view and section. The flange is tapped for gas pipe and has fitted to it, but insulated from it, contact screws to which the bracket conductors are attached, the one directly and the other being interrupted by safety strip contact springs. The contact screws are so arranged as to come against the contact springs in the wall plate when the flange is screwed against it, and maintain the connection from the bracket with the branch wires. A slot is cut in the flange through which a safety slip cemented to a wooden block is inserted, and held in position by a hinged cover, to allow a ready replacement of the strip when it fuses. The bracket is readily removed from the wall plate without deranging the branch wires, should it be necessary to take it apart for readjustment of the conductors or for repair.

For table lamps, hand lamps, and generally for electric connections by means of flexible conductors a special fitting has been designed by Mr. Weston. It is a combination of the holder socket without the switch and the wall plate, of which descriptions have already been given. Figs. 6 and 7 illustrate a fitting which has been much used and sufficiently resembles the one now manufactured for the purpose of its description.

The modifications have been made principally for economic reasons, and with a view to greater uniformity throughout the system. Provision is made, as in the bracket wall plate, for the insertion of a fusible metal. The plug is slightly altered in dimensions to be identical with the base of the incandescent lamp in order that it may be fitted into the incandescent holders, as well as into the wall plate, and as the wall plate is made to correspond a lamp may be inserted into it instead of the This modification suits the plug wall plate for use as a plug. cheap form of lamp support, and is particularly useful for lowceilinged apartments, cellars, cupboards, shop fronts, and for theatrical and decorative work. A flexible double conductor is attached to the plug by one pair of terminals, and to the other may be attached a hand or table lamp, motor, or other electric apparatus which it may be desired to have in a movable form. A considerable number of these fittings are provided with the Weston installations, particularly in factories, warehouses, etc., and are used for hand lamps, which are suspended in a desirable position for general illumination when nototherwise required. In cellars or warehouses, or where a large amount of illumination is not required, but where one or two movable lights are desirable, a series of plates are fitted along the wall within easy reach, and one or two lamps with plugs and cords are supplied which can be carried from one place to another for use.

Weston's gang and multiple series switches have an action precisely similar to that of the holder switch of which details have already been shown. The lever is modified to make duplicate contracts, in order that two or more short breaks may be made in a circuit instead of one long one. In order to economise space and adapt the switch to a circular case or box (Figs. 8, 9, and 10) the switch is shown with a closed circuit. The contact springs are doubled and the pins in the extremities of the bell-crank lever enter between the two. This construction is adopted to obtain a large amount of contact surface and sufficient flexibility to the contact springs. At the same time that the necessary conducting capacity is secured the springs are split, as are all spring contacts in the Weston system when their construction permits, and the scraping action is also provided for. The conductors to which the switch is attached are cut and the ends brought up through the base and connected to the posts carrying the contact springs, the bell-crank lever making the circuit by bridging across the spring. The multiple series switch differs only slightly in its details (Fig. 11) from the gang switch, and in its external appearance is the same, but the arrangement of its connection are changed ; the gang switch is designed to open and close a single circuit, whilst the multiple series switch operates two, closing one when the other is opened for the purposes detailed in the description of the multiple series system.

Fusible strip blocks, branch blocks for cased or moulded leads and branches, and the whole of the fittings which come under this heading, are designed by Mr. Weston with a view to uniformity and neatness of wiring. Each size corresponds with a standard section of moulding or casing, just as do the pipe fittings used by gas and steam fitters; the safety strip blocks are made both single and double, that is for the insertion of a strip in one or both leads of the multiple arc system of wiring, and they are made of widths to suit various breadths of casings and with the contacts arranged at the same distance apart, if double, as are the wires, and in any case to come immediately over the grooves containing the wires. The illustrations (Figs. 12 and 13) represent a single pole strip block closed and open, and fitted to the moulding in which the conductors are protected : in all these fittings the strips are tacked or cemented to wooden blocks having holes corresponding to dowel pins in the hinged cover of the block, so that the mere act of setting them on the cover puts them in their correct position with relation to the contacts in the body of the block. The contacts are plates of metal supported on spiral springs, which keep them in contact with the ends of the strips when the cover is fastened down, which is done by means of a screw or button; for heavy currents clamp contacts are used, and the strips are unmounted and have their ends heavily plated with copper both for the purpose of having a good contact and for preventing the compression of the strip.

For branches or loops from the main leads, branch boxes are provided in order that the safety metals may be inserted immediately at the point of branching off. In the smaller sizes of branch boxes (Figs. 14 and 15), the contacts for the metals are mounted on spiral springs as in the strip blocks. Fig. 14 shows a double branch box fitted to casings, portions of which are shown cut away to expose the wires. The main leads are shown as composed of a number of small wires, but the boxes are equally applicable to installations where the leads are each one large wire. The undersides of the blocks are provided with screw clamps, by means of which connection is made with the mains. On looking at the figure, it will be observed that two of the safety strip contacts, diagonally placed, are mounted or cemented to larger squares than the other set, and each with an extra screw; and further, that these plates are immediately over the main wires. The blocks are connected by the clamp with the main leads, and the contact is made good by the extra screws referred to. At the other corners of the block, the strip contacts make no direct connection with the leads. In connecting up the branches one wire of each branch is connect. ed to the contacts which are in direct connection with the leads and the other two with the isolated contacts.

Thus each lead has one leg of a branch connected directly with it and the other, only when the cover is closed, and a safety metal bridges the break in the branch between the two contacts.

This block may be used as a double strip block, when it is desired to insert a strip in each pole of a branch, as will be readily understood.

Fig. 15 is a view of a single branch box, with the cover thrown back to expose the interior and with portions of the casings cut away to show the mains and the branch wires. The larger branch blocks having greater internal space are fitted with a spring contact similar to that used in the wall blocks or plates. Fig. 16 shows an open view of a double branch with mouldings cut away as in the other figures. These blocks differ from the smaller blocks merely in the form of contact springs and are connected with the leads in the same manner.

The whole of the strip blocks and branch blocks used for the Weston installations, are attached by screws to the lower grooved portion of the casings, and the casing covers are fitted to a nut directly against the block as shown in the figures, concealing all connections and finishing the work in a neat and symmetrical manner. There can be no liability of shocks to the person, as no part of the body can be brought in contact with the wires or connections when once fittel. Short circuits or grounds from the accidental contact of conducting substances being accidentally placed across the leads or branches cannot occur, and if short circuit occur from other causes, the fusible metals take care of the circuits. Each of Mr, Weston's fittings have been designed as a part of a system, so that they may all be connected together with ease and rapidity. Their dimensions are regulated by standard gauges, and they may be ordered by number from the lists and catalogues just as the gas or steam fitter orders his pipes, tees, elbows, and other fittings.

Corresponding with the pipes of the gas system are the mouldings or casings in the incandescent system, with the tees, elbows, unions, and flanges; there are the double and single branch blocks, and the wall plates. The incandescent holders and switches take the place of the burner sockets and the cocks or taps of the gas system. In both systems there are swinging joints, and the plug and flexible cord of the incandescent plant corresponding with the hose coupling and hose of the gas or water system. In all these fittings the parts which make contact are prevented from oxidation by heavy nickel plating, and the scraping action of the contacts further insures perfectly clean surfaces. There is no limit to the adaptability of