Title of the Invention: Lifting and lowering device
Abstract Title: Lifting device for scaffolding materials

A lifting device comprises a back plate 6 which includes an eyelet 5 suitable for attachment to a rope 4 or similar. The carrier plate is also characterised by at least a pair of clips/clamps 2, 3 specifically for attaching scaffolding construction materials 1 thereto. The scaffolding materials may include tubes, boards or fittings.
FIGURE 2
Lifting and lowering device

**Background**

This invention is primarily designed for use in the scaffolding industry for the raising and lowering of scaffolding tubes/boards, although with a few modifications it could be used to lift a multitude of materials.

Scaffolding tubes/boards are at present raised and lowered by means of a Ginny wheel, powered hoist, hand line or by scaffolders lining up above each other on the scaffolding, the latter being the safest method as the materials are passed hand to hand, this is also one of the most expensive ways of raising and lowering scaffolding materials as any number of scaffolders can be involved in this activity depending on the height of the scaffolding being erected/dismantled, this also means they are unavailable to perform other duties.

The problem with connecting the scaffolding tubes/boards to ether a Ginny wheel or winch is that they must be tied on manually, using knots, the knots are tied around a tube/board using a length of rope known as a whip, the knots comprising a clove hitch or a rolling hitch in the case of scaffolding tubes and in the case of wooden boards a timber hitch would usually be tied by the scaffolders labourer, some of whom ether through youth or inexperience seem to have difficulty learning how to tie these knots correctly.

Even when tied correctly these knots can and often do fail, by the tube/board colliding with stationary objects such as scaffolding already erected, pipe tracts and other such structures, allowing the tube/board to fall to earth, scaffolds are erected/dismantled in many places such as oil refineries, factories, and on busy streets, If a scaffolding tube/board falls in any of the above locations, or any location were scaffolding is in the process of being erected/dismantled the result can be damage and/or injury, also the general rule at most work places is that only one tube/board be raised/lowered at any one time due to the danger of tubes/boards slipping through the knots, by adding clips/clamps or other attachments onto other sides of the lifting device one two or more tubes/boards may be raised/lowered at the same time, vastly speeding up construction times.
Description

To overcome the problems relating to the raising and lowering of scaffolding tubes/boards, or other such material by the means of having to manually tie knots around the above materials, I have invented a lifting/lowering device this comprises a lifting ring, eyelet or other support connected to a back plate, shaft or other means of supporting two or more clamps or clips, that will tighten around a scaffolding tube/board or other such material holding it tightly in place when being raised or lowered.

The invention will now be described solely by way of example and with reference to the accompanying drawings.

Number 1 in drawing 3 back view. Shows the material locked in place by the clamps clips or other fastenings ready to be lifted.

Number 2 and 3 in drawing 2 front view. Shows the clips clamps or other fastenings holding the material ready to be lifted figures 2 and 3 show the clips/clamps welded in place the clips/clamps or other fastenings may be bolted or attached by other means.

Number 4 in drawing 1 side view. Shows the lifting wire/rope connected to the lifting ring eyelet or other connecting point by means of a hook it could also be attached by means of a rope/wire or other such means.

Number 5 in drawing 1 side view. Shows the lifting ring eyelet or other such attachment for raising/lowering the lifting device.

Number 6 in drawing 1 side view. Shows the back plate shaft or other support for the locking clips, clamps or other means of locking materials to the lifting device.

Number 7 in drawing 1 side view. Shows the place where an extra support will be added for attaching fitting bags and other materials that cannot be attached in any other way.
Claims

1. A lifting/lowering device to be attached to a rope or wire for the purpose of raising and lowering materials.

2. A lifting/lowering device that will comprise of two or more clips clamps or other such fastening devices attached by means of bolts, weld or other means of attachment to a back plate shaft or other such means of support for the purpose of attaching materials of various shapes and sizes needing to be raised or lowered.

3. A lifting/lowering device that will make it unnecessary for unqualified persons to have to tie knots to hold materials being raised or lowered in place.

4. A lifting/lowering device that should make it unnecessary for an unqualified person to have to use a tool to secure materials being raised or lowered.

5. A lifting/lowering device that should make the task of raising and lowering items such as scaffolding boards, tubes, fittings and other such equipment or materials a safer operation.

6. A lifting/lowering device that can be attached by a qualified person and then with very little training be used safely by a trainee or labourer.

7. A lifting/lowering device that with the addition of extra clips clamps or other means of attaching materials would allow more than one item to be raised or lowered safely at any one time.
Application No: GB1011929.5  Examiner: Mrs Judith Peake
Claims searched: as filed  Date of search: 1 November 2010

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

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<tr>
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<td>X</td>
<td>1-6</td>
<td>US6779631 B1 (HENSLEY et al) See Figures 1A, 4A and 5, and the description at column 4 lines 34-45 particularly</td>
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<tr>
<td>X</td>
<td>1, 3-7</td>
<td>GB2411925 A (WOOD) See whole document especially the figures</td>
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<td>X</td>
<td>1, 3-7</td>
<td>US4452337 A (ATZINGER) Whole document, Figure 7 especially</td>
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<tr>
<td>X</td>
<td>1, 3-6</td>
<td>JP2001063957 A (IM TRUST KK) See WPI Abstract Accession Number 2001-287526 [30] and Figures 1-3 in particular</td>
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Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC:

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B66C; E04G

The following online and other databases have been used in the preparation of this search report:

Online: WPI, EPODOC

International Classification:

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<tr>
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