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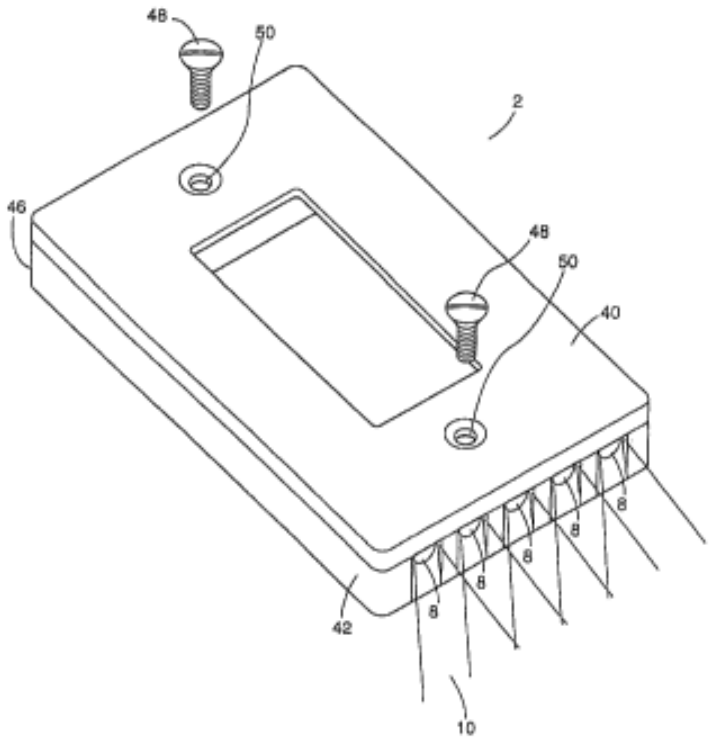
Patent Summary

(12) Patent:	(11) **CA 2297539**
(54) English Title:	FRAME ASSEMBLY AND LIGHT FOR AN ELECTRICAL WALL CONDUIT
(54) French Title:	ENSEMBLE DE CADRE ET LUMIERE POUR UN CONDUIT ELECTRIQUE MURAL

Representative Drawing



Abstracts

Third-party disclaimer

English Abstract

A frame assembly for covering a wall conduit having a connection to electrical power
and a component associated with the wall conduit requiring access through the frame
assembly is provided. The frame assembly comprises a light powered by an electrical
circuit connected to the connection and a frame for housing the light. The frame has an
opening allowing access to the component through the frame, a side and an aperture in
the side allowing the light to illuminate a space outside the frame assembly through the
aperture.

Patent Details

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PDF Readers.

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1. A frame assembly for covering a wall conduit having a connection to electrical power and a component associated with the wall conduit requiring access through the frame assembly, the frame assembly comprising:

a light powered by an electrical circuit connected to the connection; and

a frame for housing the light, the frame having an opening allowing access to the component through the frame, a side and an aperture in the side allowing the light to illuminate a space outside the frame assembly through the aperture,

wherein the component is a vacuum wall valve,

wherein the electrical circuit provides power to the light during a portion of the AC signal having a first polarity and allows activation of a vacuum system on a second portion of the AC signal having a second polarity.

2. A frame assembly for covering a wall conduit having a connection to electrical power and a component associated with the wall conduit requiring access through the frame assembly, the frame assembly comprising:

a light powered by an electrical circuit connected to the connection; and

a frame for housing the light, the frame having an opening allowing access to the

component through the frame, a side and an aperture in the side allowing the light to illuminate a space outside the frame assembly through the aperture,

wherein the component is a vacuum wall valve, and

wherein the electrical circuit further controls activation of the vacuum system and provides power to the light, and

wherein the light and an electrical connection to the wall conduit are connected in series to the electrical circuit.

3. A frame assembly and light for covering a wall conduit in a wall, the wall conduit having components requiring access outside the frame assembly, the frame assembly comprising:

a light;

an electrical circuit providing electrical energy to the light from a power source;

a rectangular frame through which the component is accessible, the frame housing the electrical circuit, the frame housing the light and having sides with a depth sufficient to house the light, and the frame having an aperature in at least one of

the sides allowing the light to illuminate a space outside the frame assembly through the aperature; and

a cover plate separate from the frame and for covering the frame and for providing access to the components of the wall conduit.

4. The frame assembly of claim 3 wherein the component is an electrical switch.

5. An assembly for use in association with a component having a connection to electrical power and requiring access during use to a portion of the component, and a separate rectangular cover for the component, the assembly comprising:

a rectangular frame through which the component is accessible, the rectangular frame having substantially the same external rectangular dimensions as the cover; and

a light;

wherein the rectangular frame has sides that have sufficient depth to house the light,

wherein at least one of the sides has an aperture for allowing the light to illuminate outside the frame through the aperture,

wherein access through the frame to the component is dimensioned to be covered by the rectangular cover, except for that portion of the component requiring access during use.

6. The assembly of claim 5, wherein the component is an electrical outlet with an electrical connection, and the electrical connection is that part of the electrical outlet that requires access during use.

7. The assembly of claim 5, wherein the component is an electrical switch with an electrical actuator, and the electrical actuator is that part of the electrical switch that requires access during use.

8. The assembly of claim 5, further comprising spacers extending from the frame for holding the component in a desired position relative to the cover.

9. The assembly of claim 5, further comprising:

a substantially flat base plate extending inwardly from the rectangular frame, the component being accessible through the rectangular frame while connected to the connection, and

spacers extending from the base plate for holding the component with the base

plate between the component and the conduit in a desired position relative to the cover.

10. The assembly of claim 8, wherein the spacers are hollow and the hollow is positioned such that fastening means may be inserted through the component and the hollow.

11. The assembly of claim 5, wherein the rectangular frame is dimensioned to cover a wall conduit for an electrical box.

12. The assembly of claim 6, wherein the rectangular frame is dimensioned to cover a wall conduit for an electrical box.

13. The assembly of claim 5, wherein the frame further houses a power circuit for powering the one or more lights from the electrical connection.

14. The assembly of claim 5, wherein the frame further houses a light sensor, the frame having sensor apertures through which the sensor senses ambient light external to the frame.

15. The assembly of claim 14, wherein the frame further houses a power circuit that powers the lights when the sensor senses that ambient light external to the frame is low.

16. The assembly of claim 15, wherein an additional light is housed within the frame and the frame has a corresponding aperture such that the additional light increases the ambient light received by the sensor.

17. The assembly of claim 5, wherein the light comprises a lighting emitting diode (LED).

18. The assembly of claim 17, wherein the LED is attached to a printed circuit board and the LED extends into the side aperture.

19. An assembly for use in association with a component having a connection to electrical power and requiring access during use to a portion of the component, the assembly comprising:

a rectangular frame through which the component is accessible; and

a light;

wherein the rectangular frame houses the light and has four sides, including a side that has sufficient depth to house the light, and

wherein the side has an aperture for allowing the light to illuminate outside the frame through the aperture, and

wherein the light comprises a lighting emitting diode (LED), and

wherein the LED is a plurality of LEDs and the side aperture is a series of side apertures, one aperture for each LED, and each LED extends into its respective side aperture.

20. The assembly of claim 19, wherein all of the LEDs are part of a light circuit and extend from a single printed circuit board that is powered by a separate power circuit.

21. The assembly of claim 14, wherein the sensor aperture is in a sensor side of the rectangular frame opposite the side of the rectangular frame having the light.

22. The assembly of claim 15, further comprises isolation means between the power circuit and the component in the event of power circuit failure.

23. The assembly of claim 22, wherein the frame houses a routing channel for wires connecting the power circuit and the lighting circuit such that the wires are physically separated from the component.

24. An assembly for use in association with a component having a connection to electrical power and requiring access during use to a portion of the component, and a separate rectangular cover for the component, the assembly comprising:

a rectangular frame through which the component is accessible, the rectangular

frame having substantially the same external rectangular dimensions as the cover; and

a light;

wherein the rectangular frame has a depth sufficient to house the light,

wherein the frame has an aperture for allowing the light to illuminate outside the frame through the aperture,

wherein the cover mounts on top of the frame, and the component mounts inside the frame to the assembly at the same depth as the cover mounts to the frame.

25. An assembly for use in association with a component having a connection to electrical power and requiring access during use to a portion of the component, and a separate rectangular cover for the component, the assembly comprising:

a rectangular frame through which the component is accessible, the rectangular frame having substantially the same external rectangular dimensions as the cover;

spacer means inside the frame; and

a light;

wherein the rectangular frame has a depth sufficient to house the light,

wherein the frame has an aperture for allowing the light to illuminate outside the frame through the aperture,

wherein the cover mounts on top of the frame, and the spacer means are flush with the frame where the cover mounts, and

wherein the component mounts on top of the spacer means.

26. An assembly for use in association with a component having a connection to electrical power and requiring access during use to a portion of the component, and a separate rectangular cover for the component, the assembly comprising:

a rectangular frame through which the component is accessible, the rectangular frame having substantially the same external rectangular dimensions as the cover;

spacer means inside the frame for holding the component in a desired position relative to the cover; and

a light;

wherein the rectangular frame has a depth sufficient to house the light,

wherein the frame has an aperture for allowing the light to illuminate outside the frame through the aperture, and

wherein the cover mounts on top of the frame.

27. The assembly of claim 26, wherein the component is a wall outlet with electrical connections.

28. The assembly of claim 27, wherein the desired position places the connections substantially flush with a front surface of the cover.

29. The assembly of claim 26, wherein the component is an electrical switch.