

## Dampness Condensation



Condensation occurs when water vapour in the air comes into contact with cold, non-porous surfaces. The vapour turns to water droplets which run down walls and collect on sills, skirting boards, door tops and windows. They gradually soak into plaster, and salt deposits appear on the wall surface. Wallpaper peels, and growths of mould develop.

Condensation is most common in kitchens or bathrooms because steam adds to the humidity of the air. But it is likely to develop in any house occupied after a period without heating.

**Prevention** Insulation and improved heating and ventilation are the best ways to stop condensation.

An extractor fan, for example, directly improves the ventilation in a room. Loft insulation (see p. 114) helps to retain warmth throughout a house. Cavity walls should have insulation, but this is specialist work: consult an insulation company.

Solid walls can be covered with polystyrene sheeting (see p. 31) or aluminium foil (see p. 28) before being hung with paper.

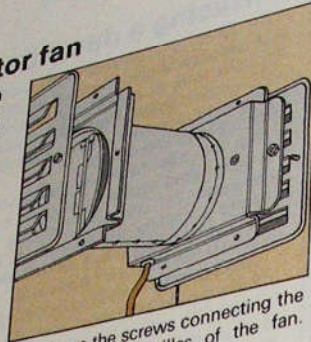
If a house has rising damp as well as condensation, a dry lining system (see p. 135) may remedy both faults.

When the condensation is caused by the discharge of gases from a boiler, re-line the flue (see p. 23).

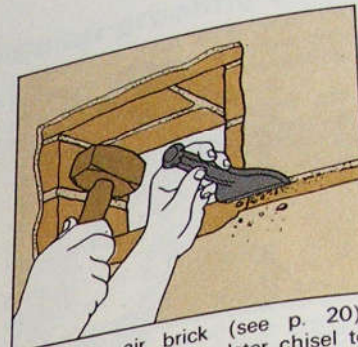
### Installing an extractor fan

An extractor fan can be fitted into a window pane or a wall. It is easier, however, to install one in place of an existing high-level air brick.  
Do not try to connect the fan directly to the electricity supply. Wire to a fused connection unit and cut a channel round the cable, bury in conduit round the cable, bury in the channel and fill with plaster. Switch off to inspect or clean fan (see p. 534).

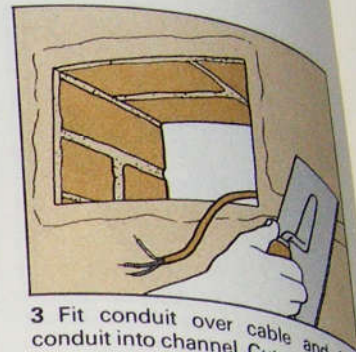
**Materials:** fan; three-core cable; wall plugs; plastic conduit.  
**Tools:** drill with masonry bit; club hammer; bolster chisel; screwdrivers.



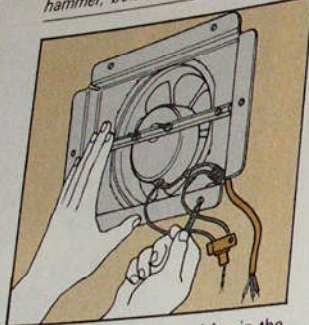
1 Remove the screws connecting the outer and inner grilles of the fan. Separate the fan sections



2 Remove air brick (see p. 20). Use a hammer and bolster chisel to cut a channel where the cable will run



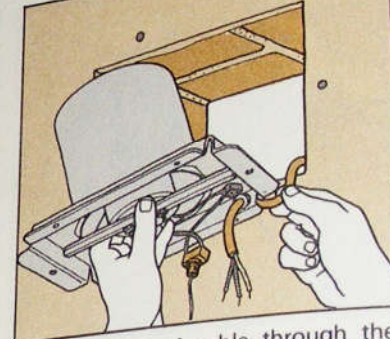
3 Fit conduit over cable and feed conduit into channel. Cut cable and fill channel (see p. 132)



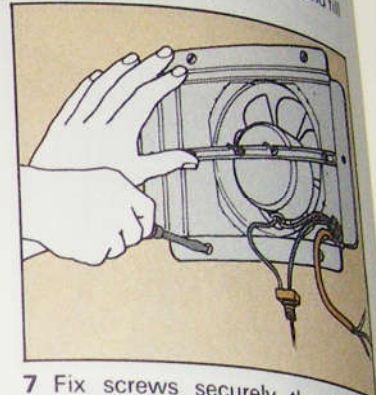
4 Position inner section of fan in the hole in the wall. Mark the wall through each screw hole with a pencil



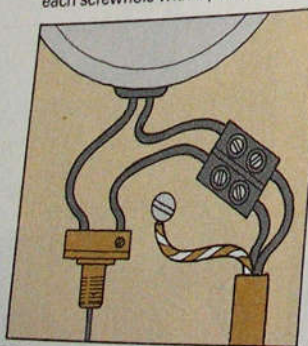
5 Remove fan section and drill holes for fixing screws provided with fan. Fit wall plugs in holes (see p. 683)



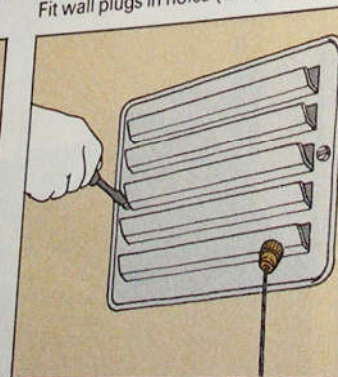
6 Thread end of cable through the rubber sleeve on the fan. Position the fan against the holes in the wall



7 Fix screws securely through the flanges at top and bottom of the fan. Bare cable wire ends (see p. 526)



8 Fit the cable wires to the fan block terminal. Follow the manufacturer's instructions carefully



9 Thread switch cord through grille and screw grille to side flanges. Fit thumbscrew on cord



10 Outside the house, position outer grille sleeve. Drill holes at top and bottom, and plug and screw to wall



11 Place the outer grille over the flange and screw it home. Connect cable to terminals and switch on

## Extractor fans

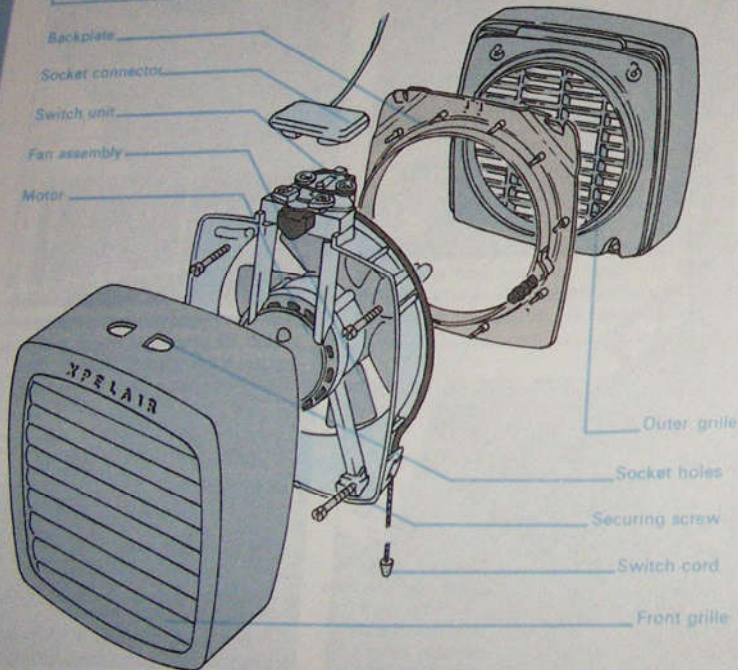
### The basic parts of an extractor fan

Extractor fans are usually fitted in outside walls or windows (see p. 30). The fan blades, which may be driven by an induction or brush motor (see p. 527) are housed between two grilles. The inner grille is usually shuttered, so that as the fan is turned off, the shutter closes and protects the room from draughts.

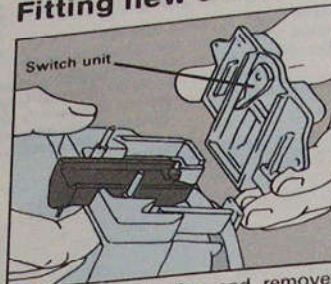
Always disconnect the fan socket from the power supply or switch off at the mains before trying to clean or repair the equipment.

#### FINDING THE FAULT

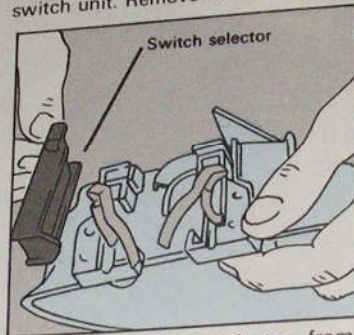
Symptom	Checking order	Action
No power	Fuse blown at plug	Fit new fuse (see p. 519)
No power or intermittent power	Loose or broken flex connections at plug or fan Broken flex. Check with circuit tester (see p. 526) Burnt-out motor	Reconnect (see pp. 525, 526) If necessary fit new flex (see p. 526) Call a service engineer



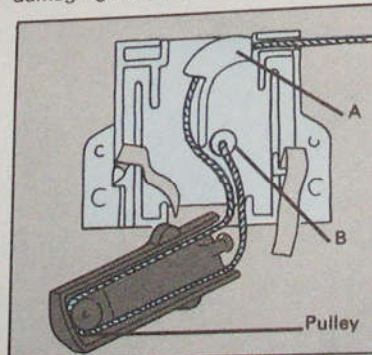
### Fitting new cord



1 Disconnect the fan and remove front grille. Undo the screws holding switch unit. Remove unit



2 Slide the switch selector from between the metal contacts. Avoid damaging the contacts

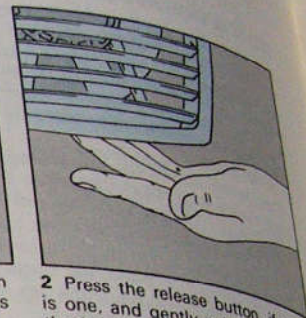


3 Use a needle to push cord through sleeve, under curved part (A), round pulley and knot it in hole (B)

### Cleaning a fan



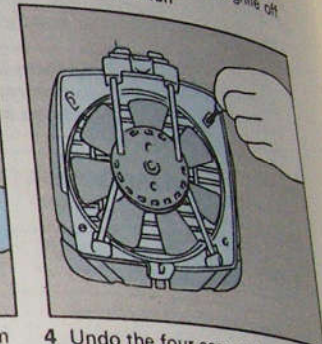
1 Disconnect the flex socket from the fan assembly. Undo the screws holding the front grille



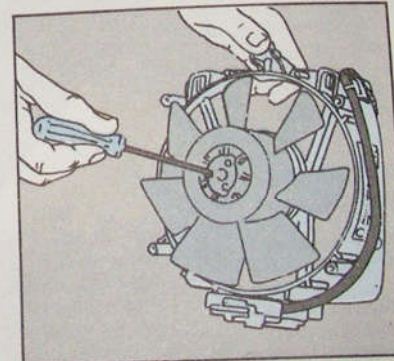
2 Press the release button, if there is one, and gently pull the grille off the front of the fan



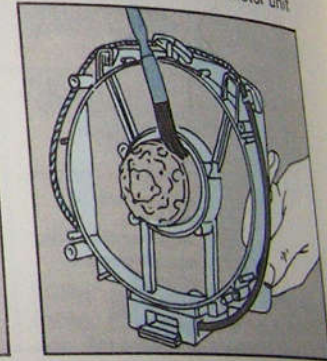
3 Wash the shutter grille in warm water and detergent. Dry thoroughly with clean cloth



4 Undo the four screws holding the motor and fan assembly to inner clamp plate. Remove the motor unit



5 Undo the screws holding the fan blades on the motor shaft. Lift the fan impeller off the motor



6 Wash impeller in soapy water and dry it. Clean motor, and holes in motor support arms, with dry brush