rails, said upper and lower sheets riveted to the multiple rails, and channel-shaped fillets for closing the open ends of the plank.

3. A light weight manually movable scaffold plank comprising spaced upper and lower elongated tread sheets one above the other and bowed away from each other progressively from the ends inwardly, tapering channels each having a relatively wide web at the middle of the plank and a narrow web at an end of the plank, pairs of said channels secured with the butt ends in end to end relation and forming side rails and a central rail, said central rail being slightly shorter than said side rails, flanges on said rails, rivets securing said upper and lower sheets to said flanges, means for securing said butt ends together, and fillets secured between companion ends of said side rails and across the ends of said center rail to close the ends of the planks.

4. A light weight manually movable scaffold plank comprising parallel side rails and a central rail, said rails being thickened midway their lengths and tapering toward each end, flanges on the rails, spaced upper and lower elongated treat sheets one above the other secured to said flanges, whereby the sheets are spaced from each other at their ends and diverge from each other from the ends inwardly, said central rail being slightly shorter than the side rails, and fillets secured in each end of the plank at the end of the central rail and extending between companion ends of said side rails.

5. A light weight manually movable scaffold plank comprising longitudinally extending rails, said rails being thickened midway their lengths and tapering toward each end, spaced upper and lower elongated tread sheets one above the other secured to said rails, whereby the sheets are spaced from each other at their ends and diverge from each other from the ends inwardly, selected ones of said rails being shorter than other rails, and fillets secured in each end of the plank at the ends of said shorter rails and between said other rails.

6. A light weight manually movable scaffold plank comprising longitudinally extending rails, said rails being thickened midway their lengths and tapering toward each end, spaced upper and lower elongated tread sheets one above the other secured to said rails on opposite surfaces thereof with the thickened dimensions of said rails perpendicular to said sheets thereby bowing one sheet away for the other from their ends inwardly to space the sheets apart more at their mid portions than at their ends.

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