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(54) Hoisting device for mounting windows

(57) Device for mounting a roof light in an outer construction in a building. The device comprises a support unit (2,16) comprising an abutting surface (3) for abutting against an underside (26) and an abutting surface (4) for abutting against a foundation (28), a rotatable arm (7), which can be connected to the support unit (2, 16) in at least one first point, around which the arm can rotate, a hoist (11) comprising a wire (12) where the wire can be connected to a gripping device (13) and where the wire is led through at least one control device (10) arranged on the arm. The device comprises a connection element (14), which can be connected to at least one other point on the arm and at least a third point on the support unit, such that the slope on the arm can be adjusted. It is hereby possible for one man to lift and control the roof light in place. Furthermore, the device can be compressed and easily assembled and disassembled.

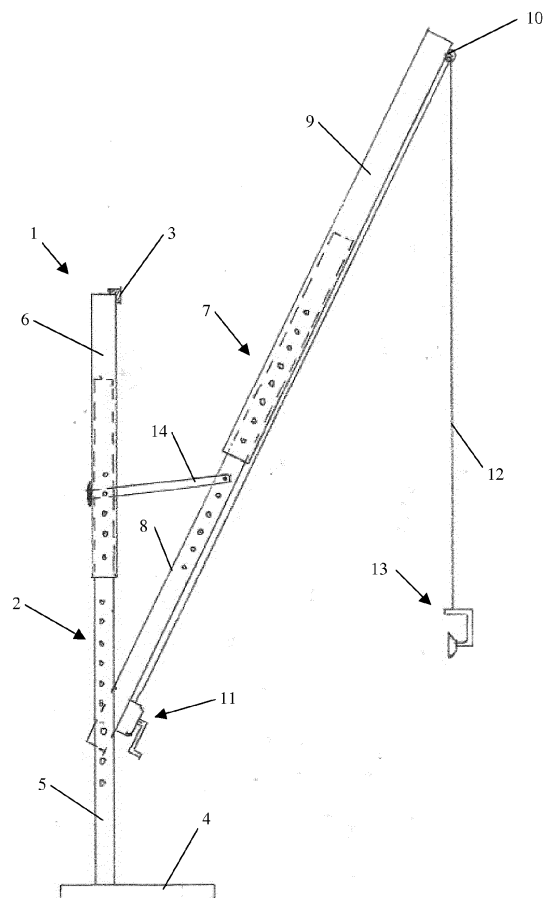


Fig. 1

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Description

The area of the invention

[0001] The present invention relates to a device for mounting elements such as a roof light in an exterior construction in a building, where the device comprises:

- a support unit comprising an abutting surface for installation against a lower side in the exterior construction and an abutting surface for installation against a foundation;
- a rotatable arm, which is shaped in such a way in one end, that it can be connected to the support unit in at least one first point, around which the arm can rotate;
- a hoist comprising a wire arranged in the device, where the wire in the free end is shaped such that it can be connected to a gripping device, and where the wire is led through at least one guiding device arranged on the arm when the hoist is in use.

[0002] The present invention also relates to the application of this device.

The background of the invention

[0003] In connection with mounting of roof lights in a sloping roof it is often necessary to put up a scaffold on the exterior side of the building and place a ladder or platform on the roof in order to mount the window in the roof construction. The frame is subsequently mounted in the roof construction, whereafter the window is lifted up and is mounted in the frame from the outer side. Alternatively, the frame and the window can be lifted in place and mounted from the inside. Due to the size of the window and its weight, it is necessary to be at least two people in order to handle and mount the window. This work is often difficult and often involves heavy lifts and inappropriate work positions for the individual person.

[0004] In order to avoid heavy lifts in connection with mounting a roof light, a guiding rail can be mounted a point above the window opening, on which there is placed a so-called crane crab or hoisting device, which can be used to lift the window up in place in the frame. JP 5138557 A describes a different hoisting device, which can be placed on the guiding rail. In order to use the hoisting device, it is necessary to initially raise a scaffold on each side or end wall of the building, whereafter the guiding rail and the hoisting device can be mounted. Alternatively, the guiding rail can be mounted on a frame, which is placed above the opening. The use of such hoisting devices contributes to complicate and raise the costs of the mounting process since it requires a lot of preparatory work before the window can be mounted.

[0005] CN 201753244 U describes a portable hoisting crane comprising a first telescopic rod with abutting surfaces in both ends, a crane arm connected, in a tiltable

way, to the telescopic rod and another telescopic rod connected to the crane arm and with an abutting surface in the bottom. The crane arm is connected to an electrically operated hoist, such that the hoisting crane can be operated by one person. The first telescopic rod is fixed to floor and ceiling where the other telescopic rod is used to adjust the angle of the crane arm. The hoisting crane has the drawback that the other telescopic rod complicates the mounting, which makes it difficult to move around the unit, which the hoisting crane holds. The crane arm comprises a guiding wheel mounted on a third rod, which is placed on the opposite side of the other telescopic rod, which limits the angle, in which the crane arm can be placed in relation to the first telescopic rod. This is inappropriate in connection with mounting roof lights, since the crane arm can not be telescopic.

The object of the invention

[0006] The object of the present invention is to create a device for mounting a window, which makes it possible for one person to lift and control the window in place.

[0007] The object of the present invention is to create a device, which can be applied indoors.

[0008] The object of the present invention is to create a device, which can easily be assembled and separated.

[0009] The object of the present invention is to create a device, which can easily be transported up and down stairs in a building.

Description of the invention

[0010] The present invention seeks to solve the problems of the known technique by creating a device comprising a connection element, which in one end is shaped such that it can be connected to at least one point on the arm, and is shaped in such a way in the other end that it can be connected to at least one point on the support unit.

[0011] A device is hereby created consisting of a hoisting device for mounting roof lights and other elements in a roof construction, where the mounting can be carried out from inside the room. The device is suited for mounting roof lights in sloping roof constructions, where it can be difficult to move around the opening as a result of the decreasing roof height. The design of the device makes it possible for one man to lift and guide the window in place by application of the hoist, since the support unit abuts on the underside of the roof construction and the arm is held up by the support unit via the connection element. It is hereby achieved that the user can move freely around the window in connection with the mounting since the hoisting device does not take up space below the opening. Furthermore, a device is created, which can easily be assembled and dismantled, since the arm, the support unit and the connection element can be connected to each other by application of removable mandrels / bolts. The mandrels can in the free end comprise a hole,

in which a pin can be placed such that the mandrels are hold in place when the device is in use. Furthermore, the subsequent mounting and modification of the roof covering, around the roof light, can be carried out from the inside through the opening.

[0012] According to one embodiment of the invention, the arm is a telescopic arm comprising a first arm part and another arm part where the other arm part can be telescopic in relation to the first arm part and where the arm parts can be locked in at least one position.

[0013] Hereby, the length of the arm and thereby the height of the hoisting device can be adjusted in relation to the placement of the opening above the foundation and the sloping of the opening such that the free end on the arm extends out of the opening. Hereby, the window can be hoisted up to a height, which enables that the window can be mounted in the frame. Typically, the window is mounted in the frame by hoisting up the window, such that the connection elements on the window pass the corresponding connection elements on the frame, whereafter the window is lowered, such that the connection elements go in mesh with each other and are subsequently locked. The arm parts can be shaped as a telescopic rod, where the one arm part can be moved in and out of another arm part. The arm parts can comprise a number of locking positions, where arm parts can be locked by leading a mandrel or bolt through a hole in the arm parts. The mandrel can be locked by leading a pin through a hole in the mandrel. The arm part can be locked by the fact that the one arm part comprises a spring-loaded pawl, which is led through the hole on the other arm part in that position. The pawl can be connected to a trigger mechanism, which leads the pawl out of the hole when the trigger mechanism is activated. Alternatively, the arm parts can be telescoped in relation to each other by application of an actuator connected to the arm parts, where the actuator can be electrically operated, manually driven, powered by a motor or by a screwing machine or a drilling machine.

[0014] According to an embodiment of the invention, the support unit is a telescopic support unit comprising a first support part and another support part, where the second support part can be telescoped in relation to the first support part and where the support parts can be locked in at least one position.

[0015] Hereby, the length of the support unit can be adjusted in relation to the distance between the foundation and the underside, such that the top of the support unit abuts on the underside. It is hereby achieved that the device can be placed near the opening, such that the arm extends out of the opening and can thereby be placed in the desired position in relation to the opening. Hereby, a device is created, which can be compressed to a compact unit, since both the support unit and the arm can be telescoped together. Hereby, the device can easily and simply be carried up and down the stairs in a building when the support unit and the arm are separated and compressed. The support unit can comprise one or

more telescope units comprising at least two telescope elements, where one of the telescope elements can be telescoped in relation to the other telescope element. The telescope elements in each telescope unit can be telescoped individually or synchronously. The support unit can be shaped as a telescopic rod or two U-shaped frames, where the legs on the frames can be telescoped in relation to each other. Alternatively, the support parts can be telescoped in relation to each other by application of an actuator connected to the arm parts, where the actuator can be electrically powered, manually operated, operated by a motor or by a screwing machine or a drilling machine.

[0016] According to an embodiment of the invention, the connection element comprises a number of first connection elements, which are shaped, such that they correspond to at least another connection element in the support unit, and which is arranged in the one end of the connection element.

[0017] Hereby, the connection element can be connected to the support unit in a number of different positions, since the connection element is connected to the arm in the other end. Hereby, the angle between the support unit and the arm and thereby the slope of the arm is adjusted at the different positions. The connection element can be connected to the arm and / or the support unit by application of a removable mandrel / bolt, which in the free end can comprise a hole, in which a pin can be placed such that the mandrel / bolt is hold in place when the device is in use. The first connection elements can be shaped as a number of notches arranged in the edge of the connection element, which corresponds to the other connection element. The other connection element can be shaped with a rod or a flat rectangular element or be a removable mandrel, bolt or pawl. Hereby, the slope on the arm can be adjusted by simply leading the connection elements away from connection and lock them in a new position. This can be carried out with one hand. The first connection elements can be shaped as a number of holes in the connection element and the second connection element can be a hole, where the mandrel or the pawl is led through one of the holes in order to lock the connection elements. The first connection elements can alternatively be shaped as a row of teeth, where the second connection element can be shaped as a lockable gripping device, which can be in mesh with the teeth. The gripping device can be locked in a specific position by application of a locking element.

[0018] According to an embodiment of the invention, the connection element comprises at least one third connection element, which corresponds to a number of fourth connection elements in the arm, and which are arranged in the other end of the connection element.

[0019] Hereby, the connection element can be connected to the arm in a number of different positions, since the connection element is connected to the support unit in the other end. Hereby, the angle between the support unit and the arm and thereby the slope of the arm can

be adjusted at the different positions. Both the arm and the support unit can comprise a number of second and fourth connection elements, where the connection element can be locked to one of these by application of a first and third mesh element on the connection element, such that the angle between the support unit and the arm and thereby the slope of the arm can be adjusted. The fourth mesh elements can be shaped as a number of holes, where the third connection element can be shaped as a hole, which is placed opposite one of the holes in the hole sequence. A removable mandrel, bolt or pawl can subsequently be led through the two holes such that the connection element is kept fastened in the desired position. The mandrel can be shaped such that it can be locked by application of a pin. The third connection element can be shaped as at least one spring-loaded pawl connected to a trigger mechanism, which can unlock the pawl after the pawl has formed mesh with a hole, when this is activated manually.

[0020] According to an embodiment of the invention, the distance between the second point and the third point is adjustable by application of the connection element.

[0021] Hereby, the connection element can be shaped as a buttress manufactured from metal, plastic or another suited material, where the distance can be adjusted by connecting the scaffold to the support unit and / or the arm in a number of different positions. At least one of the first, second, third or fourth connection elements can be shaped as an oblong hole in which the corresponding connection element can be locked in place in any position along the oblong hole, for example by application of a locking device or clamping device. The connection element can be shaped as a cable / rope, wire or band where the support part and / or the arm can be fastened in a number of different positions along the cable / rope, the wire or the band. The connection element can be shaped as a threaded spindle, hoist or other adjustable device, which is connected to an operation unit or operational unit. The adjustable device can be manually operated, electrically operated, operated by a motor or operated by screwing machine or drilling machine.

[0022] According to an embodiment of the invention, the arm comprises a fifth connection element, which corresponds to a number of sixth connection elements on the support unit.

[0023] Hereby, the arm can be connected to the support unit in different positions, such that than arm can be raised or lowered in relation to the support unit. Hereby, another possibility is achieved to adjust the arm's placement in relation to the opening. The fifth connection element can be shaped as a hole, and the sixth connection elements can be shaped as a row of holes. The hole in the arm can be placed opposite one of the holes in the row, whereafter a removable mandrel, bolt or pawl is led through the holes. The mandrel can, if necessary, be locked in place by application of a pin. The fifth connection element can be shaped as a notch at the end of the arm. The end of the arm is led down on the mandrel /

pawl, such that this comes in contact with the bottom of the notch when the arm and the support unit is assembled and let the opposite way when the arm and the support unit are separated. This can be carried out with one hand.

[0024] According to an embodiment of the invention, the support unit is in the bottom connected to a foot.

[0025] Hereby, a larger abutting surface can be achieved against the foundation, whereby the support unit stands more stable on the foundation. The foot can furthermore help to prevent that the device is pushed over when the arm is loaded. The foot can be a plate on which the support unit is mounted. The foot can comprise two or more legs, which stretch perpendicular out from the support unit and away from it. The legs can be shaped as removable legs, which can be put in and out of a female part or male part connected to the bottom of the support unit. Hereby, the legs can be removed or simply turned, such that they stretch in the same direction as the support unit when the device is separated. It is hereby achieved that the foot takes up less space whereby it is easier to transport the support unit when the device is disassembled.

[0026] According to an embodiment of the invention, the hoist is connected to the one end of the arm and the arm is shaped in such a way in the other end that it can be connected to the guiding device.

[0027] Hereby, the hoist and the wire can be transported together with the arm, where the wire can remain on the control device when the device is disassembled. When the device is separated, it is only necessary to release the connection element in the one end and release the arm from the support unit. Hereby, the device can be disassembled into two main components, which easily and simply can be transported up and down the stairs in a building. The two main components can with advantage be fastened on the back such that the user at the same time can transport the window up the stairs. The hoist can be shaped as a wire hoist with handle, where the user can hoist the window by application of the handle.

[0028] According to an embodiment of the invention, the hoist is connected to an operation unit or an operational unit.

[0029] Hereby, the hoist can be designed as an electrically operated hoist, which can be controlled by application of a control unit, which is connected to the operation unit via a threaded or wireless connection. Hereby, the user can operate the hoist when he stands at the window, which can ease the mounting process. Alternatively, the hoist can be shaped as a manually operated hoist, a hoist with motor or a hoist, which is operated by a screwing machine or drilling machine.

[0030] According to an embodiment of the invention, the device is used for mounting a roof light in a roof construction.

[0031] Hereby, the device can with advantage be used for mounting a roof light in a sloping roof construction, since the roof light can be lifted up and controlled in place

by one person in connection with its mounting. Hereby, work hours can be saved and the mounting process can become less costly. Furthermore, it is with the device possible to avoid heavy lifts and difficult working postures since the mounting is carried out from the inside and the person simply needs to control the window in place while the device carries out the lift.

Drawing description

[0032] In the following, the invention will be described with reference to the drawings, in which:

Fig. 1 shows a first embodiment of the device seen from the side;

Fig. 2 shows a second embodiment of the device seen in a perspective from the back; and

Fig. 3 shows the device placed near an opening to a roof light.

[0033] In the description of the drawings, identical or similar elements will be described with the same reference name in the different figures. An explanation of all details in relation to each individual figure / embodiment will therefore not be given.

Detailed description of the invention

[0034] Fig. 1 shows a first embodiment of the device 1 consisting of a hoisting device seen from the side. The device 1 can comprise a support unit 2 consisting of a crane leg, which in one end can comprise an abutting surface 3 for abutting against an underside of an exterior construction in a building. The abutting surface 3 can be shaped from an elastic deformable material or as an L-shaped plate, which can be placed on the top and / or partially down a side on the support unit 2. Alternatively, the abutting surface 3 can be shaped as a tiltable element mounted on the top of the support unit 2.

[0035] The support unit 2 can in the other end comprise an abutting surface 4 consisting of a foot for abutting against a foundation. The foot 4 can be shaped with a plate on which the support unit 2 is mounted. The foot 3 can be shaped as two or more legs, as shown in fig. 1, where the support unit 2 can be mounted to that end of the legs or a placement a distance in on the legs.

[0036] The support unit 2 can be shaped as a telescopic support unit comprising at least a first support part 5 and another support part 6. The support parts 5, 6 can be shaped such that the support part 6 can be telescoped (in and out) in relation to the support part 5 whereby the length of the support unit 2 can be adjusted. The support unit 2 can comprise one or more telescope units (not shown) comprising at least a first telescope element and another telescope element, where the other telescope element can be telescopic in relation to the first telescope element.

[0037] The support unit 2 can comprise a locking de-

vice (not shown) such that the support parts 5, 6 can be locked in a number of different positions. The locking device can be shaped as a number of holes on the support part 5 and a hole on the support part 6, or the other way around, where the hole on the support part 6 can be placed opposite one of the holes on the support part 5. A mandrel / bolt (not shown) or pawl can subsequently be led through the two holes such that the support part 5, 6 is locked together. The mandrel / pawl and the hole on the support part 6 can be replaced by a spring-loaded pawl (not shown), which is pushed into one of the holes in the row by application of a spring, when the pawl is opposite one of the holes. The pawl can be connected to a trigger mechanism, which leads the pawl out of the hole on the support part 5 when the trigger mechanism is activated. When the trigger mechanism is released, the pawl is again pushed towards the holes in the row. The spring-loaded pawl can be placed on the support part 5 while the row of holes can be placed on the support part 6 or the reverse.

[0038] An arm 7 consisting of a crane arm can be connected to the support unit 2 for example to the support unit 5 in a number of different positions. The support unit 2 can comprise a number of connection elements, which correspond to a connection element on the arm 7 or the reverse. The connection elements on the support unit 2 can be shaped as a number of holes and the connection element on the arm 7 can be shaped as a hole where the hole in the arm 7 is placed opposite one of the holes in the support unit 2. A mandrel / bolt (not shown) or pawl is led through the hole on the arm 7 and through one of the holes on the support unit 2. The mandrel or the pawl can be shaped such that it can be locked when it is led through the holes, for example with a locking pin. Alternatively, the part of the pawl, which stretches away from the support unit 2, can be folded such that the pawl can be "locked" in place around the support unit 2.

[0039] The arm 7 can be shaped as a telescopic arm comprising at least one first arm part 8 and another arm part 9. The arm parts 8, 9 can be shaped such that the arm part 9 can be telescoped (in and out) in relation to the arm part 8, whereby the length of the arm 7 can be adjusted.

[0040] The arm 7 can comprise a locking device (not shown) such that the arm parts 8, 9 can be locked in a number of different positions. The locking device can be shaped as a number of holes on the arm part 8 and a hole on the arm part 9 or the reverse, where the hole on the arm part 9 is placed opposite one of the holes on the arm part 8. A mandrel / bolt (not shown) or pawl can subsequently be led through the holes such that the arm parts 8, 9 are locked. The mandrel / pawl and the hole on the arm part 9 can be replaced by a spring-loaded pawl (not shown), which is pushed into one of the holes in the row by application of a spring when the pawl is opposite one of the holes. The pawl can be connected to a release mechanism, which leads the pawl out of the hole in the row on the arm 8 when the release mechanism

is activated. When the release mechanism is let go, the pawl is again pushed in towards the holes in the row. The spring-loaded pawl can be placed on the arm part 8 while the row of holes can be placed on the arm part 9 or the reverse.

[0041] The arm 7 can in its longitudinal direction be shaped such that it can be connected to at least one control device 19. A control device 10 can be connected to the free end of the arm 7 via a mandrel / bolt, pawl or hook, which is led through a hole in the arm 7. The control device 10 can instead be connected directly to the free end of the arm 7. One or more control devices 10 can be arranged along the length of the arm 7.

[0042] A hoist 11 comprising a wire 12 can be connected to the support unit 2 or the arm 7. The hoist 11 can be placed on the support unit 2 between the foot 4 and the point where the arm 7 is connected to the support unit 2. The hoist 11 can instead be placed on the arm 7 near the end, which is connected to the support unit 2. The wire 12 can in the free end be shaped such that it can be connected to a gripping device 13. The gripping device 13 can be shaped as a suction disc device or another device shaped to grip a window, for example a roof light. The wire 12 is led through the control devices 10, when the hoist 11 is in use, such that the free end of the wire 12 faces down towards the foot, as shown in fig. 1. The control devices 10 can be shaped as a wooden block (pulley block) comprising at least one block on which the wire 12 is placed. The hoist 11 can comprise a manually operated handle, an operation unit or an operational unit connected to the hoist 11. The operation unit can be connected to a control unit consisting of a remote via a wireless or threaded connection.

[0043] A connection element 14 consisting of a scaffold can be connected to the arm 7 and the support unit 2 in a number of different points. The connection element 14 can be connected to the arm 7 between the free end of the arm 7 and the end, which is connected to the support unit 2 and be connected to the support unit 2 between the top of the support unit 2 and the point where the arm 7 is connected to the support unit 2. The connection element 14 can in one end comprise a connection element, which corresponds to a number of connection elements on the arm 7 or the reverse. The connection elements can be shaped as holes, where the hole in the connection element 14 is placed opposite one of the holes in the hole row on the arm 7. A mandrel / bolt or pawl is led through the two holes such that the connection element 14 is locked in a specific point. Alternatively, the mesh element on the connection element 14 can be connected to the locking device, which locks the arm parts 8, 9 together, whereby the connection element 14 and the arm parts 8, 9 can be locked in one point, which is the same.

[0044] The connection element 14 can in the other end comprise a number of other connection elements, which corresponds to a connection element on the support unit 2 or the reverse. These connection elements on the connection element 14 can be shaped as a number of notch-

es arranged in the edge of the connection element 14, which can form a mesh with a removable mandrel, which consists the connection element on the support unit 2. The notches can instead be a number of holes, where the mandrel is led through one of the holes. Alternatively, the mesh elements on the connection element 14 can be connected to the locking device, for example the mandrel, which locks the support parts 5, 6 together, whereby the connection element 14 and the support parts 5, 6 can be locked in the same point.

[0045] Fig. 2 shows another embodiment of the device seen in perspective from the back, where the device comprises a different foot 15 and a different support unit 16.

[0046] The foot 15 can comprise a base 17 connected to the bottom of the support unit 16 and a number of removable legs 18, 19, which can be connected to the base 17. The base 17 can be shaped as a female part, and the legs 18, 19 can be shaped as a number of corresponding male parts or the reverse. The legs 18, 19 can have an L-shaped or T-shaped design, where the one free end can form a mesh with the base 17. When the device is in use, the legs 18, 19 can be placed in the base 17, such that they stretch from, and perpendicularly from, the support unit 16. When the device is not in use, the legs 18, 19 can be placed, such that they stretch up along the support unit 16. The legs 18, 19 can be locked in the base 17 by application of a pin or peg with head (not shown), which is let into at least one hole on the base 17 and on the legs 18, 19.

[0047] The support unit 16 can comprise at least two telescopic units, which comprise at least a first part 20, 22 and another part 21, 23, where the other part 21, 23 can be telescoped (in and out) in relation to the first part 20, 22, whereby the length of the support unit 16 can be adjusted. The two first parts 20, 22 can be connected to the foot 15. The two other parts 21, 23 can be connected in the top such that they form a U-shaped part. The parts 20, 21, 22, 23 together form a telescopic frame, where the arm 7 can be connected to the frame between the parts 20, 22.

[0048] Fig. 3 shows the device 1 placed near an opening 24 to an element in a roof construction consisting of a roof light 25. The device 1 is placed near the opening 24, such that the abutting surface 3 abuts on the underside 26, for example a ceiling, of the roof construction 27, and the foot 4, 15 stands firmly on the foundation 28. The support unit 2, 16 is telescoped in the length such that the arm 7 extends out of the opening 24 and the abutting surface 3 abuts on the underside 26. The arm 7 is telescoped in its length such that the roof light 25 can be hoisted / lifted sufficiently high up, such that the roof light 25 can be mounted in the frame 29 and the connection element 30 on the roof light can be lifted since the similar connection element 31 on the frame 29. The connection element 14 is adjusted in relation to the support unit 2, 16 and / or the arm 7 such that the free end of the arm 7 is placed in the desired position, for example above the middle of the opening 24. The hoist 11 can in

connection with adjustment of the device 1 either be operated via the handle on the hoist 11 or via the control unit.

[0049] Before mounting of the roof light, the gripping device 13 is fastened on the roof light 25, whereafter the roof light 25 is lifted up, such that it can be guided in place and mounted in the frame 29. Hereafter, the gripping device 13 and the wire 12 is released and the gripping device is for instance fastened to the arm 7. Subsequently, the arm 7 is telescoped together and is disassembled. Alternatively, the arm 7 can be telescoped together after disassembly. Hereafter, the support unit 2, 16 is telescoped together and the legs 18, 19 are turned up along the support unit 2, 16.

Claims

1. A device for mounting elements such as a roof light (25) in an exterior construction (27) in a building, where the device (1) comprises:

- a support unit (2,16) comprising an abutting surface (3) for installation against a lower side (26) in the exterior construction (27) and an abutting surface (4) for installation against a foundation (28);

- a rotatable arm (7), which is shaped in such a way in one end, that it can be connected to the support unit (2,16) in at least one first point, around which the arm (7) can rotate;

- a hoist (11) comprising a wire (12) arranged in the device, where the wire (12) in the free end is shaped such that it can be connected to a gripping device (13), and where the wire (12) is led through at least one guiding device (10) arranged on the arm (7) when the hoist (11) is in use,

characterized in that

- the device comprises a scaffold (14) which in one end is shaped such that it can be connected to at least one other point on the arm (7), and is shaped in such a way in the other end that it can be connected to at least a third point on the support unit (2, 16).

2. A device according to claim 1, **characterized in that** the arm (7) is a telescopic arm comprising a first arm part (8) and another arm part (9) where the other arm part (9) can be telescopic in relation to the first arm part (8) and where the arm parts (8, 9) can be locked in at least one position.

3. a device according to claim 1 or 2 **characterized in that** the support unit (2) is a telescopic support unit comprising a first support part (5) and another support part (6) where the other support part (6) can be telescopic in relation to the first support part (5) and where the support parts (5, 6) can be locked in at

least one position.

4. A device according to any of claims 1 to 3, **characterized in that** the connection element (14) comprises a number of first connection elements, which are shaped such that they correspond to at least another connection element in the support unit (2, 16), and which is arranged in the one end of the connection element (14).

5. A device according to claim 4, **characterized in that** the connection element (14) comprises at least a third connection element, which is shaped such that it corresponds to a number of fourth connection elements in the arm (7), and which are arranged in the other end of the connection element (14).

6. A device according to any of claims 1 to 5 **characterized in that** the distance between the other point and the third point is adjustable by application of the connection element (14).

7. A device according to any of claims 1 to 6, **characterized in that** the arm (7) comprises a fifth connection element, which is shaped such that it corresponds to a number of sixth connection elements on the support unit (2, 16).

8. A device according to any of the claims 1 to 7 **characterized in that** the support unit in the bottom is connected to a foot (4, 15).

9. A device according to any of claims 1 to 8 **characterized in that** the hoist (11) is connected to one end of the arm (7) and that the arm in the other end is shaped such that it can be connected to the control device (10).

10. A device according to claim 8 **characterized in that** the hoist (11) is connected to an operation unit or operational unit.

11. Application of a device according to any of claims 1 to 10 for mounting a roof light (25) in a roof construction (27).

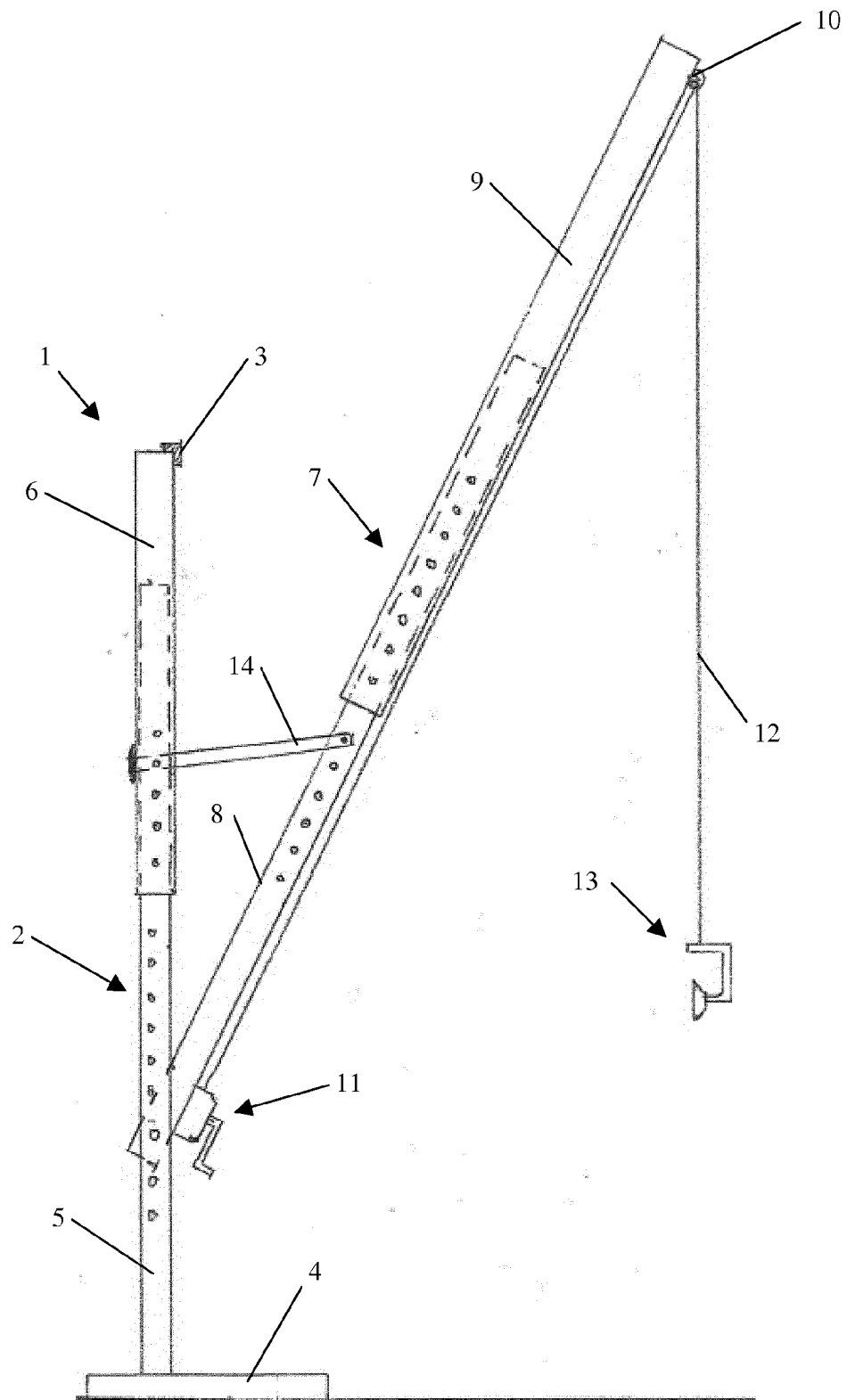


Fig. 1

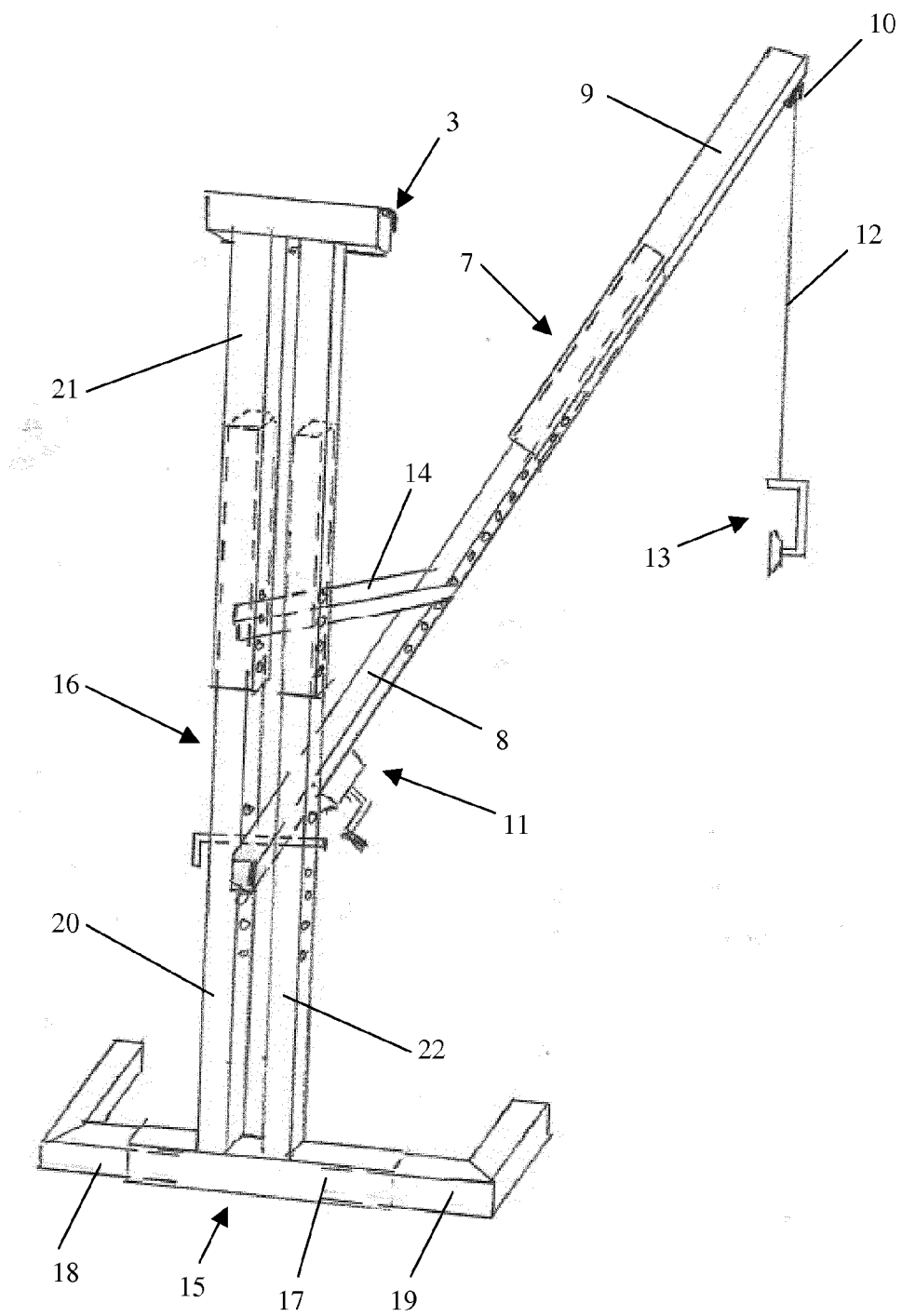


Fig. 2

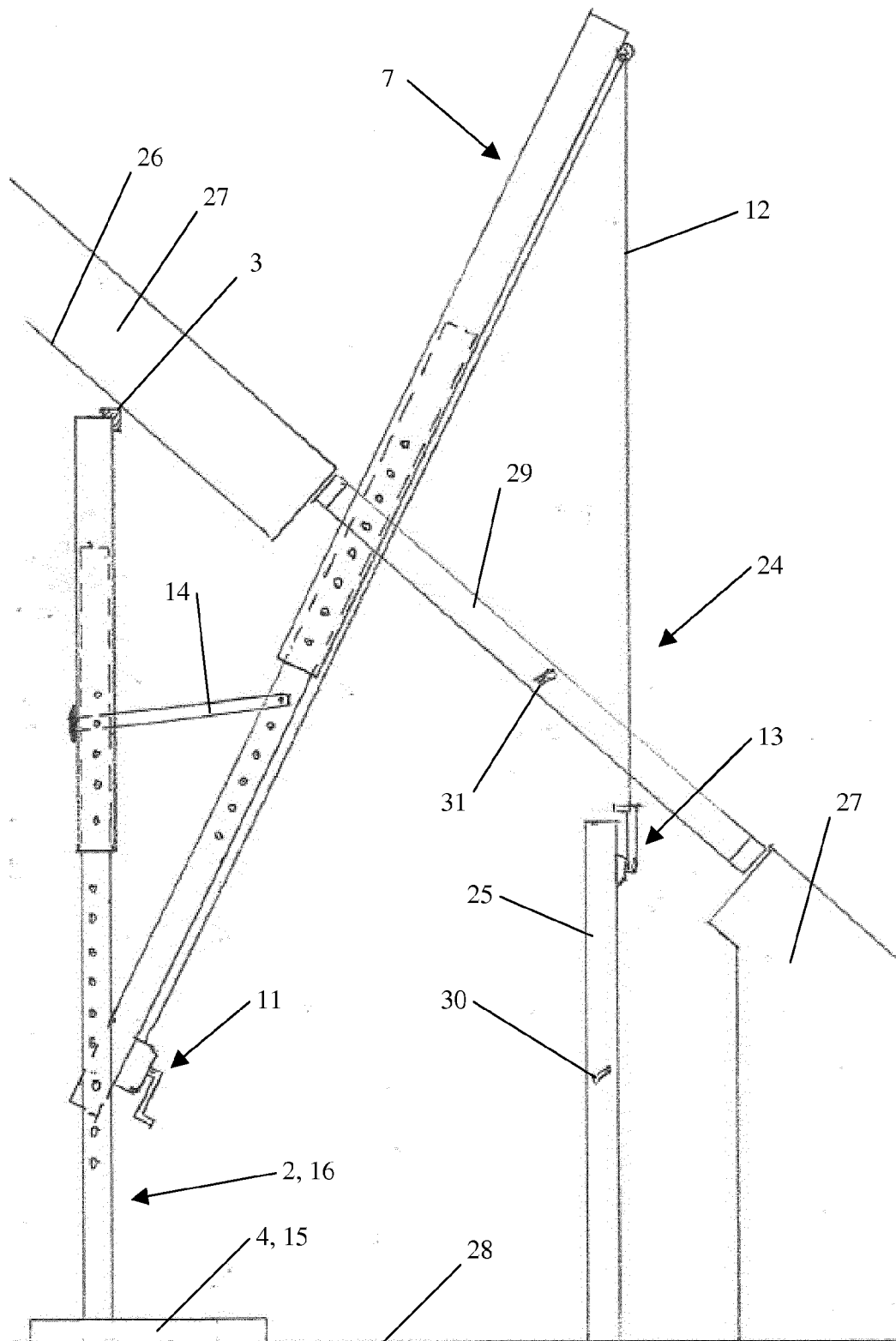


Fig. 3



EUROPEAN SEARCH REPORT

Application Number
EP 13 17 5533

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Place of search The Hague		Date of completion of the search 21 November 2013	Examiner Verheul, Omiros
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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