

2013 PAPER P3

SAMPLE ANSWER 2

This script is an example of an answer to the above examination question paper. The answer received a pass mark. It is a transcript of the handwritten answer provided by the candidate, with minimal re-formatting to improve readability.

We hope you will find it helpful when preparing for this examination, but please note it is not a model answer. You may also find the Examiners' Reports and the Final Examination Guidance Documents useful too. You will find these in the Examination Support area of the PEB website.

Lid for a Box

The present invention relates to a lid for a box, in particular a lid for a back box. Once the basic structure of a building is in place, the electrician fits conduits for wiring and back boxes for receiving the electrical sockets and switches. The plasterer then plasters the walls and finish the plaster just proud of the front edge of the back boxes. Often, the plasterer gets plaster in the back boxes because it is hard to form a clean edge at the front of the back box. This plaster must thus be removed from the back box before the electrician can get to his wires after the plasterer has finished. The plaster can be damaged in this process and this process also wastes time.

Previously, this problem has been confronted by using a Protectabox 3 as shown in Fig 1. This temporary plastic shield protects the electrical back box from ingress of building material as its frame member 1 provides an extension to the side wall or walls of the box and its resilient flanges 2 attempt to retain the frame member in the box. During use, the back box is mounted on the wall, the shield attached, the wall is plastered and finally the shield is removed. The Protectabox is made of plastic. The Protectabox has been found to fall out of the back box too easily in use. Furthermore, it is bulky and therefore difficult to transport.

It is an object of the present invention to provide an improved or alternative protective device for a box, particularly a back box, that overcomes one or more of the problems mentioned above.

In a first aspect of the invention, there is provided a lid for a box as defined by claim 1. Providing a stabiliser which is co-operable with the shield such that the flexible frame member can be biased outwards is advantageous because, firstly, the frame member can easily be pushed into the box, or back box, by squeezing the frame member (because it is flexible) such that the member is insertable into the mouth of the box, and secondly, in use the stabiliser pushes the flexible frame member against the wall or walls of the back box to hold the lid in place and stop the frame member from caving in when the plasterer plasters up against them, and the flexible frame member is reinforced ie stronger. The flexible nature of the frame member also means that the shield is more easily transported, for example, it can be folded, preferably folded flat, before use. Preferably, the lid is initially separate from the stabiliser.

Preferably, the shield is made of cardboard and/or plastic. This enables the shield to be folded flat, eg across a diagonal if the shield is a rectangular or square shape.

Preferably the shield comprises one or more tabs through which a screw may be inserted for attaching the shield to the box. This is useful when the box, eg a back box, is out of shape after being fitted and means the shield will remain in place to protect said box.

Preferably the said box is a back box.

Preferably the shield further comprises legs extending axially from the flexible frame member. Such legs provide a better anchor in said box, and may be adjusted according to the depth of the box.

Preferably, the box comprises entry holes for wiring and the legs straddle these holes, such that the shield is easily inserted into the box around said wires.

Preferably the lid has the features of claim 7. Preferably the flexible frame member comprises a double layer of cardboard to provide increased strength and to prevent the shield from falling completely into the box such that the flexible frame member no longer forms an extension to the walls of the box.

Preferably, the stabiliser comprises holes for pulling the stabiliser out of the shield, for easy grippage and removal once, for eg, the plastering has been done and the electrician wishes to access the wiring.

Preferably the stabiliser comprises flanges which straddle legs in the said box.

In a second aspect of the invention, there is provided a shield comprising a flexible frame member for use in the lid as described herein.

In a third aspect of the invention, there is provided a stabiliser for use in the lid as described herein.

The invention will now be further described, by example only and with reference to the accompanying Figures 2 to 5.

Fig 2 shows an exploded view of a lid 10 comprising a shield 11 and a stabiliser 12 before the shield 11 is inserted into a back box 13. The back box 13 has entry holes 14 for wiring and lugs 15 for screws to fit the socket. The shield 11 comprises a flexible frame member 16 and legs 17. The shield 11 can be squeezed and then easily inserted into the mouth of the back box 13, as shown in Figure 3. The stabiliser 12 can then be inserted into the shield 11 to bias the frame member 16 against the walls of the back box 13, as shown in Figure 4. The stabiliser has holes 18 for easy removal of the stabiliser when needed.

Figure 5 shows the lid 10 on a back box 13 in a wall with a conduit 19 with wires 20. Plaster 21 has been applied up to the edge of the flexible frame member 16 and the ingress of building material is prevented.

It will be understood that the flexible frame member may flex at any point.

Claims

- 1 A lid for a box, comprising a shield and a stabiliser, wherein the shield comprises a flexible frame member; and the stabiliser is co-operable with the shield such that the flexible frame member can be biased outwards;

such that, in use, the stabiliser co-operates with the shield such that the flexible frame member is biased against and provides an extension to the wall or walls of said box.
- 2 The lid of claim 1, wherein the shield is initially separate from the stabiliser.
- 3 The lid of claim 1 or claim 2, wherein the shield is made of cardboard and/or plastic.
- 4 The lid of any of the preceding claims, wherein the shield further comprises one or more tabs through which a screw may be inserted for attaching the shield to the box.
- 5 The lid of any of the preceding claims, wherein said box is a back box.
- 6 The lid of any of the preceding claims, wherein the shield further comprises legs extending axially from the flexible frame member.
- 7 The lid of claim 6, wherein said box comprises entry holes for wiring and the legs straddle said entry holes.
- 8 The lid of claim 6 or claim 7, wherein the flexible frame member is thicker than the legs such that the flexible frame member forms shoulders over the rim of said box.
- 9 The lid of any of the preceding claims, wherein the stabiliser comprises holes for pulling the stabiliser out of the shield.
- 10 The lid of any of the preceding claims, wherein the stabiliser comprises flanges which straddle lugs in said box.
- 11 A shield comprising a flexible frame member for use in the lid of any of claims 1 to 10.

- 12 A stabiliser for use in the lid of any of claims 1 to 10.
- 13 A shield substantially as described herein with reference to figures 2 to 5.
- 14 A stabiliser substantially as described herein with reference to figures 2 to 5.
- 15 A lid substantially as described herein with reference to figures 2 to 5.

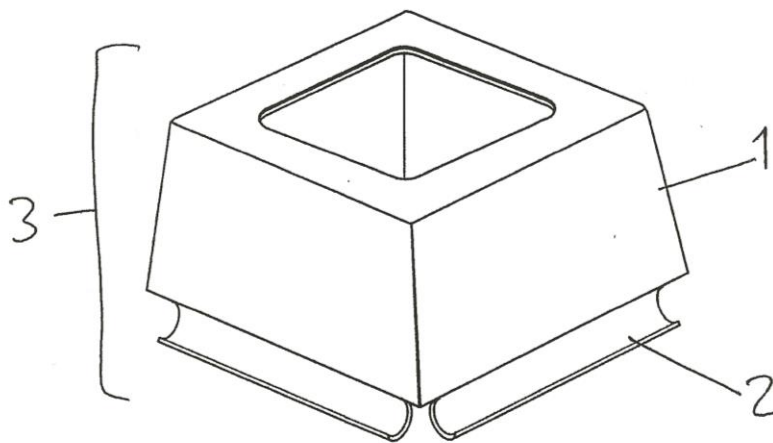


Fig- 1

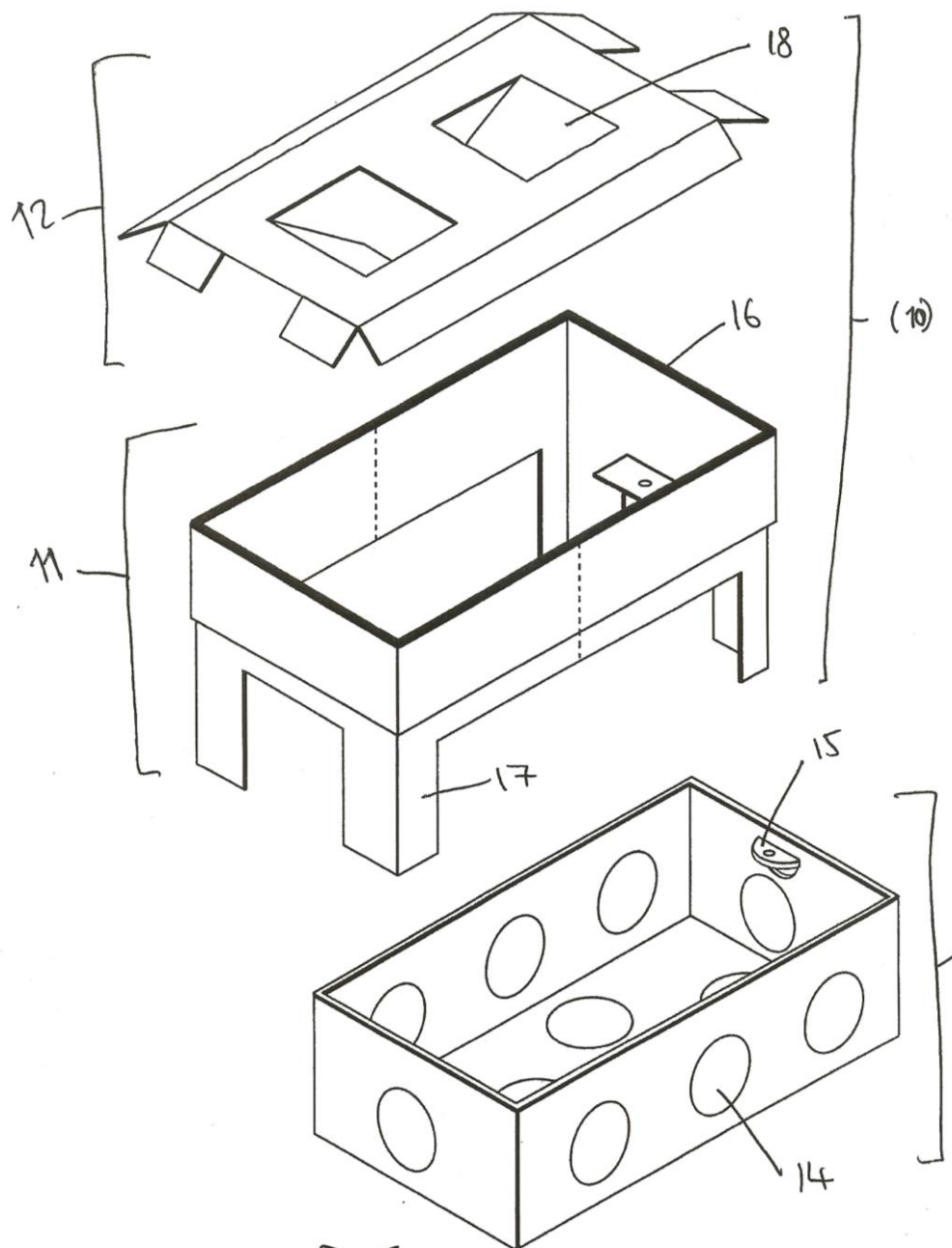
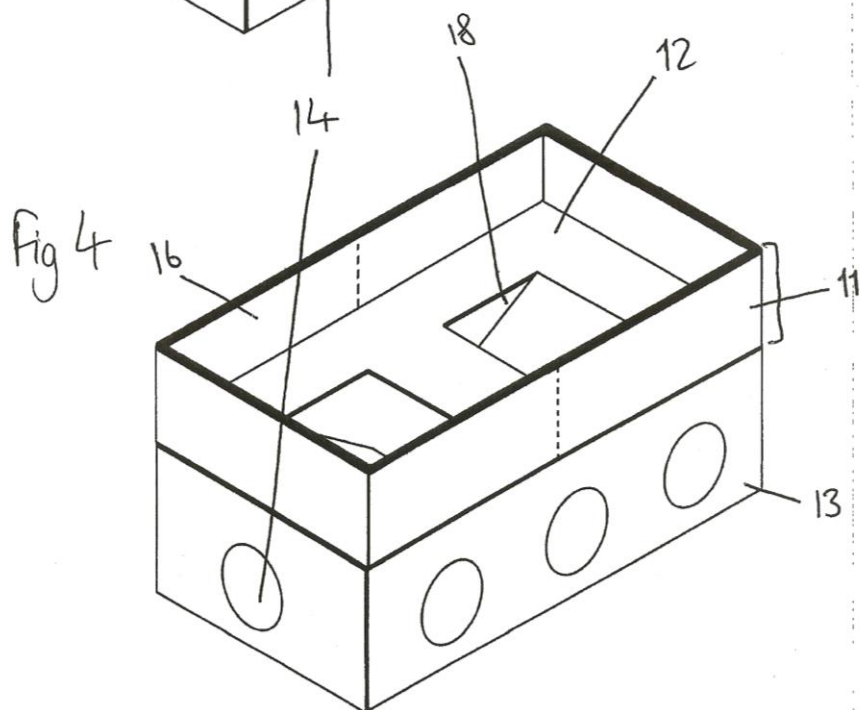
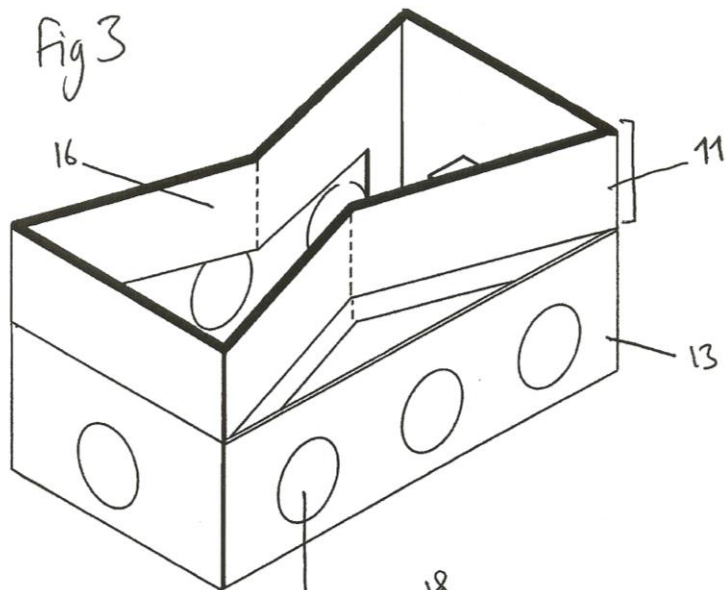
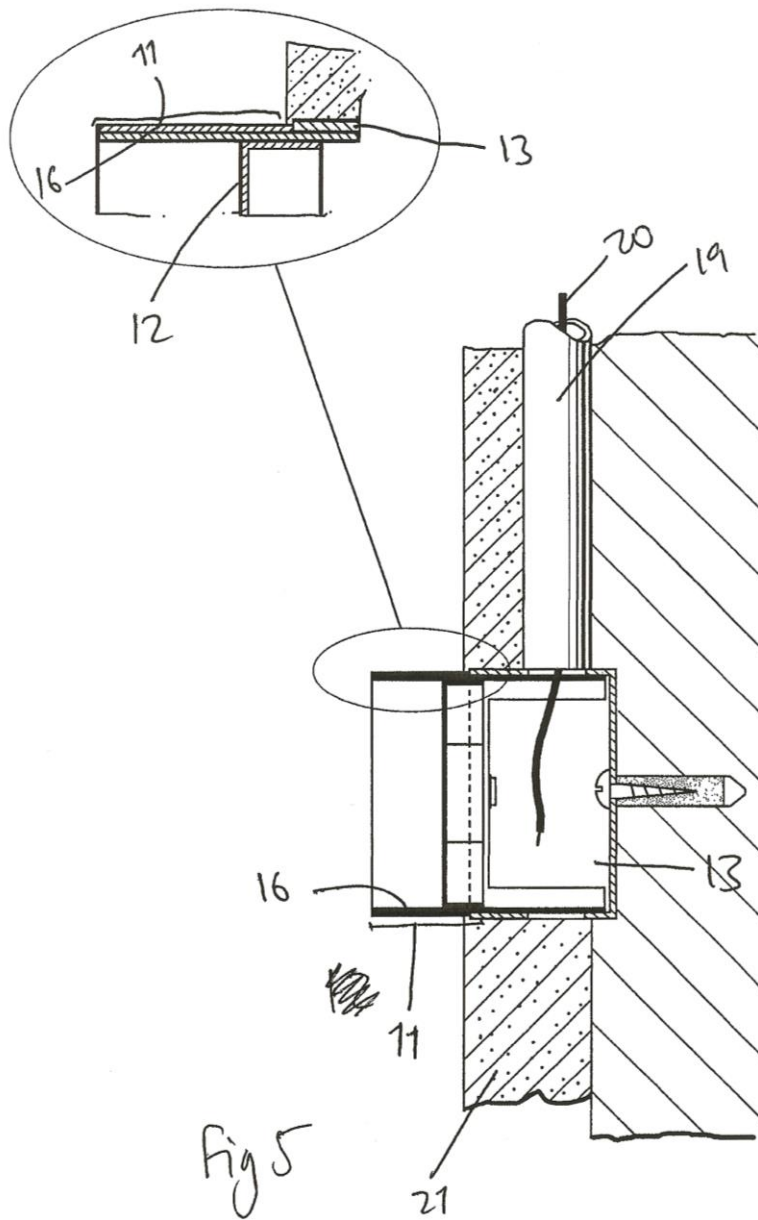


Fig 2





Abstract

Lid for a Box

The present invention relates to a lid 10 for a box 13, in particular a lid for a back box. There is provided a lid comprising a shield and a stabiliser, such that in use, the stabiliser biases the flexible walls of the shield against the walls of the box and provides an extension to the walls of the box. The lid is particularly useful in protecting the electrical back boxes from ingress of building material, such as plaster.

(Accompanied by Figure 4)