The present invention comprises a substantially U-shaped truss member including a flat base and a pair of opposing perpendicularly carried upstanding legs operable to support and carry deck planking forming a work platform of the scaffold; and a substantially C-shaped rafter engaging bracket suitably fastened to the terminal ends of the upstanding legs of the truss portion operable to slidably engage ceiling rafters commonly employed in building construction, each bracket being provided with a bracket closure bolt pivotally mounted to the lower portion of each of the C-shaped brackets and engageable with the top plate thereof.

1 Claim, 4 Drawing Figures
SUSPENDED MOVABLE SCAFFOLD

FIELD OF INVENTION

The present invention relates to scaffolding and more particularly to scaffolding trusses which may be selectively operable to be suspended from ceiling rafters, joists, and the like.

DESCRIPTION OF THE PRIOR ART

Scaffolding apparatus commonly used and employed in the art may be conveniently divided into underbraced and cable suspended types. The underbraced group relies on four suitably braced column legs to support a platform from underneath. This type of scaffold is limited by the requirement that each of the legs have a level and even floor upon which to rest. The cable suspended group mainly relies on a multiplicity of cables anchored at the top of a wall or the like and connected to a plank platform member, which is projected outwardly from the wall. A principle limitation of this type of scaffolding is that the cable anchoring means requires cornices operable to protect the parapet of the wall. Another limitation is that the cable suspended scaffolds cannot be employed freestanding of a wall without complex mooring ropes frequently requiring lag bolts fastened to a wall.

Accordingly, it is an important object of the present invention to provide a means operable to provide a scaffolding platform irrespective of the ground conditions under the platform.

It is a further object of this invention to provide means by which a truss assembly may be directly selectively engage rafters, joists and the like.

Another object of this invention is to provide apparatus to be easily portable and readily engaged and disengaged from the work location.

These and other objects shall become apparent from the description following, it being understood that modifications may be made without affecting the teachings of the invention here set out.

SUMMARY OF THE INVENTION

Generally, the present invention comprises a substantially U-shaped truss member including a flat base and a pair of opposing perpendicularly carried upstanding legs operable to support and carry deck planking forming a work platform of the scaffold; and a substantially C-shaped rafter engaging bracket suitably fastened to the terminal ends of the upstanding legs of the truss portion operable to slidably engage ceiling rafters commonly employed in building construction, each bracket being provided with a bracket closure bolt pivotally mounted to the lower portion of each of the C-shaped brackets and engageable with the top plate thereof.

A more thorough and comprehensive understanding may be had from the detailed description of the preferred embodiment when read in connection with the drawings forming a part of this specification.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a right side perspective view as seen from below showing the suspended scaffolding trusses of the present invention, including platform boards, dependingly disposed from rafters of a building, shown in broken for illustrative purposes.

FIG. 2 is a front elevational view of a scaffold truss provided with a substantially U-shaped truss member and two rafter engaging bracket assemblies suitably fastened to each of the terminal ends of the respective legs of the truss member.

FIG. 3 is a right front perspective view drawn to a larger scale, showing a typical rafter engaging bracket assembly including a top plate, back wall plate, and bottom plate forming the C-shaped bracket; a pivotally mounted closure bolt, wing lock nut and bolt pivot means mounted to the bottom plate of the bracket; and a fragmentary truss leg shown with a typical fastening means.

FIG. 4 is a top view of the top plate of the bracket showing the bolt engaging slot and the nut seating bevel thereof.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings and more particularly to the FIG. 1, the suspended scaffolding truss assembly of the present invention is advantageously shown and identified by the numeral 10. In operation a multiplicity of truss assemblies 10 are disposed transversely at selected intervals from two adjacent parallel rafters 11 typically found in building construction. A plurality of the rafters 12 are then laid on the trusses 10 to form a scaffold platform. The rafters 12 are disposed on the trusses rectilinearly with respect to the rafters. It can be readily seen by those skilled in the art that this arrangement of primary elements 10 and 12 provides a scaffold easily assembled and disassembled.

Referring now the FIG. 2, the scaffold truss assembly 10 comprises a substantially U-shaped truss 13 and a pair of opposing selectively engageable rafter mounting brackets 14 and 14' suitably fastened to the respective terminal ends of the truss 13. It has been found to advantage to fasten the truss 13 of angle iron and to dispose one of the outer sides of the angle iron to form a support upon which the planks 12 may be positioned. The truss 13 is provided with a base portion 15 and a pair of opposing upstanding legs 16 and 16' perpendicularly disposed from the terminal ends of the base 15. The configuration of the base 15 and the two upstanding legs 16 and 16' is operable to form a deck carrying means comprising an enclosure for the planks 12.

At each of the terminal ends of the truss legs 16 and 16' of the truss 13 are mounted two substantially C-shaped mounting brackets 14 and 14'. The brackets 14 and 14' are identical and are disposed on the terminal ends of the truss 13 such that the openings of the brackets 14 and 14' are disposed in the same direction, and are, therefore, operable to slidably engage the rafters 11 as shown in the FIG. 1. Referring to the FIG. 3, a bracket assembly, typical of the brackets 14 and 14', is provided with a substantially C-shaped rafter carrier bracket 17 and a closure bolt 18. The carrier bracket 17 comprises a perpendicularly disposed wall portion, to wit: a top bracket plate 19, a perpendicularly depending back wall plate 20 disposed from the rearwardmost terminal end of the plate 19, and a bottom plate 21 perpendicularly forwardly disposed from the back wall 20. The bracket member may be suitably fastened to the truss 13 by a number of means such as bolts 22. The bottom plate 21 is provided at its forwardmost end with a bolt engaging slot 23, and a bolt pivot means 24 to retain the bolt 18 disposed on the lowermost side distally from the forwardmost terminal end. The bolt 18 is provided at one of its terminal ends.
with a substantially T-shaped pivoting arm 25 which engages the bolt pivot means 24. The bolt 18 is then operably mounted to freely rotate on the axis of the pivot means 24 and bolt arm 25. The bolt 18 is provided at its uppermost terminal end with a wing nut 26 operable to secure the bolt 18 to the top plate 19. As shown in the FIG. 4, the top plate 19 is provided at the forwardmost terminal end with a slot 27 similar to the slot 23 operable to engage the bolt 18 in its closed position. At the rearwardmost end of the slot 27 is a bevel portion 28 operable to provide a wing nut 26 seat in the bolt 18 “closed” position. It can be readily appreciated that the configuration of elements 18, 19, 24, 25, and 26 not only provides a safety latch for the bracket portion 17, but provides a bracing means between plates 19 and 21 at their forward ends.

Having thus described in detail a preferred apparatus which embodies the concepts and principles of the invention and which accomplishes the various objects, purposes and aims thereof, it is to be appreciated and will be apparent to those skilled in the art that many physical changes could be made in the apparatus without altering the inventive concepts and principles embodied therein. Hence, it is intended that the scope of the invention be limited only to the extent indicated in the appended claims.

I claim:

1. A suspended scaffolding truss means comprising a substantially U-shaped truss portion, a pair of substantially C-shaped rafter engaging mounting brackets mounted at each of the respective terminal ends of said U-shaped truss portions operable to engage two parallel adjacent rafters, said pair of rafter engaging brackets being disposed from said truss portion in the same direction with respect to each other so that said suspended scaffolding truss may be slidably mounted on said rafters, said truss means including means fastening said brackets to said rafters, said fastening means including hingedly mounted closure means suitably fastened to each of said C-shaped rafter engaging brackets and being operable to form an enclosure about said rafter, said closure means comprising a bolt hingedly mounted to the bottom plate of said bracket, said bolt being engageable with a slot in the top plate of said bracket, and a wing nut threadably engageable with said bolt to compressibly secure said bolt to said top bracket plate.