Chapter 1
TUMBLER SWITCHES

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Switch, Type A1, 4 amp. (3-way) ... ... *Stores Ref. 5CW/4517*
Dimensions of mounting flange ... ... *1·9 in. × 1·32 in.*
Overall depth ... ... *2·44 in.*
Weight ... ... *2·75 oz.*

Switch, Type A, 4 amp. (change-over) ... *Stores Ref. 5CW/1003*
Dimensions of mounting flange ... ... *2·6 in. × 2·8 in.*
Overall depth ... ... *2·44 in.*
Weight ... ... *6 oz.*

Switchbox, Type B, 7 amp.
On/off switch ... ... *Stores Ref. 5CW/2497*
Dimensions of mounting flange ... ... *1·9 in. × 0·66 in.*
Overall depth ... ... *2·36 in.*
Weight ... ... *1·5 oz.*
Single-pole change-over switch ... ... *Stores Ref. 5CW/4063*
Dimensions and weight ... ... *As 5CW/2497*

Switchbox, Type B, 20 amp.
1-unit ... ... *Stores Ref. 5CW/543*
Dimensions of mounting flange ... ... *1·9 in. × 1·32 in.*
Overall depth ... ... *2·48 in.*
Weight ... ... *2·25 oz.*
3-unit ... ... *Stores Ref. 5CW/544*
Dimensions of mounting flange ... ... *1·9 in. × 3·5 in.*
Overall depth ... ... *2·4 in.*
Weight ... ... *6·25 oz.*
5-unit ... ... *Stores Ref. 5CW/545*
Dimensions of mounting flange ... ... *1·9 in. × 5·68 in.*
Overall depth ... ... *2·4 in.*
Weight ... ... *10·12 oz.*

Switchbox, Type B, 40 amp. ... ... *Stores Ref. 5CW/2498*
Dimensions of mounting flange ... ... *1·9 in. × 1·26 in.*
Overall depth ... ... *2·75 in.*
Weight ... ... *2·75 oz.*

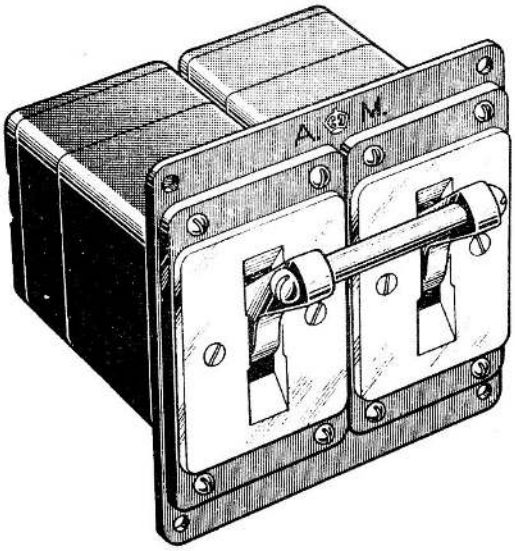

Fig. 1. Change-over switch, Type A

Introduction

1. This chapter covers various types of switches, which are all of general application. Dimensional details and weights are given under Leading Particulars.

DESCRIPTION

Switch, Type A1, 4 amp. (3-way)

2. The 3-way switch, Type A1, is a single-pole switch used for selecting one of three circuits where the load does not exceed 4 amp. An example of its use is in landing lamps, downward identification lamps, or similar circuits, where one of three lamps is to be selected. When used in landing lamp circuits, the centre position is not connected up and is used as an off position.

Switch, Type A, 4 amp. (change-over)

3. The change-over switch (*fig.* 1) is a double-pole switch consisting of two 3-way switches fitted side by side. The mechanism of the 3-way switch is shown in fig. 2, which also gives the connections, with the dolly in the central position. The terminals in one bank are joined together by a link to provide a common feed; this link can be removed if required. When moving the dolly from the centre position to either of the two outer positions, four terminals are momentarily connected together; when the full travel has been completed, only the two outer terminals are joined.

Switchbox, Type B, 7 amp.

4. There are two Type B switches for use in circuits where the load does not exceed 7 amp. One is a single-pole on/off switch, and the other is a single-pole change-over switch, which has no off position. Both are of the same dimensions, and the on/off switch is illustrated in fig. 3.

5. In these switches, the connections are made or broken by the action of the spring-loaded extension of the dolly, which rides on a cam to depress or release the contact plate that bridges the two contacts.

Switchbox, Type B, 20 amp.

6. The 1-unit, 3-unit, and 5-unit 20 amp. switches one, three, and five single-pole on/off switches, respectively, mounted in a common casing. A general view of the 3-unit switch is given in fig. 4.

7. A sectional view of the mechanism is shown in fig. 5. When the dolly is brought to the ON position, the two contacts are

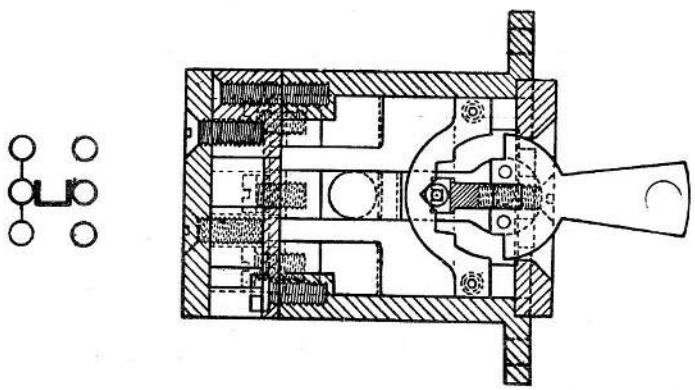

Fig. 2. Mechanism of 3-way switch, Type A1

bridged by a stud which is operated through a toggle mechanism. Each switch has a third terminal for connecting the pole of the circuit that is not switched, and in the 3-unit and 5-unit types, these terminals are linked together. The connections for the individual switches are given in fig. 6.

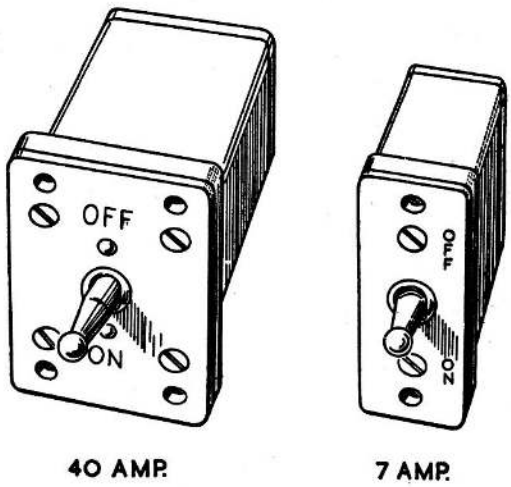

Fig. 3. Switchboxes, Type B, 40 amp. and 7 amp.

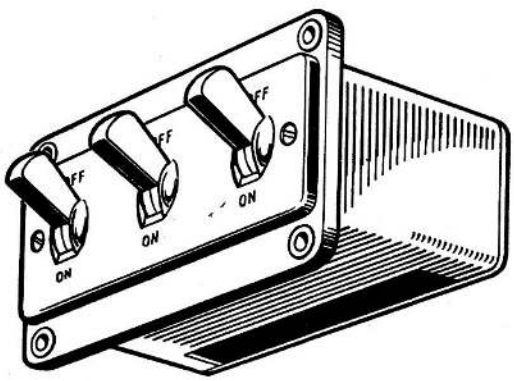

Fig. 4. Switchbox, Type B, 20 amp., 3-unit

Switchbox, Type B, 40 amp.

8. This is a single-pole, on/off switch for general use in circuits where the load does not exceed 40 amp. An external view is given in fig. 3, and the internal mechanism is similar to that in the 7 amp., Type B switches described in para. 5.

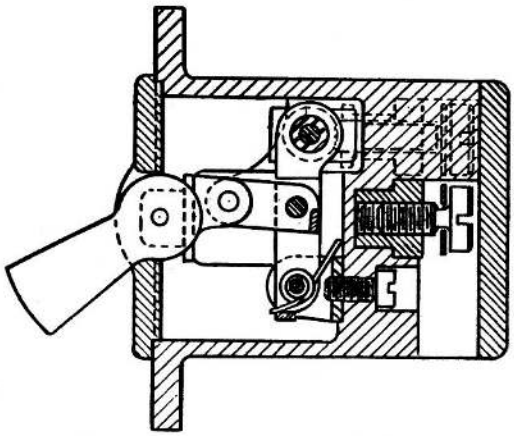

Fig. 5. Mechanism of switchbox, Type B, 20 amp.

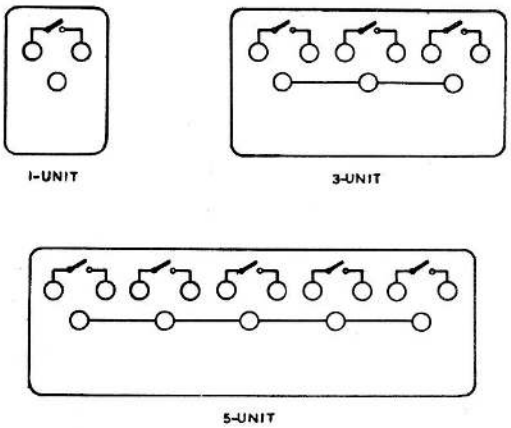

Fig. 6. Connections for switchbox, Type B, 20 amp.