Abstract Title: **Barrier to prevent falling during wall construction**

A barrier comprises a support extending upward from the outer wall face, a rest element which is longer than the wall width and extends from the support past the inner wall face sitting on the wall itself; and a clamp, attached to the rest element and securing the barrier against the inner face. Preferably, the support includes a mount which may be one or more brackets which may hold flat sided posts. The rest element may be a flat sided bar the thickness of the mortar or more preferably 10mm thick. The support may include one or more stabilisers which may be shorter than the rest element and extend parallel to the rest element. The support may have a telescopic, extendable lower portion which may be retained by a lock or stopper. The clamp is preferably adjustable along the rest element and may be locked in place. The clamp may abut the inner wall and a clearance gap from the top of the wall may be provided.
APPARATUS FOR USE IN PREVENTING PERSONS OR OBJECTS FALLING FROM A WALL DURING CONSTRUCTION OF THE WALL

This invention relates to apparatus for use in preventing persons or objects falling from a wall during construction of the wall.

Walls can be built to various heights. During their construction, there is always a possibility that a person such as the bricklayer may fall from the wall, or an object such as a brick, building block or tool could fall from the wall and injure a person below. Health and safety regulations require that scaffolding erected to stop persons and objects falling from the wall. The scaffolding has to be put up by skilled labour which adds to the cost of the wall. Often the scaffolding gets in the way of a bricklayer or bricklayers constructing the wall.

It is an aim of the present invention to reduce the above mentioned problems.

Accordingly, in one non-limiting embodiment of the present invention there is provided apparatus for use in preventing persons or objects falling from a wall during construction of the wall, which apparatus comprises:

(i) a barrier support member for extending upwardly from an outer face of the wall being constructed when the wall being
constructed comprises wall members which have been laid and allowed to set;

(ii) a rest member which is of a length which is longer than the width of the wall being constructed, which extends from the barrier support member such that it rests on top of the wall members which have been laid and allowed to set, and which is such that it projects from an inner face of the wall being constructed; and

(iii) clamp means which depends from the rest member and clamps to the inner face of the wall being constructed and thereby holds the apparatus in place on the wall being constructed.

The apparatus of the present invention can be erected by unskilled labour. The apparatus can easily be removed after use. The apparatus is able to be used to help to stop persons and/or objects falling from the wall being constructed. The apparatus is also able to be used such that it causes a minimum of obstruction to a bricklayer or bricklayers constructing the wall.

The wall members used for constructing the wall will usually be bricks or blocks. Other wall members may however be employed if desired. The wall may be a wall of a building, a garden wall or other walls.
Preferably, the barrier member is a flat-sided post. Other types of barrier member may be employed.

Preferably, the rest member is a flat sided rest bar. Preferably, the rest bar is of the same thickness as the mortar or cement being used between the wall members. Typically, the rest bar is 10mm thick.

The barrier support member preferably includes mounting means for mounting one or more barrier members on the barrier support member. Any suitable and appropriate mounting means may be employed.

Preferably, the mounting means is a bracket for receiving a barrier member in the form of a board. The board may be a wooden scaffolding board, or the board may be of a plastics material.

Preferably, there are two of the brackets spaced apart along the length of the barrier support member. If desired, more or less than two of the brackets may be employed.

The apparatus may include at least one stabilising member which is spaced apart from the rest member and which extends in the same direction as the rest member.

Preferably, the stabilising member is shorter than the rest member and it does not extend to the outer face of the wall members.

Preferably, there are two of the stabilising members, the two stabilising members being arranged one on either side of the rest member. More or less than two of the stabilising members may be employed if desired.
Advantageously, the barrier support member has an extendable lower portion for extending downwardly along the wall under construction as the wall under construction gets higher and higher.

The extendable lower portion is preferably a telescopic extendable lower portion. The extendable lower portion may be retained by retainer means in the remainder of the barrier support member in order to avoid the extendable lower portion falling out. The retainer means may be a stopper or a lock.

Advantageously, the clamp means is adjustably positionable along the length of the rest member and is thereby able to engage walls under construction which are of different thicknesses. Advantageously, the apparatus is one in which the clamp means is adjustably positionable by being slidable along the length of the rest member, and in which the clamp means includes a locking device for locking the clamp means in its chosen position along the length of the rest member. The locking device may be a clamp, screw, bolt or any other suitable and appropriate type of locking device.

The clamp means may include an abutment member for abutting against the inner face of the wall under construction. The abutment member may be movable towards and away from the inner face of the wall under construction in order firmly to engage the inner face. Thus, for example, the abutment member may be a screw-threaded abutment member which
screws backwards and forwards with respect to the remainder of the clamp means.

Preferably, the clamp means provides a clearance gap at an upper part of the wall under construction. The clearance gap may be obtained by a cranked arrangement, or by a straight inclined arrangement.

The apparatus of the present invention can be made of any suitable and appropriate materials including aluminium and steel.

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

Figure 1 shows two pieces of the apparatus of the present invention in use;

Figure 2 is a perspective view of one piece of the apparatus shown in Figure 1; and

Figure 3 is a side view of the piece of apparatus shown in Figure 2.

Referring to the drawings, there is shown apparatus 2 for use in preventing persons or objects falling from a wall 4 during construction of the wall 4. The apparatus 2 comprises a barrier support member 6 for extending upwardly from an outer face 8 of the wall 4 being constructed, when the wall 4 being constructed comprises wall members 10 which have been laid and allowed to set.

The apparatus 2 also comprise a rest member 12 which of a length which is longer than the width of the wall 4 being constructed. The rest member 12 extends from the barrier support member 6 such that the rest
member 12 rests on top of the wall members 10 which have been laid and allowed to set. The rest member 12 is such that it projects from an inner face 14 of the wall 4 being constructed.

The apparatus 2 also comprises clamp means 16 which depends from the rest member 12 and clamps to the inner face 14 of the wall 4 being constructed. Thus the clamp means 16 holds the apparatus 2 in place on the wall 4 being constructed.

As can be seen from Figure 1, the wall members 10 are in the form of bricks. The wall members 10 could alternatively be blocks such as breeze blocks, thermal blocks, or other types and/or shapes of wall members.

The rest member 12 is of the same thickness as mortar 18 being laid between the wall members 10 as shown. Typically the rest member 12 is 10mm thick.

The barrier support member 6 includes mounting means 20 as shown in Figures 2 and 3. The mounting means 20 is for mounting one or more barrier members on the barrier support member 6. Figure 3 shows one of the barrier members 20 mounting a pair of wooden scaffolding boards. As shown in Figures 2 and 3, the mounting means 20 is in the form of a bracket. There are two of the mounting means 20 spaced apart along the length of the barrier support member 6.

The apparatus 2 includes two stabilising members 22. Each stabilising member 22 is spaced apart from the rest member 12, and it extends in the same direction as the rest member 12. The stabilising
member 22 is shorter than the rest member 12 and it does not extend to the outer face 8 of the wall members 10. As shown in Figure 2, there are two of the stabilising members 22, the two stabilising members 22 being arranged on one either side of the rest member 12.

As best appreciated from Figure 3, the barrier support member 6 has an extendable lower portion 24 for extending downwardly along the wall 4 under construction, as the wall 4 under construction gets higher and higher.

In Figure 3, the wall 4 already constructed has been shown with cross-hatching lines. The wall 4 still to be constructed has just been shown in broken lines. The extendable lower portion 24 is a telescopic extendable lower portion 24. The extendable lower portion 24 has a foot 26 which abuts against the outer face 8 of the wall 4 under construction. The foot 26 also abuts against an obstacle 28 which might be, for example, the ground, or the floor of a building under construction.

The extendable lower portion 24 is retained in position by retainer means (not shown). The retainer means prevents the extendable lower portion 24 from falling out of the remainder of the barrier support member 6. The retainer means may be a stopper, a lock, or any other suitable and appropriate retainer means.

The clamp means 16 is adjustably positioned along the length of the rest member 12, and it thereby able to engage walls under construction which are of different thicknesses. The clamp means 16 is adjustably positionable by being slidable along the length of the rest member 12. The
clamp means 16 includes a locking device for locking the clamp means 16 in its chosen position along the length of the rest member. The locking device is a screw clamp 30.

The clamp means 16 includes an abutment member 32 for abutting against the inner face 14 of the wall 4 under construction. The abutment member 32 is movable towards and away from the inner face 14 of the wall 4 under construction in order firmly to engage the inner face 14. The abutment member 32 is a screw-threaded abutment member 32 having a hand screw portion 34. The abutment member 32 is thus able to be screwed backwards and forwards with respect to the remainder of the clamp means 16. As best shown in Figure 3, the clamp means 16 is a cranked clamp means which is cranked at position 36 to provide a clearance gap 38 at an upper part of the wall 4 under construction.

The apparatus 2 may be made of steel or aluminium. Other materials may be employed.

The apparatus 2 is easily able to be erected and dismantled by unskilled labour. At the end of a day's work, a bricklayer can simply tap the end of the rest member 12 remote from the barrier support member 6. This will then loosen the rest member 12 with respect to surrounding mortar 18. The apparatus 2 can then be removed on the next day for re-use at the top of the wall 4 so far constructed.

It is to be appreciated that the embodiment of the invention described above with reference to the accompanying drawings has been given by way
of example only and that modifications may be effected. Thus, for example, the shape of the barrier support member 6, the rest member 12 and the clamp means 16 may be varied. The crank in the clamp means 16 could alternatively be a straight inclined arrangement. A barrier member other than a board may be employed so that, for example, the barrier member could be a mesh net. The apparatus of the invention can be used to build walls of any suitable and desired length and height.
CLAIMS

1. Apparatus for use in preventing persons or objects falling from a wall during construction of the wall, which apparatus comprises:

   (i) a barrier support member for extending upwardly from an outer face of the wall being constructed when the wall being constructed comprises wall members which have been laid and allowed to set;

   (ii) a rest member which is of a length which is longer than the width of the wall being constructed, which extends from the barrier support member such that it rests on top of the wall members which have been laid and allowed to set, and which is such that it projects from an inner face of the wall being constructed; and

   (iii) clamp means which depends from the rest member and clamps to the inner face of the wall being constructed and thereby holds the apparatus in place on the wall being constructed.

2. Apparatus according to claim 1 in which the barrier member is a flat sided post.
3. Apparatus according to claim 1 or claim 2 in which the rest member is a flat sided rest bar.

4. Apparatus according to claim 3 in which the rest bar is of the same thickness as mortar or cement being layed between the wall members.

5. Apparatus according to claim 4 in which the rest member is 10mm thick.

6. Apparatus according to any one of the preceding claims in which the barrier support member includes mounting means for mounting one or more barrier members on the barrier support member.

7. Apparatus according to claim 6 in which the mounting means is a bracket for receiving a barrier member in the form of a board.

8. Apparatus according to claim 7 in which there are two of the brackets spaced apart along the length of the barrier support member.

9. Apparatus according to any one of the preceding claims and including at least one stabilising member which is spaced apart from the rest member and which extends in the same direction as the rest member.
10. Apparatus according to claim 9 in which the stabilising member is shorter than the rest member and it does not extend to the outer face of the wall members.

11. Apparatus according to claim 9 or claim 10 in which there are two of the stabilising members, the two stabilising members being arranged one on either side of the rest member.

12. Apparatus according to any one of the preceding claims in which the barrier support member has an extendable lower portion for extending downwardly along the wall under construction as the wall under construction gets higher and higher.

13. Apparatus according to claim 12 in which the extendable lower portion is a telescopic extendable lower portion.

14. Apparatus according to claim 12 or claim 13 in which the extendable lower portion is retained by retainer means in the remainder of the barrier support member in order to avoid the extendable lower portion falling out.

15. Apparatus according to claim 14 in which the retainer means is a stopper or a lock.
16. Apparatus according to any one of the preceding claims in which the clamp means is adjustably positionable along the length of the rest member and is thereby able to engage walls under construction which are of different thicknesses.

17. Apparatus according to claim 16 in which the clamp means is adjustably positionable by being slidable along the length of the rest member, and in which the clamp means includes a locking device for locking the clamp means in its chosen position along the length of the rest member.

18. Apparatus according to claim 17 in which the locking device is a clamp.

19. Apparatus according to any one of the preceding claims in which the clamp means includes an abutment member for abutting against the inner face of the wall under construction.

20. Apparatus according to claim 19 in which the abutment member is movable towards and away from the inner face of the wall under construction in order firmly to engage the inner face.
21. Apparatus according to claim 19 in which the abutment member is a screw-threaded abutment member which screws backwards and forwards with respect to the remainder of the clamp means.

22. Apparatus according to any one of the preceding claims in which the clamp means provides a clearance gap at an upper part of the wall under construction.

23. Apparatus for use in preventing persons or objects falling from a wall during construction of the wall, substantially herein described with reference to the accompanying drawings.
Application No: GB0618642.3  Examiner: Helen Harrop
Claims searched: 1-22  Date of search: 18 December 2007

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

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- E1S Worldwide search of patent documents classified in the following areas of the IPC
- E04G The following online and other databases have been used in the preparation of this search report
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