For clarity the other circuit components mounted on printed circuit board **108** are not illustrated in the drawings. These are standard small size components and the manner in which they may be fitted to the circuit board is entirely conventional.

Capacitor C5 is mounted within casing **101.** More specifically it is clamped in position between a flange **131** which stands up from the floor **105** of the casing and a clamping pad **132** engaged by a clamping screw **133,** which is mounted in a threaded hole in casing side wall **106** and is set in position by a lock screw **134.** Flange **131** has two holes **135** (See FIG. 6) in which the terminal bosses **136** of capacitor C5 are located. The terminal pins **137** projecting from bosses **136** are connected to the terminal board **108** by wires (not shown) and appropriate connector pins which are extended through holes in the circuit board and soldered to the appropriate conductor strips on the other face of that board.

Transistors Q3 and Q4 are mounted on the front wall **103** of casing **101** so that the finned casing serves as an extended heat sink for these two transistors. ransistors. They are mounted on the casing wall and electrically connected to the printed circuit board in identical fashion and this is illustrated by FIG. **10** which shows the mounting of transistor Q3. As shown in that figure the transistor is clamped in position by clamping screws **138** and nuts **139** which also serve to provide electrical connections to the appropriate conductors of the printed circuit board via conductor wires **141.** The third connection from the emitter of the transistor to the common negative conductor of the printed circuit is made by conductor **142.** Screws **130** and conductor **142** extend through three holes in the casing front wall **103** and these holes are lined with electrically insulating nylon bushes **143, 144.** A formica sheet **145** is sandwiched between casing plate **103** and the transistor which is therefore electrically insulated from the casing. Two washers **146** are placed beneath the ends of conductor wires **141.**

Pressure operated microswitch **52** is mounted on a bracket **147** projecting inwardly from front wall **103** of casing **101** adjacent the top wall **104** of the casing and the pressure sensing unit **148** for this switch is installed in an opening **149** through top wall **104.** As most clearly seen in FIG. **11,** pressure sensing unit **148** is comprised of two generally cylindrical body members **150, 151** between which a flexible diaphragm **152** is clamped to provide a diaphragm chamber **153.** The gas pressure of sensing tube **63** is applied to chamber **153** via a small diameter passage **154** in body member **150** and a larger passage **155** in a cap member **156.** The cap member and body members are fastened together and clamped to the casing top plate **104** by means of clamping screws **157.** Sensing tube **63** is connected to the passage **155** in cap member **156** by a tapered thread connector **158** and the interface between cap member **156** and body member **150** is sealed by an O-ring **159.**

The lower end of body member **151** of pressure sensing unit **148** has an internally screw threaded opening which receives a screw **161** which at its lower end is formed as an externally toothed adjusting wheel **162.** A switch actuating plunger **163** extends through a central bore in adjusting wheel **162** so that it engages at one end flexible diaphragm **152** and at the other end the actuator member **164** of microswitch **62.** The end of plunger **163** which engages the diaphragm has a flange **165** to serve as a pressure pad and a helical compression spring **167** encircles plunger **163** to act between flange **165** and the adjusting wheel **162** to bias the plunger upwardly against the action of the gas pressure acting on diaphragm **152** in chamber **153.** The pressure at which diaphragm **152** will force plunger **163** downwardly against the action of spring **167** to cause actuation of switch **62** may be varied by rotating screw **161** and the setting of this screw may be held by a setting screw **168** mounted in a threaded hole in the upper part of casing front wall **103** and projecting inwardly to fit between successive teeth of adjusting wheel **162.** After correct setting of screw **161** is achieved set screw **168** will be locked in position by locking screw **169** which is then sealed by a permanent seal **170** to prevent tampering. Microswitch **62** is also electrically connected to the appropriate conductors of the printed circuit board via wires within the housing and connector pins.

Electrical connections are made between the conductors of printed circuit board **108** and the internal wiring of the circuit via a terminal block **150** (FIG. **12**) set in an opening of housing floor **105** by screws **160** and fitted with terminal plates **140.**

The physical construction of electrolytic cell **41** and the second stage transformer TR2 is illustrated in FIGS. **13** to **29.** The cell comprises an outer casing **171** having a tubular peripheral wall **172** and top and bottom closures **173, 174.** Bottom closure **174** is comprised of a domed cover **175** and an electrically insulated disc **176** which are held to the bottom of peripheral wall **172** by circumferentially spaced clamping studs **177.** Top closure **173** is comprised of a pair of top plates **178, 179** disposed face to face and held by circumferentially spaced clamping studs **181** screwed into tapped holes in the upper end of peripheral wall **172.** The peripheral wall of the casing is provided with cooling fins **180.**

The anode **42** of the cell is of generally tubular formation. It is disposed vertically within the outer casing and is clamped between upper and lower insulators **182, 183.** Upper insulator **182** has a central boss portion **184** and an annular peripheral flange **185** portion the outer rim of which is clamped between upper closure plate **179** and the upper end of peripheral wall **172.** Lower insulator **183** has a central boss portion **186,** an annular flange portion **187** surrounding the boss portion and an outer tubular portion **188** standing up from the outer margin of flange portion **187.** Insulators **182, 183** are moulded from an electrically insulating material which is also alkali resistant. Polytetrafluoroethylene is one suitable material.

When held together by the upper and lower closures, insulators **182, 183** form an enclosure within which anode **42** and the second stage transformer TR2 are disposed. Anode **42** is of generally tubular formation and it is simply clamped between insulators **182, 183** with its cylindrical inner periphery located on the boss portions **184, 186** of those insulators. It forms a transformer chamber which is closed by the boss portions of the two insulators and which is filled with a suitable transformer oil. O-ring seals **190** are fitted between the central bosses of the insulator plates and the anode to prevent loss of oil from the transformer chamber.

The transformer core **91** is formed as a laminated mild steel bar of square section. It extends vertically between the insulator boss portions **184, 186** and its ends are located within recesses in those boss portions. The primary transformer winding **88** is wound on a first tubular former **401** fitted directly onto core **91** whereas the secondary winding **89** is wound on a second tubular