

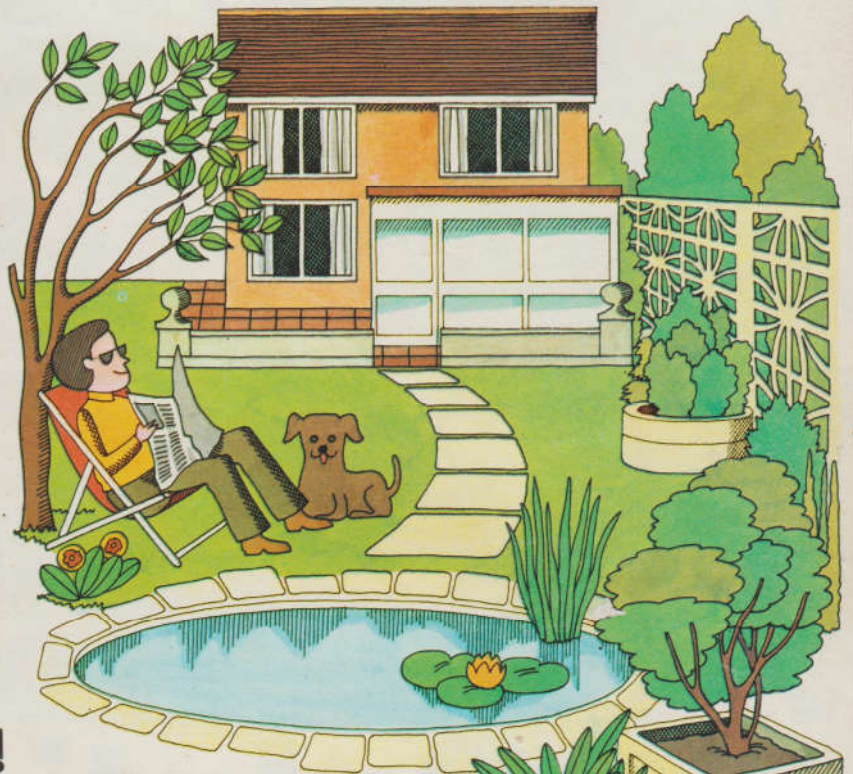
PRACTICAL HOUSEHOLDER

JULY 1973 15p



BLOOMING BRILLIANT!

Gardens of delight – by day and night



POTTER'S KILN

Puts you in the firing line



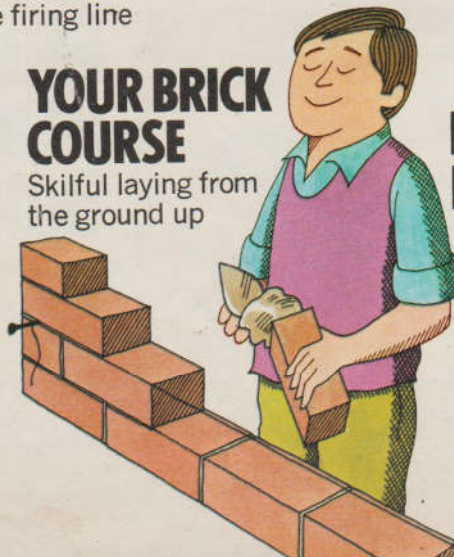
CIVILISE THAT GARDEN

How concrete improves any plot



YOUR BRICK COURSE

Skilful laying from the ground up



LOFTS WITH LIFE

They're all over you





NOT many homes can be claimed to be free of the condensation problem at some time or another—unless the owners make some effort to eliminate it.

We would go further and say that about 75 per cent of the readers' problems with damp are caused by condensation rather than moisture rising through the foundations or penetrating the masonry.

Most of these 'damp' problems are caused by poor internal atmospheric conditions based chiefly on low heating levels, cold structural surfaces and, most significantly, totally inadequate ventilation.

Condensation is caused by a very high level of humidity in the air. The warmer the air the more water vapour it will contain and, when the air cools, either by a fall in temperature or by settling on a cold surface, such as a window, a wall or a thin door (especially metal doors) it will contract and the vapour will condense on the cold surface.

Generating vapour

Water vapour is generated in areas where water is evaporated—kitchens and bathrooms. The smaller the room the less air volume and the sooner the precipitation level of condensate is reached.

Most kitchens, in modern houses, are 'compact', to say the least; and bathrooms are just about large enough to cope with their purpose.

So as warm air expands and absorbs more vapour in these rooms, when they are in use, then the expansion creates a

TWO - V

Fitting a reversible extractor fan

1 Cutting the circles in a fixed-pane light with a professional's cutter

2 The squares make it easier to remove a small section at a time to inner circle

3 Remaining 1in. wide circle is lifted out in segments and the rubber ring fitted

4 This ring has a channel on the outside which fits snugly over the edge of glass

5 The motor side of the assembly is then offered into the ring, flex in position

6 The outer part of the assembly finally fitted to the motor, inner part, of unit

slight pressurisation with the result that it seeps out round doors, through key-holes, and spills out in great volumes when the door is opened.

Then it spreads out and rises to the landing and the bedrooms—and condenses on the cold surfaces there.

Improving the atmosphere

Obviously proper ventilation is a major step towards winning the eternal war against condensation. So while a natural ventilation rate may be sufficient in average conditions the exceptional conditions, such as an already high outside humidity level, cooking, washing, bathing and so on will saturate the air to an extent where windows stream with water, even doors and outside walls will appear 'damp' and clammy.

The answer is to get rid of the humid air as soon as it is formed by a controllable means in excess of normal ventilation rate. Most of the domestic fans manufactured today will deal efficiently and adequately with these situations; and they should be put to work as soon as 'steam-making' operations commence. In this way a better atmosphere can be achieved in a short time.

Applications

There are three basic applications for extractor fans: wall fixing, window fixing or by trunking, when no exterior wall is available.

There is a different approach to the fixing of each—and in this article we deal with a window fan.

Prizewinners' fan

The fan installed in this project was one of the £1,000 worth of fans offered in a free entry competition last month in Practical Householder.

The unit is the Philips HR3407 two-speed Reversible Flow Window-fitting fan, which will extract 13,250 cu. ft. of air per hour at high speed and 9,600 cu. ft. per hour at low speed, and is rated for consumption at 42 watts maximum. If readers didn't win one but want to buy one they can do so through an electrical dealer, quoting the above type number.

The advantage with this type of fan is that while they have a high extraction rate they can also be reversed, by a simple operation, to induce a constant fresh air flow into the room when hot barometric conditions make it desirable, thus forcing stale, warm air out of the room by normal ventilation, replacing it with cooler, fresh air.

Fitting instructions

All extractor fans have complete fitting instructions included; and as they seldom rate above 60 watts electrical supply is no problem—a cable can be coaxed from a convenient ceiling rose of the normal lighting circuit.

The big problem with an extractor fan is the hole in which it is to fit. Cutting a circle in glass is not everyone's cup of tea and, quite frankly, unless you have the special tools yourself it's cheaper to have an experienced glazier either cut a pane to suit the frame or come and cut the existing

pane on site, as this one did, with his special beam compass to which the cutter is attached. He charged only £3 for this visit—so it was a saving in fact, as the type of tools you need would cost far more than that, not mentioning the replacement panes you may gain expensive experience on!

The pictures show how the glass is cut. By careful measurement the precise centre of the pane is found and the axis of the beam is fixed, with the cutter set on the beam to half the hole diameter of 9 $\frac{1}{2}$ in.

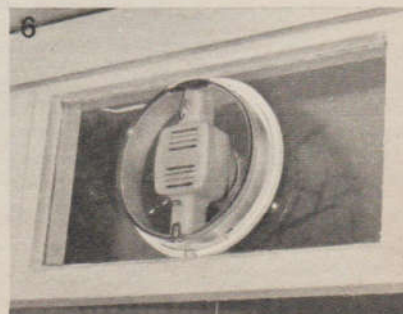
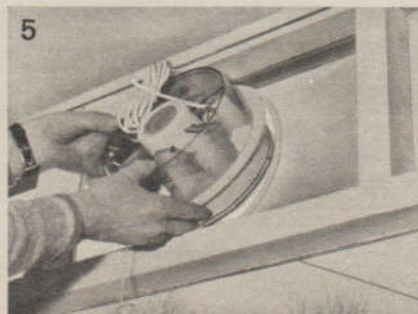
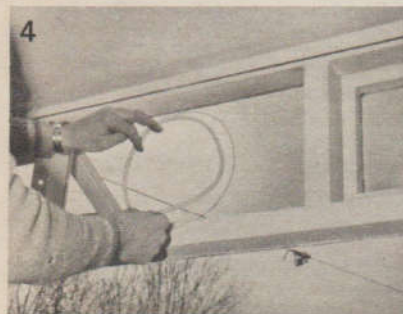
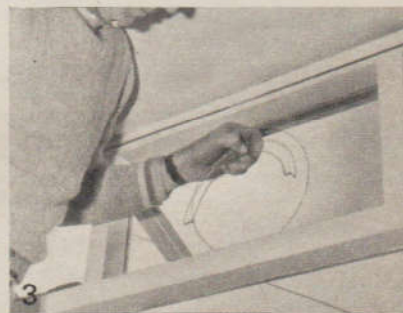
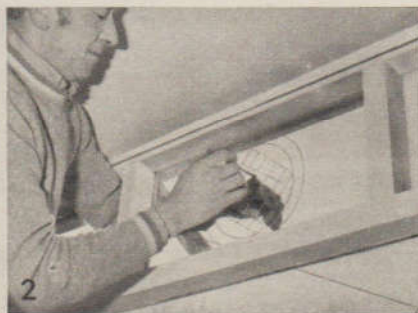
The hole is scribed and then another circle is scribed one inch inside the hole proper.

Then diagonal lines are cut to produce average one inch squares inside the smaller circle. The blunt top of the cutter is then used to tap out the middle sections first to the inner circle. Then the narrow ring is carefully removed in segments to produce the correct hole. Instructions tell you how to fit the rubber ring or grommet, which seats on the raw edges of the glass and into which the fan is simply slotted from the inside of the glass. Since all the installation is carried out from inside the room, it remains a one-man job, even when you're working above ground level.

Electrics

A correctly rated flexible cord should be fitted to the motor terminals and be run to a suitably fused spur and switch for isolating. Note IEE Regulations, quoted in our series on domestic wiring, re switches in bathrooms.

WAY CONDITIONER



Fit a Philips Electric Window Fan. For a fresher, cleaner home.



1. Place plastic sealing ring on hole in the window pane.



2. Fit fan in hole. Make sure plastic ribs on the top side fit over ring.



3. Lift fan up. Fit bottom ribs over edge. Pull fan down so bottom side touches ring.

Kitchens and bathrooms are cleaner, fresher places when you have a Philips Electric Window Fan working quietly for you.

Switch on the Philips Window Fan to clear out stale air, cooking smells and steam. Reverse the flow, and you draw in fresh air.

This helps to preserve the paintwork and decor in your home, by checking the condensation which carries dirt into corners and discolours your walls.

There are two models of Philips Window Fans:-

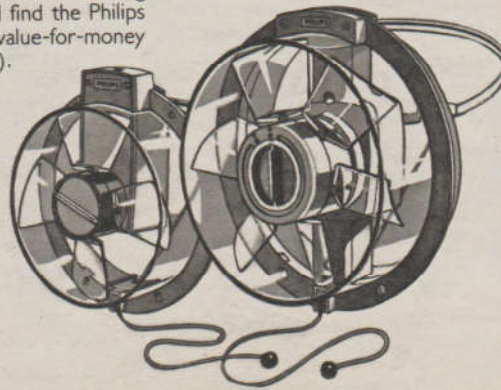
HR3404 A 6" reversible-flow fan. Compare the prices with other leading window fans, and you'll find the Philips Fan offers unbeatable value-for-money at £6.88 (inc. V.A.T. 63p).

HR3407 A new 8" reversible-flow fan. Its 8" fan and 2-speed action will clear the air in no time! £12.78 (inc. V.A.T. £1.16). Suggested selling prices.

Philips Window Fans have an automatic weatherproof-hinged flap and a built-in on/off switch. They're made from white A.B.S. and clear polystyrene to cut light loss to a minimum. And the fan blade assembly can be removed for easy cleaning.

PHILIPS

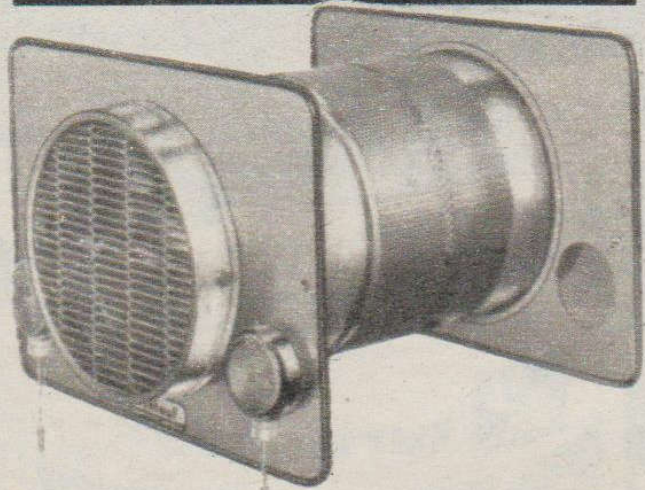
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