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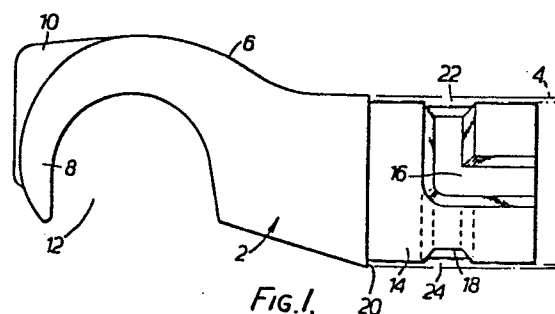
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(54) A hooked elongate scaffolding member.

(57) A hooked elongate scaffolding member (2) comprising a tube (4) and a hook (6), the hook (6) being releasably secured to one end of the tube by a bayonet connection (16, 18, 22, 24).



A HOOKED ELONGATE SCAFFOLDING MEMBER

This invention relates to a hooked elongate scaffolding member.

Hooked elongate scaffolding members are well known. They either have a hook at one end or at both ends of a tube. The hooked elongate scaffolding members serve a wide variety of purposes including acting as scaffolding and staging braces and acting as structural support members forming part of staging platforms. The hooks of the scaffolding members tend to get damaged if misused or abused. The scaffolding members must then be returned to the manufacturer for repair. This is inconvenient to the user and, since the hooks are welded to the tubes, it is relatively time consuming and costly for the manufacturer to cut off the damaged hooks and to weld on new hooks.

It is an aim of the present invention to provide a hooked elongate scaffolding member which can easily be repaired by the user in the event that a hook should become damaged.

Accordingly, this invention provides a hooked elongate scaffolding member comprising a tube and a hook, the hook being releasably secured to one end of the tube by a bayonet connection.

Preferably, the elongate scaffolding member is one in which the hook has a grooved shank constituting one portion of the bayonet connection, and in which the interior of the tube is provided with a pair of projections which constitute the other portion of the bayonet connection, the projections

in the tube fitting in the grooves in the grooved shank.

Obviously, if desired, the reverse arrangement may be employed in which the interior of the tube is grooved and the shank of the hook is provided with the pair of projections but this
5 alternative arrangement is less easy to manufacture and it would have a disadvantage in increasing the overall diameter of the tube, preventing other hooked elongate scaffolding members being fitted onto that portion of the tube.

Usually, the hooked elongate scaffolding member will
10 include releasable locking means for releasably locking the tube and the hook together.

The locking means is advantageously a pair of screws. The screws may extend through apertures in the tube and may locate in a threaded bush provided in a shank of the hook.
15 Preferably the screws will be located opposite each other.

The elongate scaffolding member may be one in which each end of the tube is provided with one of the hooks, each of the hooks being secured to the tube by the bayonet connection. If only one end of the tube is provided with the hook, then the
20 other end of the tube may be provided with, for example, a ring coupler.

An embodiment of the invention will now be described solely by way of example and with reference to the accompanying drawings in which:

25 Figure 1 is a side view of part of a hooked elongate scaffolding member in accordance with the invention;

Figure 2 is an end view of the hook employed in Figure 1 but showing only the hook shank part of the bayonet

connection; and

Figure 3 is a side view of a threaded bush.

Referring to the drawings, there is shown a hooked
elongate scaffolding member 2 comprising a tube 4 and a hook
5 6. The hook 6 is provided with a hooked end 8 which is
provided with a reinforcing web 10 which is designed to help
prevent the hooked end 8 being deformed. It will be appreciated
that if the hooked end 8 deforms inwardly then the aperture 12
will not be sufficiently large to hook over a scaffolding tube
10 (not shown). The hook 6 is further provided with a shank 14
and the shank 14 is provided with a pair of right angled
grooves 16, 18 which are positioned diametrically opposite to
each other as shown. The shank 14 is tubular as can best be
seen from Figure 2. The shank 14 has a shoulder 20 against
15 which the tube 4 abuts as it passes over the grooves 16, 18.
The tube 4 is provided with a pair of inwardly directed
projections 22, 24 for engaging in the groove 16, 18
respectively. These projections 22, 24 may be formed in the
tube 4 using a hydraulic or a fly press. It will be
20 appreciated that the projections 22, 24 engage in the grooves
16, 18 respectively such that the projections are first pushed
in a straight line along the first part of the grooves and
then either the tube 4 or the hook 6 will be turned through
90° to complete the bayonet connection and locate the
25 projections 22, 24 in the ends of their grooves 16, 18. The
hook 6 will then be positively but releasably secured by the
bayonet connection to the tube 4.

In order to ensure that the bayonet connection does not

inadvertently become released during use, the tubular shank 14 is provided with a threaded bush 26, see Figure 3. The bush 26 is located across the shank 14 so that two screws can then be passed through apertures (not shown) in the tube 4 and into the threaded bush 26. The screws thus form releasable locking means for ensuring that the bayonet connection constituted by the grooves 16, 18 and the projections 22, 24 does not become prematurely released.

In the event that the hook 6 and particularly the hooked end 8 should become deformed, then the user merely has to undo the screws and turn the hook 6 through 90° with respect to the tube 4 to release the bayonet connection. The hook 6 can then be removed from the tube 4 and a new hook 6 can be inserted in the end of the tube 4. The bayonet connection can then be remade and the screws inserted again in the bush 26 that will be in the new hook 6. The screw heads can be arranged to be flush in the tube 4 or they can project from the tube 4. The hook 6 is thus very easily renewed and this can be done by a user of the hook, for example on site. There is no need to cut off the hook 6 as would be previously the case and to weld a new hook 6 in position. This is particularly advantageous with the majority of scaffolding members 2 which are made from an aluminium alloy and which requires special tungsten-inert-gas (TIG) welding, which is costly. Alternatively, on elongate scaffolding members fitted with a hook 6 on either end of a tube 4, should the tube 4 become deformed and the hooks 6 are servicable, then the tube 4 is very easily renewed

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and this can be done by the user of the elongate scaffolding member, for example on site. Obviously, the tube 4 can also be renewed even if it only has a hook 6 on one end.

It is to be appreciated that the embodiment of the invention described above has been given by way of example only and that modifications may be effected. Thus, for example, a hook 6 may be provided at both ends of the tube 4. Also, if desired, other locking means such as self-tapping screws or nuts and bolts may be employed instead of the screws and the bush, although the screws and the bush 26 are preferred since they make a flush fitting connection.

CLAIMS

1. A hooked elongate scaffolding member comprising a tube and a hook, the hook being releasably secured to one end of the tube by a bayonet connection.
2. A hooked elongate scaffolding member according to claim 1 in which the hook has a grooved shank constituting one portion of the bayonet connection, and in which the interior of the tube is provided with a pair of projections which constitute the other portion of the bayonet connection, the projections in the tube fitting in the grooves in the grooved shank.
3. A hooked elongate scaffolding member according to claim 1 or claim 2 and including releasable locking means for releasably locking the tube and the hook together.
4. A hooked elongate scaffolding member according to claim 3 in which the locking means is a pair of screws.
5. A hooked elongate scaffolding member according to claim 4 in which the screws extend through apertures in the tube and locate in a threaded bush provided in a shank of the hook.
6. A hooked elongate scaffolding member according to claim 5 in which the screws are located opposite each other.

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7. A hooked elongate scaffolding member according to any one of the preceding claims in which each end of the tube is provided with one of the hooks, each of the hooks being secured to the tube by the bayonet connection.

- 5 8. A hooked elongate scaffolding member according to any one of claims 1 to 6 in which only one end of the tube is provided with the hook, and in which the other end of the tube is provided with a ring coupler.

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