DOOR HINGE

The present invention relates to door hinges. The invention is particularly applicable to throw hinges for large or heavy doors.

A wide variety of throw hinges is available for doors fitted to cabinets, cupboards, wardrobes, and the like. One commonly used type is the European hinge, or "cup hinge", which comprises two parts: a cup part, which is attached to the interior of the cabinet side wall; and a mounting plate, which includes a pivot arm connected to the cup part and is attached to the inside of the cabinet door.

When the door is closed, the cup part and the mounting plate are at right angles to each other, and the pivot arm is received in the cup part. In the closed configuration, the hinge is hidden from view, thereby enhancing the aesthetic appearance of the cabinet. As the door is opened, the pivot arm moves out from the cup part to throw the door outwardly away from the cabinet. In the fully open configuration, the cup part and the mounting plate are inline with each other. That is, the opened door has been rotated outwardly through 90 degrees, thereby providing access to the inside of the cabinet.

However, the European hinge is not suitable for use with large or heavy doors because the narrow section of the pivot arm is subjected to great stress under high vertical loads, leading to distortion of the hinge which causes misalignment of the door with the cabinet and difficultly in opening and closing the door. If the loads are high enough then structural failure of the hinge may occur.

~~It is an aim~~ Embodiments of the present invention seek to provide an improved hinge for supporting large or heavy doors.

According to a first aspect of the present invention there is provided a door hinge, comprising: a body part for attaching to a door jamb, the body part including a jamb face; a door part for attaching to a door, the door part including a door face; and a pivot coupling which pivotally connects the door

part to the body part about a displaceable pivot axis, wherein the door face faces in a first direction towards the jamb face when the hinge is in a closed configuration and in a second direction when the hinge is in an open configuration.

An arrangement wherein the door face faces towards the, jamb face when the hinge is in a closed configuration means that the body part of the hinge can be fitted to the front, rather than to the side, of the carcass of the cabinet (or cupboard, wardrobe, or the like). This ~~is~~may be particularly advantageous because the hinge ~~does~~ may not intrude into the interior space of the cabinet, thereby providing improved storage capacity and access.

According to a second aspect of the present invention, there is provided a door, comprising: a door hinge according to the first aspect.

According to a ~~second~~ third aspect of the present invention there is provided a door hinge, comprising: a body part for attaching to a door jamb, the body part including a jamb face; a door part for attaching to a door; and a pivot coupling which pivotally connects the door part to the body part about a displaceable pivot axis, wherein the displaceable pivot axis is displaced from a first location when the hinge is in a closed configuration to a second location along and away from the jamb face when the hinge is in an open configuration.

Movement of the displaceable pivot axis along and away from the jamb face may advantageously enable~~s~~ a thick door, to which the hinge may be attached, to be thrown outwardly of a cabinet door jamb, from a closed position to an open position.

According to a fourth aspect of the present invention, there is provided a door, comprising: a door hinge according to the third aspect.

Embodiments of the present invention will now be described by way of example, with reference to the accompanying figures in which:

Figure 1a shows a perspective view of two door hinges according to the invention, wherein the hinges are installed in respective doors and door jambs of a cabinet.

Figure 1b shows a plan view of the installed hinges of Figure 1a, wherein the hinges are in a closed configuration.

38. A door hinge according to any of claims 30 to 37 when dependent on claim 30, wherein the pivot coupling further comprises:
a second arm which is coupled to the body part about a. second fixed pivot axis and to the door part about the second displaceable pivot axis.

39. A door hinge according to claim 38, wherein the second fixed pivot axis of the second arm is located within the body part.

40. A door hinge according to claim 38 or 39, wherein the first arm includes a recess for partially receiving the second arm when the hinge is in the open configuration.

41. A door hinge according to any of claims 23 to 40, wherein the door part includes a channel for receiving the pivot coupling when the hinge is in the closed configuration.

42. A door hinge according to any of claims 23 to 41, formed of metal or plastics.

43. A door hinge according to any of claims 23 to 42, wherein the hinge is configured to be mortised or concealed in a door/door jamb.

44. A door, comprising:
a door hinge according to any of claims 23 to 43.

~~45. A door hinge, constructed and arranged substantially as herein described with reference to the accompanying drawings.~~