This invention relates to a demountable scaffold and
clamps therefor of the character employed for supporting
men and materials at an elevation from the ground, as in the construction and maintenance of buildings.

This application is a continuation of the patent applica-
tion of Paul H. Watts, Serial No. 451,530, filed August

It is the primary object of this invention to provide a
scaffold unit which may be constructed from random
pieces of structural material, and then disassembled or
disassembled after use, rapidly and easily.

It is another object of this invention to provide a de-
mountable scaffold unit which is readily adjustable to
different elevations.

It is another object of this invention to provide a de-
mountable scaffold unit which may be used on uneven
ground.

It is another object of this invention to provide a de-
mountable scaffold unit which is safe in use, the compo-
nent parts being interlocked more securely with increasing
load.

It is another object of this invention to provide a de-
mountable scaffold unit the component parts of which
do not bind together upon application of a heavy load
and which consequently may be disassembled readily.

It is another object of this invention to provide a de-
mountable scaffold unit which is safe, light, compact and
easily portable.

It is another object of this invention to provide a de-
mountable scaffold unit which is applicable either as a
portable unit or as one rigidly constructed to rigid structural
members of a building.

It is another object of this invention to provide grips
or clamps for use in the assembly of scaffold units having the aforementioned desirable characteristics.

The manner in which the above and other objects of
this invention are accomplished will be apparent from the
accompanying specification and claims, considered to-
tgether with the drawings hereinafter:

Fig. 1 is a perspective view of the presently described
demountable scaffold unit;

Fig. 2 is a view in side elevation of the presently de-
scribed demountable scaffold unit in a second embodi-
ment;

Fig. 3 is a perspective view of one form of clamp or
grip which may be employed in the fabrication of the
presently described demountable scaffold unit; and

Figs. 4 and 5 are perspective views, respectively, of
second and third alternate forms of clamping or gripping
means which may be used in the assembly of the present-
ly described demountable scaffold unit.

As is apparent from a consideration of Fig. 1 of the
drawings, the scaffold unit of this invention, in one of
its embodiments, may be applied as a portable unit for
use in supporting men and materials working adjacent
the wall 10 of a building or other structure. The scaf-
dfold unit is employed to support a plank 12 of suitable
length and dimensions. The unit itself includes a ver-
tically disposed standard 14, a substantially horizontal
support arm 16, and a pair of supporting legs 18, 20, po-
sitioned in crossed relation to each other. It will, of
course, be apparent that two such units may be required,
one for each end of the plank, unless alternate pro-
vision is made for supporting one end of the same.

All of these members may comprise random pieces of scrap
material, or scrap 2 x 4's, which usually are available
on a construction site.

The scaffold unit is supported in a combination sup-
port and clamp member, the construction of which is
particularly evident from Fig. 3. It is indicated gen-
erally by the numeral 22 and includes a pocket or socket
portion 24 which may conveniently be formed from a
piece of reversely bent sheet metal. Straps 26, 28 may
be provided across the open sides of the best piece to pro-
vide a pocket which will support the lower end of stand-
ard 14.

Attached to the upper portion of the pocket member
22 are a pair of encircling grip means or clamps 30, 32
which have for their function receiving and gripping re-
leasably the upper ends of legs 18 and 20. Accordingly,
they may be formed as complete rings, if this is desired,
the ends of the legs then being slipped through the rings
to the desired position.

Preferably, however, the grip members are not com-
pletely closed in order to permit the insertion of the legs
sidewise, which may, in some instances, be more con-
venient. Thus in the illustrated form, grip member 30 com-
prises the back segment 34, the side segments 36, 38 form-
ored substantially at right angles to the back segment,
and the tabs 40, 42 formed substantially at right angles
to the side segments and directed toward each other.
Grip member 32 may, of course, be constructed in an
analogue manner.

The distance between side segments 36, 38 and the
width of the openings between tabs 40, 42 is such that
the clamp will receive a 2 x 4 or other structural mem-
ber inserted through the opening and then inclined to the
desired angle until it is engaged and gripped by the side
walls and edges of the clamp to provide the desired sup-
port.

To secure standard 14 and legs 18, 20 releasably in-
position in the support and clamp member 22, particu-
larly where it is desired to move the assembly from place
to place, means are provided for interengaging the clamp
and the structural members. In the illustrated form, such
means comprise nails or screws inserted through the
openings 50 in the support members.

The means employed for releasably fixing the hori-
zontal arm 16 to the upper portion of standard 14 is illus-
trated particularly in Fig. 4. Such means, indicated
generally at 52, preferably comprise a pair of substan-
tially coplanar grip members 54, 56 which may be formed
 integrally with each other, or as separate units welded to-
gether back to back.

Each grip member includes a back segment 58, a pair
of end segments 60, 62 and a pair of tabs 64, 66 which
define the width of the opening provided for insertion
of the structural member. Nail holes 70 also are pro-
vided for the purpose of tacking the clamp to the struc-
tural members. As in the case of support clamps 22,
clamp 52 is dimensioned to receive the structural mem-
bers through the openings between the tabs, the struc-
tural members then being inserted into the engagement
and are gripped by the side walls and edges of the clamp

An alternate form of clamp is illustrated in Fig. 5. It
comprises simply a closed band 71, preferably rectangu-
lar in longitudinal cross section, and including the side
walls 72, 74, 76 and 78. These have nail holes 80 for the above described purpose of temporarily affixing the clamp to the structural members. The band is dimensioned to receive a pair of structural members positioned side by side but at an angle to each other so that they engage and are gripped by the side walls and edges of the band in a manner analogous to that illustrated in Fig. 1.

In using the presently described scaffold unit, a standard, which may be of scrap lumber of suitable length, first is inserted in pocket 24. Legs 18 and 20 then are inserted in grip members 30, 32 and placed in cross relationship to each other to form a supporting leg assembly. If desired, these structural members may be nailed in place. Then horizontal arm 16 and the upper portion of standard 14 are placed in clamp 52 or band 71, angled to the desired extent and nailed in place. Two of the resulting scaffold units then may be inclined against wall 10, and the plank 12 placed across the supporting arms to form a secure scaffold.

It is a particular feature of the present invention that not only is it suitable for the erection of a scaffold to be leaned against a wall or other surface, but also that it may be applied to the erection of a scaffold on the studs of a building under construction, these being secured rigidly in place. This application is illustrated in Fig. 2. In this application, a pair of clamps 52 is used to encircle and grip horizontal support arms 89 and spaced apart studs 82, releasably interlocking them. Such an application is possible because the openings on both sides of the clamps are dimensioned so that the structural members may be inserted through the openings. Then by angling the clamps in the indicated manner, gripping engagement of the structural members with the clamp is secured. Accordingly, a supporting plank 84 may be placed across the support arms.

Thus it will be apparent that by the present invention I have provided a demountable scaffold unit and clamps therefor, which is easily assembled and used. It may be used on uneven ground by suitable adjustment of the supporting legs. Its height may be adjusted readily. It is safe in use because the more weight that is placed upon it, the more securely the clamps grip the structural members, further interlocking the units. Still further, it may be assembled from random scraps of structural material, available on almost any construction site, so that the only articles which need be purchased and carried about from place to place are the clamps used for gripping the structural members.

It is to be understood that the forms of my invention herewith shown and described, are to be taken as preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of my invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:
1. For use with a pair of scaffold members, a sub-
stantially rigid scaffold clamp comprising a substantially I-shaped member having spaced parallel end sections interconnected intermediate their ends by an elongated support extending between the end sections substantially normal thereto, a tab on each end of each end section and extending inwardly substantially parallel to the elongated support, there being one pair of tabs on one side of the support and another pair on the other side of the support, the distance between the ends of each section of each pair being greater than the corresponding dimension of the associated scaffold member for receiving the latter therebetween, the spacing between the end sections being substantially greater than the corresponding dimension of the associated scaffold members to permit the latter to be arranged in crossed relation defining an included angle therebetween, the end sections having longitudinally spaced gripping edges adapted to grip and secure the engaging edges of the crossed members to prevent movement of the crossed members in one direction changing the included angle therebetween.
2. A demountable scaffold unit comprising, in combination, a pair of elongated structural scaffold members, a substantially rigid scaffold clamp comprising a substantially I-shaped member having spaced parallel end sections interconnected intermediate their ends by an elongated support extending between the end sections substantially normal thereto, a tab on each end of each end section and extending inwardly substantially parallel to the elongated support, there being one pair of tabs on one side of the support and another pair of tabs on the other side of the support, the distance between the ends of the tabs of each pair being greater than the corresponding dimension of the associated scaffold members for receiving the latter therebetween, the spacing between the end sections being substantially greater than the corresponding dimension of the associated scaffold members to permit the latter to be arranged in crossed relation defining an included angle therebetween, the end sections having longitudinally spaced gripping edges adapted to grip and secure the engaging edges of the crossed members to prevent movement of the crossed members in one direction changing the included angle therebetween.

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