A Cleaning Implement

Field of the Invention

This invention relates generally to a cleaning implement. In particular, this invention relates to a cleaning implement for windows.

Background

The cleaning of outer surfaces such as glass, walls, boards, etc is dangerous when such an outer surface is at an elevated height. In particular, the cleaning of windows in high rise buildings, or indeed any raised structure is potentially dangerous for a cleaner since the cleaner may expose themselves to the risk of falling off the raised structure in order to clean the outer surface. This risk is most pronounced in cleaning high-rise buildings.

The window cleaning implements presently used are typically in the form of a T shape which includes a shank attached to an elongate frame member. A cleaning member such as a squeegee, wiping blade or the like is typically mounted on the elongate frame member. The disadvantage with this implement is that when a cleaner wishes to clean the outer or exterior surface of an object such as a window which is at an elevated height then the cleaner must physically locate themselves outside the window. If the window is at an elevated height then the cleaner exposes themselves to the serious risk of injury or in some cases death.

The solution to this problem has been to typically utilise safety harnesses for the cleaners or use enclosed cells raised by a winching means in order to elevate and safely enclose the cleaner. Whilst this solution is feasible for cleaning windows in high-rise buildings, the cost is significant and thus is not usually an option for the domestic window cleaner or cost conscious businesses.

Thus, a need clearly exists for a cleaning implement which seeks to alleviate reliance on expensive harnesses, winching means and the like and to provide a cleaning implement which is safe for cleaning outer surfaces, relatively inexpensive and easy to use by all cleaners regardless of their skill level.

Accordingly, this invention seeks to provide such a cleaning implement whereby the above problems are able to ameliorated.

Summary

In accordance with a first aspect of this invention, there is provided a cleaning implement for cleaning a surface of an object, comprising: a handle member; a frame member further comprising a first elongate member and a second elongate arm member joined by a transverse cross member; and an elongate first cleaning means attached to the frame member; wherein the first cleaning means is mounted on and along the length of the first elongate arm member, such that one end of the first cleaning means is in contact with or in close proximity to the transverse cross member; and the handle member is attached to the second elongate arm member.

The first cleaning means is preferably a squeegee member, a wiper member, a roller, a brush or a combination thereof.

The first elongate arm member and the second elongate arm member are preferably in parallel relationship with each other.

The first and second elongate arm members are preferably joined by a cross member wherein one of the elongate arm members extends further in length than the other elongate arm. Still preferably, the first elongate arm member extends further in length than the second elongate arm member.

The first and second elongate arm members and the transverse cross member preferably form a sickle shaped or substantially U shaped frame member. The sickle shaped or substantially U shaped frame member is preferably attached towards an end of the second elongate arm member.

The handle member preferably further comprises a removably attachable telescopic elongate member so as to allow cleaning of more remote surfaces. Still preferably, the handle member is a U shaped member attached to the second elongate arm member.

The first elongate member and the transverse cross member preferably have a channel shaped cross sectional profile.

The first elongate member and the transverse cross member preferably have one or more apertures spaced respectively along the length of each of the first elongate member and the transverse cross member. The transverse cross member is preferably narrow in width.

The apertures are preferably located towards the bottom of the channel shaped profile of each of the first elongate member and the transverse cross member.

In accordance with a second aspect of this invention, there is provided a method of cleaning a surface of an object, comprising the steps of:

inserting a cleaning implement as described in the first aspect of this invention into water and/or a cleaning fluid;

placing the cleaning implement about an edge of the object to be cleaned so that the handle is in the region of an inner surface of the object whilst the first cleaning means is in the region of the outer surface of the object; and

moving the cleaning implement over the surface of the object so as to provide a substantially clean surface.

The step of moving the cleaning implement over the surface of the object is preferably in an upward and downward direction.

The object in the first and second aspect of this invention is preferably a window or glass pane.

In accordance with a third aspect of this invention, there is provided a cleaning implement for cleaning a surface of a window or glass pane, comprising: a handle member; a sickle shaped or substantially U shaped frame member further comprising a first elongate member and a second elongate member joined by a transverse cross member; and at least one elongate cleaning member mounted on and along the length of at least one surface of the first elongate member of the frame member, such that one end of the first cleaning means is in contact with or in close proximity to the transverse cross member; wherein the handle member is attached to the second elongate arm member so that, in use, a user is able to clean the outer surfaces of the window or glass pane whilst the user is within the region of an inner surface of the window or glass pane.

The cleaning implement may have two cleaning members attached to opposing surfaces of the first elongate arm member so that the user is able to clean both the outer and inner surfaces of the window or glass pane.

Brief Description of the Drawings

A preferred embodiment of this invention is described hereinafter, by way of example only, with reference to the drawings, in which:

FIG. 1 is a perspective view of a cleaning implement and a telescopic pole which is attachable to the cleaning implement in accordance with a first embodiment of this invention;

FIG. 2 is a plan or top view of the cleaning implement as shown in FIG.1 and a telescopic pole which is attachable to the cleaning implement;

FIG. 3 is a perspective view of a second embodiment of the cleaning implement and a telescopic pole which is attachable to the cleaning implement; and

FIG. 4 is a perspective view of the first embodiment of this invention in use on a glass window.

Detailed Description

A number of preferred embodiments of the cleaning implement and of the method of cleaning a surface of an object are described. In the following description of the preferred embodiments, numerous details are described in order to provide a more thorough description of these embodiments. It becomes apparent to one skilled in the art, however, that the invention may be practised without such details. In other instances, well-known details have not been described at length so as not to obscure the invention.

The advantages of the preferred embodiments of this invention are manifold. One advantage is that the outer surfaces of an object such as glass, boards, etc are able to be cleaned without the cleaner having to place themselves in the vicinity of the outer surface. This invention is particularly advantageous for high-rise buildings. Another advantage of the embodiment of this invention is that cleaners are more likely to buy and use this implement to clean windows if it is relatively simple, lightweight and safe.

Referring now to Figure 1, there is illustrated a first preferred embodiment of a cleaning implement 10 and a method for cleaning a surface of an object in accordance with this invention.

The cleaning implement 10 comprises a handle 12 and a frame member 14. The frame member 14 comprises a first elongate arm member 16 and a second elongate arm member 18. The first and second elongate arm members 16 and 18, respectively, are joined by a transverse cross member 20. As shown in Figure 1, the transverse cross member 20, the first elongate arm member 16 and the second elongate arm member 18 form a sickle shaped or a substantially U shaped frame member 14. The first elongate arm member 16 extends past the length of the second elongate arm member 18 as shown in the drawings.

The handle 12 comprises a shank 13 and a pair of arms 12a and 12b, respectively, the pair of arms 12a and 12b extending transversely to the shank 13 to form a U shaped handle for easy gripping of the cleaning implement 10 by the user. The U shaped handle also provides a means for storing the cleaning implement 10 on a rack or pin (not shown).

The handle 12 is attached to the second elongate arm member 18 by way of the handle 12 being slidably mounted on a pair of shanks 22 and 24 which extend transversely from an end 26 of the second elongate arm member 18 which is remote from the transverse cross member 20 of the frame 14.

The transverse cross member 20 joins the respective ends 28 of the first elongate member 16 and the second elongate member 18 as shown in FIG.1. The first elongate arm member 16 has a cleaning member 30 which is typically a sponge, wiper blade or combination thereof affixed along the length of the first elongate arm member 16 and is located on an inner surface of the sickle shaped or U shaped frame member 14 such that one end of the cleaning member 30 is in contact or in close proximity to the transverse cross member 20.

The first elongate arm member 16, the second elongate arm member 18 and the transverse cross member 20 each have a cross section which forms a channel 32. As seen in the accompanying drawings, the first elongate arm member 16 and the transverse cross member 20 each have a plurality of apertures 34 spaced along their

respective length thereof. The apertures 34 are located towards the bottom of the channel 32 of each of the first elongate arm member 16 and the transverse cross member 20. The provision of the apertures 34 allows suitable drainage of water and/or cleaning fluid from the channel 32 of the first elongate arm member 16 and the transverse cross member 20. Further the provision of apertures 34 allows relief from wind as well as fluid. A telescopic pole 40 is attachable to the shank 13 of the handle 12. The telescopic pole has a first end 42 which is matingly engageable with a recess 38 formed in the handle 12. The attachment of the telescopic pole 40 allows for cleaning of more remote surfaces.

Referring now to Figure 3, there is shown a second embodiment of this invention. The second embodiment of this invention is similar to the first embodiment of the invention and accordingly the same reference numerals will be used to denote the same or similar items as for the first embodiment of this invention. The cleaning implement 10 further comprises a second cleaning member 30a which is affixed to an opposing surface of the first elongate member 16.

Typically the preferred dimensions of the cleaning implement 10 are that the length of the first elongate arm member 16 is about 350mm, the second elongate member 18 is about 200mm and the length of the transverse cross member 20 is about 150mm. The length of the first elongate arm member 16 may be lengthened to accommodate larger windows and different dimensions. Also, the corners of the cleaning implement 10 are typically rounded or curved so as to reduce any marking on walls, window frames and the like. It is envisaged that other dimensions fall within the scope of this invention and that this is an example only.

In use, the cleaning implement 10 is inserted into a pail or bucket (not shown) which contains water and /or a cleaning solution such as detergent. The cleaning implement 10 is then positioned about an object (not shown) which is typically a window or glass pane or panel. The cleaning implement 10 is positioned about the object such that the first elongate arm member 16 is in the region or vicinity of the outer surface of the object such as a window pane or glass panel. Since the cleaning implement 10 has a sickle or substantially U shaped frame member 14, the handle 12 is able to located in the region or vicinity of the inner surface of the object thereby

allowing the cleaner to be safely within the confines of the building. The cleaner then moves the cleaning implement 10 in an upward and downward direction so that the cleaning member 30 cleans the outer surface of the window or glass pane. When the cleaner is using the second embodiment of this invention, the cleaning implement 10 comprises a cleaning member 30 which cleans the outer surface of the window whilst the second cleaning member 30a is able to clean the inner surface of the window. The advantage of using the second embodiment is that both the outer and inner surfaces of the window are cleaned by the cleaning implement 10. This, thus, obviates the need for the cleaner to be physically located outside the window.

If the window or object is remote from the cleaner then the telescopic pole 40 is attached to the cleaning implement 10. Upon securing the telescopic pole 40, the cleaner is able to clean more remote surfaces positioning the cleaning implement 10 about the object. Thereafter, the cleaning implement 10 is moved in typically an upward and downward directions.

A further advantage of this invention is that since the handle and the user are inside the building or window, in use, if the cleaning implement 10 is drapped then the cleaning implement will not fall off elevated positions and become a dangerous item when dropped from such elevated positions such as in high rise buildings.

In the foregoing description, a cleaning implement and a method are described. Only two preferred embodiments are described. However, it is apparent to one skilled in the art in view of the preferred embodiments that numerous changes and/or modifications can be made without departing from the scope and spirit of the invention. It is understood that the scope of the claims should not be restricted to the preferred embodiment(s) described above.

Claims

1. A cleaning implement for cleaning at least one surface of an object, comprising:

a handle member;

a frame member further comprising a first elongate member and a second elongate arm member joined by a transverse cross member; and

an elongate first cleaning means attached to the frame member; wherein

the first cleaning means is mounted on and along the length of the first elongate arm member, such that one end of the first cleaning means is in contact with or in close proximity to the transverse cross member; and

the handle member is attached to the second elongate arm member.

2. A cleaning implement according to claim 1, wherein the first elongate member and the transverse cross member have channel shaped cross-sectional profiles, with drainage holes spaced therealong at the base thereof.

3. A cleaning implement according to claim 1, wherein the first elongate member and the transverse cross member have a channel shaped cross sectional profile.

4. A cleaning implement according to claim 3, wherein the first elongate member and the transverse cross member have one or more apertures spaced respectively along the length of each of the first elongate member and the transverse cross member.

5. A cleaning implement according to claim 4, wherein the apertures are located towards the bottom of the channel shaped profile of each of the first elongate member and the transverse cross member.

6. A cleaning implement according to any one of the preceding claims, wherein the first elongate arm member and the second elongate arm member are in parallel relationship with each other.

7. A cleaning implement according to any one of the preceding claims,

wherein the first elongate arm member extends further in length than the second elongate arm member.

8. A cleaning implement according to any one of the preceding claims, wherein the first elongate arm member and the second elongate arm members are joined by the transverse cross member to form a sickle shaped or substantially U shaped frame member.

9. A cleaning implement according to any one of the preceding claims, wherein the handle member is a substantially U shaped handle and is attached towards an end of the second elongate arm member.

10. A cleaning implement according to any one of the preceding claims, wherein the handle member further comprises a removably attachable telescopic elongate member so as to allow cleaning of more remote surfaces.

11. A cleaning implement according to any one of the preceding claims, wherein the first cleaning means is a first cleaning member located on an inner surface of the first elongate arm member, facing the second elongate arm, so that it is capable of cleaning a surface of the object.

12. A cleaning implement according to claim 11, further comprising a second cleaning member located on an outer surface of the first elongate arm member, the outer surface being on the opposite side of the first elongate arm member from the inner surface.

13. A cleaning implement according to any one of the preceding claims, wherein the first cleaning means is a squeegee member, a wiper member, a roller, a brush or a combination thereof.

14. A method of cleaning at least one surface of an object, comprising the steps of:

inserting a cleaning implement as defined in any one of claims 1 to 12 into water and/or a cleaning fluid;

placing said cleaning implement about an edge of the object to be cleaned so that the handle is in the region of an inner surface of the object whilst the cleaning means is in the region of an outer surface of the object; and

moving said cleaning implement over the surface of the object so as to provide a substantially clean surface.

15. A method as according to claim 14, wherein the step of moving the cleaning implement over the surface of the object is in an upward and downward direction.

16. A method according to claims 14 or 15, wherein the object is a window or glass pane.

17. A cleaning implement for cleaning a surface of a window or glass pane, comprising:

a handle member;

a sickle shaped or substantially U shaped frame member further comprising a first elongate member and a second elongate member joined by a transverse cross member; and

at least one elongate cleaning member mounted on and along the length of at least one surface of the first elongate member of the frame member, such that one end of the first cleaning means is in contact with or in close proximity to the transverse cross member; wherein

the handle member is attached to the second elongate arm member so that, in use, a user is able to clean the outer surfaces of the window or glass pane whilst the user is within the region of an inner surface of the window or glass pane.

18. A cleaning implement according to claim 17, wherein there are two cleaning members attached to opposing surfaces of the first elongate arm member, so that, in use, a user is able to clean the outer and inner surfaces of the window or glass pane.