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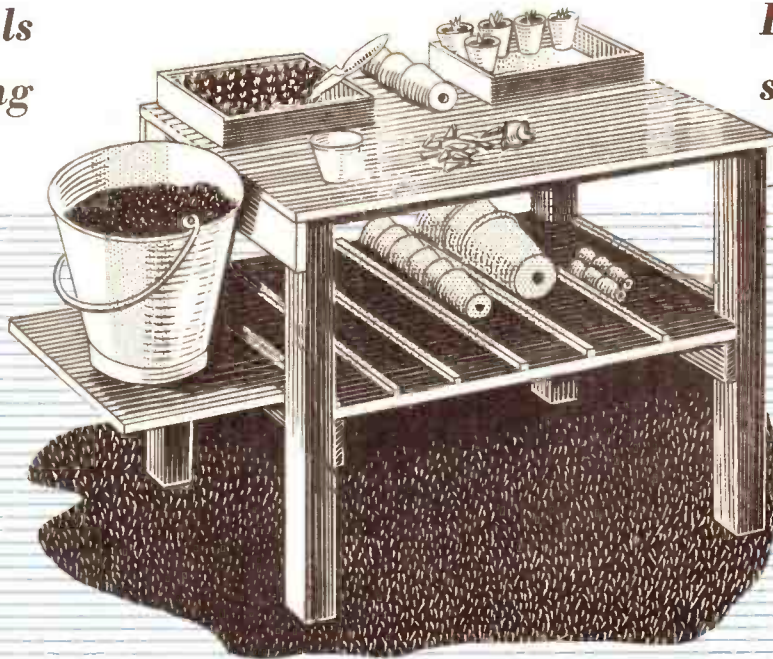
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GREENHOUSE TABLE

EXCELLENT FOR BOXING-UP, POTTING-ON, ETC.

417

**FOR ALL HOME CRAFTSMEN
Over 60 years of 'Do-it-Yourself'**

4 1/2^D

MAKING THE GREENHOUSE TABLE

(Illustrated on front page)

APRIL is a busy time for the gardening enthusiast who owns a greenhouse. Young plants are ready to be boxed up or potted on and should be moved before they receive a check. The table illustrated on the front page is specially designed as an aid to speed and convenience and provides features not found in the conventional table.

The extension at the side forms a platform on which to stand a bucket of compost and the shelf underneath provides room for pots which can be scrubbed up ready for use. The table top measures 24ins. by 42ins. and gives plenty of room for working.

The diagrams in Fig. 1 show the main dimensions and give a general idea of the construction. Note that the legs are cut from 2in. square timber and the rest from $\frac{3}{4}$ in. thick. All parts can be treated with wood preservative such as green Cuprinol before assembling.

The overall height of the table is 29ins., so that the legs will be 28 $\frac{1}{2}$ ins. long. To these are nailed or screwed the cross

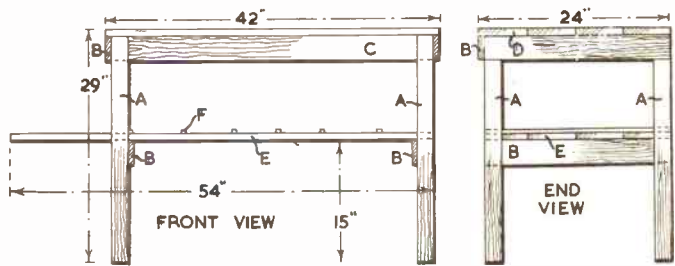


Fig. 1

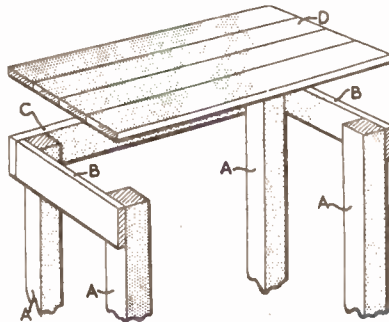


Fig. 2

pieces (B), of which there are four. Each piece (B) measures 23 $\frac{1}{2}$ ins. by 3ins. The top pair are on the outside of the legs and the lower pair on the inside. Next glue the back rail (C), (Fig. 2), and the top pieces (D) in position. Pieces (D) are all 42ins. by 6ins. and are butted

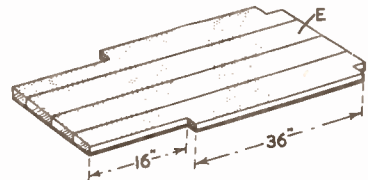


Fig. 3

together as shown. Secure them all with nails driven into pieces (B).

The pieces (E) forming the shelf for the pots are 54ins. long and 6ins. wide. The two outside pieces are cut away to a depth of 2ins., as shown in Fig. 3, to fit round the legs. Nail these pieces to the lower rails (B).

Cross pieces (F), cut from $\frac{1}{2}$ in. by $\frac{1}{2}$ in. stripwood are nailed across pieces (E) to prevent the pots from rolling off. Six or seven of these will be sufficient. (M.h.)

Screwing into Hardwood

SOMETIMES considerable difficulty is experienced when fitting wood screws into a hard material. Unless a hole is first drilled to practically the size of the screw, there is a great risk of the head breaking off. If, on the other hand, too big a hole is made, then the screw will not hold at all.

Here, then, is a simple plan which will

enable a screw to be driven into any type of hard wood with comparative ease and to ensure that it will be a good fit. It is a successful method to employ not only for hard woods, but other material such as ivory and certain types of plastics.

In actual practice the screw is made to cut its own thread in the hole, and by



this means, it is a perfect fit, is easy to put in and will stay put. First a hole is drilled slightly smaller than the screw to be inserted, but the hole for the unthreaded part of the screw should be just a little larger.

Next a portion of the screw is cut away, and this can take several forms. The best method is to file off practically half of the screw as shown by the dotted lines. A section of the tapping screw is shown at (A), where the shaded part is filed away. It will now act as a tap and cut a perfect thread in the hole, and when a whole screw is inserted, it will go in easily and hold securely.

Other methods of cutting the tap are given at (B) where both sides are filed away, or by cutting a groove (C). (A.F.T.)

 ★
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 ★ Next week's issue of Hobbies Weekly will be the start of a new volume, and changes are planned in its presentation. There will be a 'new look' cover of better quality, and we shall continue to present in alternate issues the free design, which in itself is worth at least 1/-.
 ★
 ★ In addition, in the week in which there is no separate design we shall include four extra pages - making 20 in all. This is at the wish of a great number of our readers who have expressed a desire for more articles in their favourite magazine.
 ★
 ★ Extra production costs are inevitably heavy, and from next week the cost of the magazine will be increased a halfpenny - to 5d. See page 426 for details of next week's articles, and be sure not to miss a single copy of this "value for money" magazine.
 ★
 ★

MOSAICS IN THE HOME

NOTHING suits the contemporary scene better than mosaics. The fascinating multi-coloured squares now being manufactured from plastic give that splash of colour so welcome in the modern home.

Mosaics can be used as splash backs in the kitchen or bathroom, for window sills, door finger plates, shelves, table tops (particularly dressing tables), pictorial panels, trays, coffee tables, etc. What's more, you can design your own individual pattern if you prefer.

Fitting the mosaics is simplicity itself. A coat of mastic (or adhesive) is applied to the surface and the tilettes simply pressed into place. They set hard within a few minutes. When the tiling is complete a filler is rubbed into the joints between the tilettes and the job is complete.

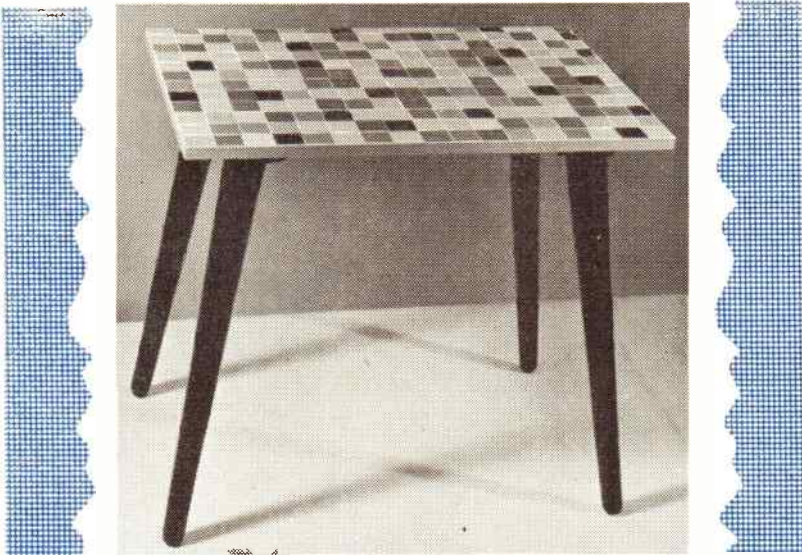
By B. Wise

Mosaics are supplied in two forms, (a) in a set pattern, affixed to a backing sheet of 12ins. square and (b) supplied loose and in assorted colours and applied singly. For the latter you can purchase quantities of separate coloured tilettes if you have a particular design and colour scheme in mind.

The 12in. square sections supplied, among others, by Messrs Plysu Ltd of Bletchley, Bucks, contain 256 square tiles and cost 6/6 per section. The mastic costs 5/6 per lb. and is sufficient to cover up to 8 sq. feet. The applicator for the mastic costs 6d.

The advantage of these set sheets is in quicker application over large areas. Also, they can be cut between the rows of tilettes with scissors whilst individual tiles are cut with metal shears or a small hacksaw. This is, of course, a great advantage when filling in irregular shapes such as around pipes or light switches. Corners and angles are also more easily overcome.

Surfaces on which the mosaic tiles are to be applied must be thoroughly clean and on glossy surfaces a key must be provided for the mastic by rubbing over



the surface with rough glasspaper.

Individual mosaic tiles can be obtained from The Laymatt Flooring Co., of Seabourne Rd., Bournemouth. They are sold in ten attractive colours, are 1in. square in size and are cut quite easily when needed, by scoring the face with a single-side 'Ever Ready' type of razor blade and then snapping off with finger pressure.

Here again, the individual tilettes are fixed with a mastic and set hard within a few moments. The between-joints filler is applied after the mosaics have set hard. The surplus filler is scraped off immediately. An hour afterwards, a sheet of well-damped brown paper is laid over the face of the pattern and left for around 15 minutes. This softens any particle of filler invisible to the naked eye on the surface of the pattern. It is then wiped over with a soft, damp cloth, leaving the joints white and the tilettes clean.

Renovating Trays

Particularly pleasing is the use of mosaics for trays. An old tray which is a family favourite can have a new lease of life with a new covering of mosaics. A word of warning; boiling kettles or electric irons will mark the surface of plastic mosaics as they would any other artificial surface.

For those interested, a kit containing 2 sets of oak tray frames and bases, 2 coded printed designs (if you do not want to attempt your own design), 2 sets of tilettes, a tin of mastic, brush, packet of filler, cutting gauge and a filler

applicator, can be obtained from Messrs Laymatt Flooring for 32/6. It is sufficient to make two trays.

You can make your own mosaics from off-cuts of Marleyfilm, Contact or other plastic surfaces, some of which already have an adhesive back and therefore no mastic application is necessary. Cut it into 1in. square and 1in. by ½in. sections which will give you easily worked combinations. Make sure the surface to which it is to be applied is thoroughly clean and dry.

Individual touch

Towel pegs in the bathroom, marked with 'His' and 'Her's' cut from these sheets look very attractive and the children will love them.

Mosaic finger plates on doors also give a very individual touch. Purchase clear, plastic finger plates; they cost around one shilling each. Lay them on the door and mark around their outline. Fill in between the markings with mosaic tiles, set in mastic, and when they are set hard, screw over the finger plates in the usual way.

Table mats are also easily made. Cut out pieces of thick cardboard or hard-board 6ins. square and apply the tilettes to whatever design you prefer. Flower pot stands can be made in the same way.

The kitchen becomes particularly gay with a sink, splashback and window sill covered with mosaics. A rectangular panel applied to the wall as a background for hanging kitchen utensils such as whisks, palettes, stirring spoons etc, will please any housewife.

TIDDLERS AND OTHER POND LIFE

A SMALL pond or stream will inevitably attract many small boys complete with jam jars, tins and improvised nets, and their activities are usually looked upon with tolerant amusement by their elders, who probably do not realise the wealth of life and interest that lies in the most humble pond.

Of course the small boys do not realise this either and they only see and catch the more obvious creatures. As a serious study, pond life or more majestically, Fresh Water Biology, can be a most rewarding pastime at any age and has the great advantage of convenience, since some piece of fresh water, however small, can usually be found near one's home. As to cost, most of the equipment required can easily be made at home, or improvised from household utensils.

Struggle for existence

The typical pond, of course, scarcely needs description, but the intelligent observer will quickly distinguish between the true pond, with its more or less permanent vegetation, and the large 'puddle', often formed after prolonged wet weather on a grassy sunken patch. Although the latter, if it remains long enough, will certainly be found to contain some creatures, mostly microscopic, the former alone can produce a balanced population of animals and plants.

In a well-balanced pond there is sufficient actively growing plant life to sustain the plant-feeding animals which themselves are preyed upon by the carnivorous ones. Indeed, what may appear to the casual observer to be a peaceful little country pond, glittering under a summer's sky, is in reality the scene of a bitter struggle for existence among the various creatures present, where no quarter is asked or given! Although individuals may perish, the population of the pond as a whole does not greatly change.

The first thing that strikes the observer is undoubtedly the plant life. Many ponds are almost completely covered with one of the Duckweeds, the most common being the Lesser Duckweed, with 'leaves' (actually flattened stems) about $\frac{1}{4}$ in. wide. These plants are truly floating, with hanging roots. If the pond



A pond with its typical band of hopeful searchers.

is completely covered with Duckweed, it is not likely to be very rewarding for the searcher for pond animals, since this often indicates foul water. Amongst the rooted plants, we may mention the Canadian Waterweed, *Elodea*, which was introduced into this country before the middle of the last century, and has spread widely. It is often used in cold-water aquariums. Also well-known for this purpose is the Water Milfoil, or *Myriophyllum*, with its delicate leaves, giving it a feathery appearance when submerged.

By P. R. Chapman

Flying over the pond in summer, with their characteristic hover, will almost certainly be seen several Dragonflies, aptly named for their ferocity towards any other creature they can overpower. They, together with their larvae, are amongst the terrors of the pond. We have over 40 species of Dragonfly in this country, together with the smaller Damselflies. The eggs are dropped into the water and, on hatching, the larvae, poor swimmers, crawl about the bottom mud. They undergo several moults and after the last are known as Nymphs. Some species remain in this stage for several years, feeding on tadpoles and anything else they come across, before the wonderful transformation on a stem above the water, into the beautiful adult insect.

The other chief 'monster' of the pond is the Great Diving Beetle, *Dytiscus marginalis*, very common in ponds. They are over 1 in. in length when adult and

are truly ferocious; often attacking creatures many times their size. Small fish and even frogs may fall victims to their savage jaws. Although air breathing, they can remain submerged for quite long periods by means of an air supply carried under the wing cases. They often fly by night in summer. The larva of the beetle is also a ferocious carnivore, living in the water, but surfacing from time to time to replenish its air supply. It reaches a length of about 2 ins.

Another very conspicuous insect, often seen near the surface of the pond, is the Water Boatman. This is a true bug and like all of its class feeds entirely by sucking. It swims upside down by means of oar-like appendages.

Returning to the actual surface, myriads of Whirligig Beetles will probably be seen, usually in late summer. At the slightest disturbance they will start dashing madly about on the surface film in an apparently haphazard manner. Although living mainly on the surface, they are able to dive, carrying an air bubble with them. Larger 'Pond Skaters' can also be seen on the surface.

'Wrigglers'

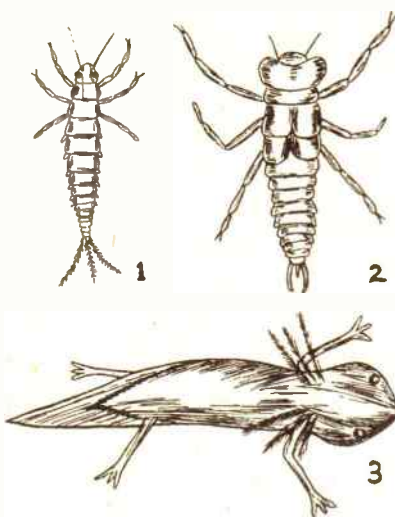
Although the small, moth-like Caddis Fly is not often readily visible, the larva, or Caddis Worm is very common on the bottom of ponds, where it builds a tubular case, using various materials such as twigs, sand grains, or pieces of broken shell.

On most still waters, Mosquito or Gnat larvae are to be found. They hang upside down from the surface film, breathing through a tube just penetrating the film. When disturbed, they wriggle wildly (hence the name 'wrigglers'). These

creatures are much favoured by small fish.

This brings us to the fish of the pond, and undoubtedly the most common of these is the Stickleback, or 'tiddler', to the small boy. Sticklebacks are most interesting creatures to study and unfortunately most of those taken home by the afore-mentioned small boy are doomed to a speedy end. It is, however, not difficult to keep them in an aquarium tank with a little care. They must have plenty of space; only about four to a medium-sized tank, and they must have live food, not dried 'fish' food. This is easily provided by the Tubifex worms readily available at most pet shops catering for the fish enthusiast. Another suitable food is *Daphnia*, or water fleas, themselves occurring in ponds. These can usually be obtained from the same pet shop, unless the amateur naturalist has the time to collect them himself.

Daphnia are on the boundary of what can be seen without a microscope, although they can be studied with the aid of a powerful lens, quite a cheap one being adequate. If the collector constructs what is known as a 'plankton net' he will be able to examine some of the smaller forms of life. This merely consists of a conical net of fine muslin, about 6ins. diameter, but with a hole at the tip of the cone which is tied to a small bottle, such as an aspirin bottle.



1. Larva of Mayfly ($\frac{1}{2}$ in. long).
2. Larva of Dragonfly (2ins.).
3. Newt tadpole (about $\frac{1}{2}$ -lin.).

When attached to a long stick and drawn slowly through the water, small creatures are trapped and swept into the bottle, where they are concentrated. After a few sweeps the bottle contents should be tipped out into a small white dish and examined with a hand lens.

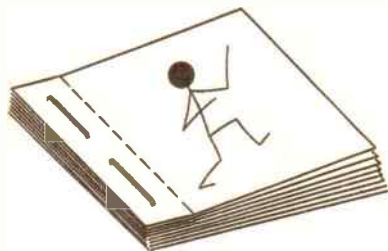
Many forms of small Crustacea, including *Daphnia*, will be seen darting about.

In the spring frog spawn and, later, the familiar tadpoles abound in most ponds, but these are so well known that little need be said about them. The newt tadpole, however, deserves mention, if only because, if caught and kept at home, the newt it eventually becomes is easier to keep than the frog. It is somewhat fish-like, more elongated than the frog tadpole, and has feathery gills. It may be fed on *Daphnia* or Tubifex.

Although we have had to ignore many of the pond inhabitants, mentioning only the most commonly observed ones, anybody who takes up this fascinating study seriously will no doubt wish to purchase some small book dealing with the subject more fully. There is an excellent one in the 'Observer' series at 5/-, and a more comprehensive (and of course more expensive) book is *Fresh-water Life of the British Isles*, published by Warne at 21/-.

In addition to the net already mentioned, little else is needed for pond life study—perhaps a small plain net, a magnifier, a few small white dishes and small bottles to carry home specimens. In order to obtain plants growing away from the bank, a weighted hook on a length of thin string is useful. This hook can easily be made from a piece of stout galvanised iron wire.

Home-made 'Movies' with a Mutoscope



THE little penny peepshows, or Kinoras, sometimes encountered in seaside amusement arcades, are descended from a simple toy once called the Mutoscope. Nowadays the Mutoscope or 'flick-book' is less common than it was before the war, although schoolboys often draw series of pin-men pictures on the page corners of their text books and make the figures appear to move by flicking the pages between finger and thumb.

A pin-man flick-book can be made quite quickly. Draw your pictures upon pieces of thin card measuring 2ins. by 3ins. Each picture must depict a successive stage in an obvious movement and the figures must be drawn in the correct

relative position. Make your pin-man jump, turn somersaults, grow tall and shrink, lift a dumb-bell or dance with a pin-woman. When the series is complete secure the pictures together to make a book, using a stapling machine.

To produce an illusion of movement flick over the pages smoothly, but not too rapidly. Owing to the principle of the persistence of vision your eye will be

deceived.

The Mutoscope has been ingeniously adapted in recent years to illustrate certain technical books. The student by flicking the pages, can observe animated diagrams printed in the wide margins and so aid his understanding. A well known correspondence school uses sequences of photographs in this manner to demonstrate dance steps. (A.E.W.)

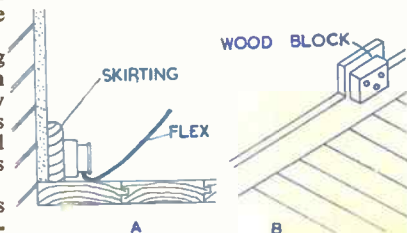
Adding Power Points

WHEN doing up the home many people like to install a few additional electric power points. If the extra points are to be on the skirting boards then don't make the common mistake of fixing them too near the floor.

In modern houses where the skirting boards are sometimes no higher than 3ins. it means that the flex is usually badly bent where it joins the plug (as shown at A), and gets continually rubbed against the floor every time the plug is inserted and removed.

To prevent this, position the points as near as possible to the top of the skirtings or, if this is still not sufficient (as in

the case of narrow skirtings), fix a piece of timber to the wall (as shown at B) so that the plug can be positioned at a suitable height from the floor. (F.K.)



Spring Cleaning for the Handyman

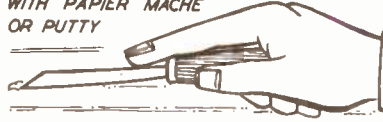
WHEN it comes to spring cleaning in the home, many handymen are too eager to get hold of a paint brush and rush into the job of decorating without giving any thought to the preliminary jobs that may require attention. Nothing is more irritating than to complete the re-decorating of a room and then find that part of the newly painted woodwork requires repairing. Do be sensible about this task of overhauling the home and carry out the various jobs systematically.

Make a list

It is best to get a pencil and paper first and go over each room very carefully, jotting down the various jobs that have to be done. Once your list is completed for the inside of the house, then do the same for the outside jobs. From your lists you will be able to estimate the total amount of materials required, so that you can order them all at once. By doing this, you will avoid interruptions later on resulting from waiting for materials. To help you to compile your repairs list, here are a few of the most common points which you should look for about the house.

First of all check all doors. Ensure that they fit properly against the door stops when closed. Make sure that there is enough clearance at the bottom and that the door doesn't rub on the floor. If

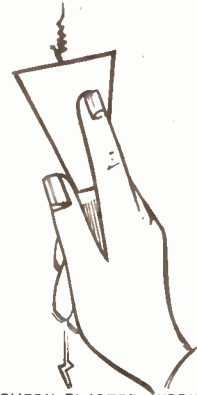
FILL GAPS BETWEEN FLOOR BOARDS
WITH PAPIER MÂCHÉ
OR PUTTY



EASE STICKING
DOORS



CHECK PLASTER WORK
AND MAKE GOOD ANY
CRACKS & HOLES WITH
A PLASTER FILLER



thick carpets are laid, then fit rising butt hinges. Check the locks and see that they function freely. Do they need oiling? Try the door handles to make sure that they operate with ease.

After this, examine the windows. Ensure that they fit properly and function freely. Check the window panes to see if any reglazing is necessary. If the window is the sliding sash type, then have a look at the sash cords to see if there are any signs of wear — replace with new cords if necessary. Check the window fasteners and other items of ironmongery.

The next general feature is the floor. Walk over every part slowly to see if there are any loose boards. If so, then these should be nailed down securely. If, however, the loose boards are necessary to gain access to underfloor pipes, then secure them with screws — not nails. Examine the floor surface for signs of wear. Remember, a badly worn floor can cause havoc to newly laid linoleum. If necessary, resurface an old floor with super quality hardboard. This produces an excellent flat foundation for lino or carpets. If there are any gaps present between the floor boards due to shrinkage, then fill up with papier mâché or putty.

Check over the plaster work on the walls and ceilings and fill up any cracks with a plaster filler. If there are any

signs of dampness present, then try and locate the cause and remedy it. Persistent dampness will ruin new decorations.

Are you making pelmets for the windows? Are you filling up that odd alcove by the fireplace with a built-in fitment? If so, then take the necessary measurements and complete the jobs before you commence to decorate.

By K. Finlay

Have a look at the fireplaces and see if there are any loose or missing tiles requiring attention. At the same time examine the fireclay backs for any cracks. These should receive attention without delay because a cracked fireback can be the cause of an outbreak of fire. Repair with special fire-clay cement. Does the chimney need sweeping? If so, then make an early appointment.

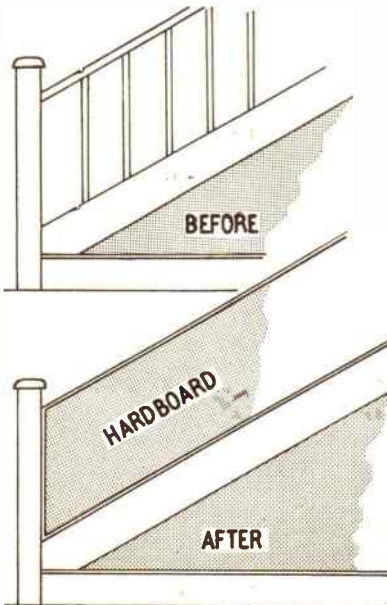
Check your staircase carefully for loose treads which creak and 'moan'. Loose treads may be secured by renewing the glue blocks underneath the stairs or by driving a few nails through the top surface into the risers below. Balusters also have a nasty tendency of working loose, so check each one individually. Why not modernise your staircase by panelling the balustrade with hardboard or plywood? This will cut down a lot of dust-collecting cavities.

Flushing pipes

A very careful examination should be given to the sanitary fittings. Ensure that each sink, bath, lavatory basin and W.C. functions freely, and that all waste water flushes off with ease. Use a force plunger on each sink and flush out the waste pipes with a strong solution of borax and water. This will get rid of any greasy accumulations inside the pipes. Check the washers on the taps and replace with new ones if necessary. Check also the inlet washer on the W.C. cistern.

The foregoing points then, although not fully comprehensive, will give some indication of the various inspections which should be carried out inside the house.

The following inspections are required outside. Start at the top of the house and see if there are any broken or missing tiles or slates on the roof. Pay particular attention to the ridge tiles at the apex of the roof. Check the flashings around the chimney stacks to ensure that they are functioning properly and in a good



Modernise your staircase before decorating by flush panelling with hardboard.

state of repair. If these are found to be defective, then you will have rain getting inside your house.

On the roof

A job which is often neglected by the home handyman is the pointing of brickwork on the chimney stack. The continual heat from the flues sometimes causes the mortar joints to fall out, and this causes dampness to enter into the brickwork. If necessary repaint any defect.

Inspect the guttering carefully. Clean out all dirt, moss, leaves, etc., and swill out with plenty of water. The inside of all gutters should be given an annual coat of bitumastic paint to prevent corrosion. Be on the look-out for cracked gutters and if any joints are found to be defective, then repair with a bitumastic sealing compound.

Check all the rainwater pipes for

defective joints and cracked pipes. Ensure that there are no blockages within the pipes. When painting rain-water pipes remember to paint the backs of the pipes. This part is often missed and is, therefore, the most vulnerable position for corrosion.

Have a look at the external rendering and roughcasting on the face of the walls to see if there are any damaged or defective parts. Be particularly cautious if there are signs of dampness present.

Inspect the gullies and drains to ensure that they are free and function freely. Lift off the gully grids and man-hole covers, and swill the drains thoroughly with a strong solution of borax and water, followed by a disinfecting solution to keep the drains 'sweet'.

If possible try and trace the position of the damp-proof course around the house. This should be positioned not less

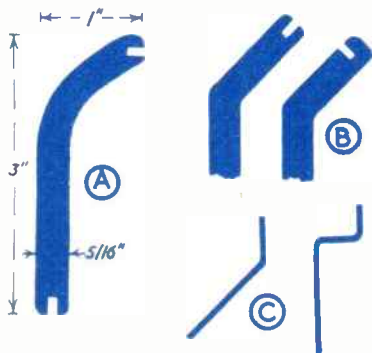
than 6ins. above the surrounding ground. Don't have rockeries or garden beds built up against the walls and projecting above the level of the damp-proof course. This is only inviting the ingress of dampness into your house because the soil acts as a bridge for the moisture. Also, make sure that the fresh air inlets under wooden floors are kept free, as these are necessary to prevent dry rot.

Paths and Fences

Finally, check over the garden paths, gates and fences, and note any repairs that may be required.

Once all the preliminary repair jobs have been carried out, then the home handyman can commence the final task of spring cleaning by re-decorating without the fear of having to spoil his work with some major job at a later date.

Spanner for that awkward Nut



a useful addition to your tool kit. The measurements given at (A) are only approximate, but will give a good idea of the proportions necessary to produce a good tool. They may be amended quite easily to suit special circumstances.

For use in a confined space the position of the spanner slot in each end should enable almost any nut to be manipulated with ease. Where, how-

ever, the space is very limited, it may be necessary to have two spanners with the positions of the slots cut at slightly different angles in each.

Two alternative ends of the tool are given at (B), and these will, doubtless, allow sufficient variation for most jobs. The tool may also be bent or cranked (C) if this will make manipulation easier. (A.F.T.)

Home uses for Glued Tape

NUTS in awkward places can sometimes give a lot of trouble. It is when standard type pliers or spanners will not do the job that this handy little spanner proves its worth.

It was designed originally to adjust the balance screw of an alarm clock without removing the dial, but there are so many other ways in which it can be extremely useful. Scientific instruments, toys and models of all kinds with nuts in inaccessible positions, need such a tool.

Steel, of course, is the best metal to use, but it is not essential. The actual choice will depend upon the type and amount of work for which it will be needed.

For occasional light work, hard brass will answer very well. Where the work is harder and the tool has considerably more to do, then it must be either iron, or better still, mild steel.

The size of the spanner will be governed by the job it has to do, and a set of three or four different sizes will be

AYARD of glued tape marked off in inches is very useful to stick down on to the working bench or table. It will not stretch and will always remain a working guide in place of a steel inset rule.

When border and line painting is carried out, glued tape may be used to give an accurate straight line when applied to wall or other surfaces. It stops the paint from creeping under or over the border line. Two strips of glued tape applied parallel leaving the required space between is all that is necessary to give a straight border for panel and similar painted work. Damping and peeling away the tape at the conclusion of the job, when dry, is all that is necessary. This method is far easier than frequently removing excess paint in the wrong places, and cheaper in the end.

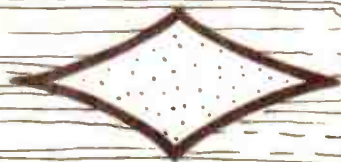
Many kinds of brick and plaster walls in the home often present some difficulty when it is necessary to drive home a nail to hang a picture or to fit a bracket into position. Before the nail is driven home, it will be found that two one-inch pieces

of glued tape applied in the form of a cross will not only strengthen the wall's outer surface, but will actually prevent it from cracking. The nail may then be driven home through the double layer of tape, this being removed in the usual way by wetting and stripping.

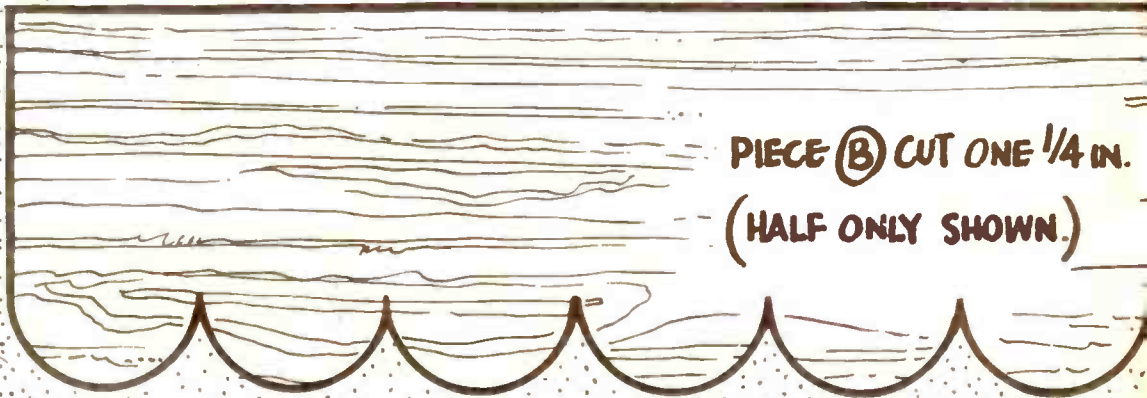
Plaster walls, partitions, cracked surfaces and other articles may be temporarily repaired with a length of glued tape applied across the break. Minor cracks in walls may be suitably dealt with before painting, the paint itself having the effect of hardening off the tape under its coating.

Where a broom head hole is too large for the wood handle, a strip of tape may be first wound round the handle end to enlarge the circumference of the handle, thus making a firm fit. This may also be carried out with tools of all kinds where the handle is too small to give a good strong fitting. Broken handles on baskets and carriers may be reinforced by the application of a strip of tape wound round. A coating of paint will make it hard and durable in use. (F.T.D.)

Display Race



PIECE (A) CUT ONE $\frac{1}{4}$ IN.
(HALF ONLY SHOWN)



PIECE (B) CUT ONE $\frac{1}{4}$ IN.
(HALF ONLY SHOWN.)

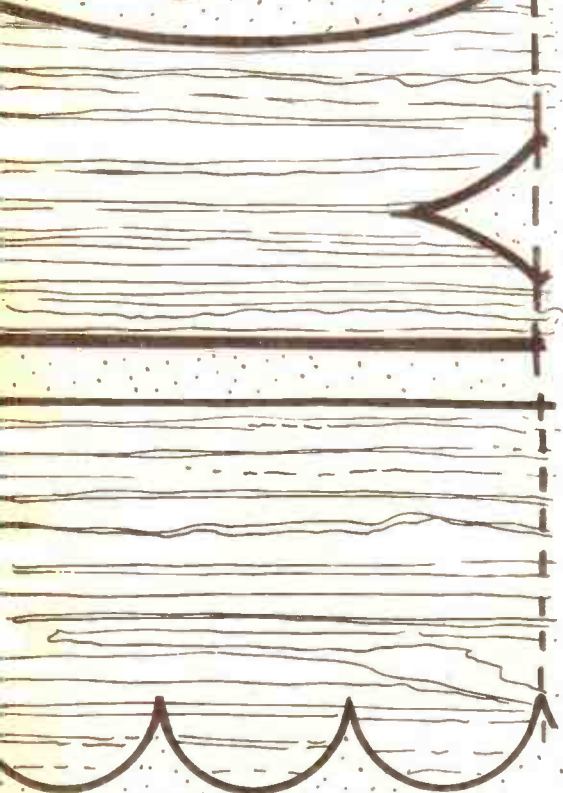


PIECE (C) CUT ONE $\frac{1}{4}$ IN.



PIECE (C) CUT ONE $\frac{1}{4}$ IN.

K for CACTI AND SUCCULENTS



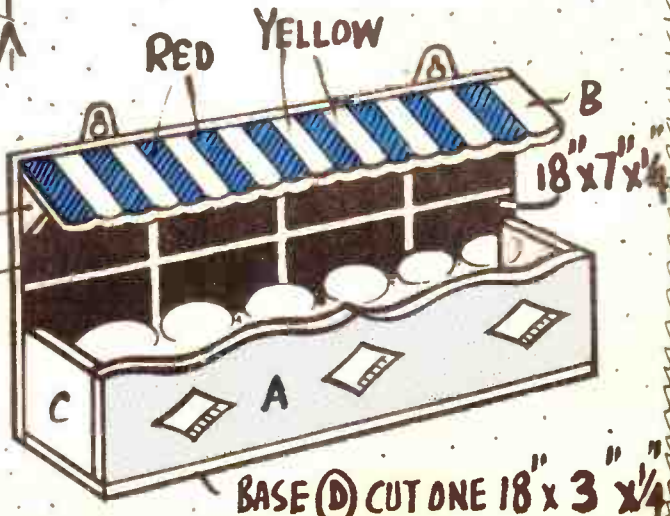
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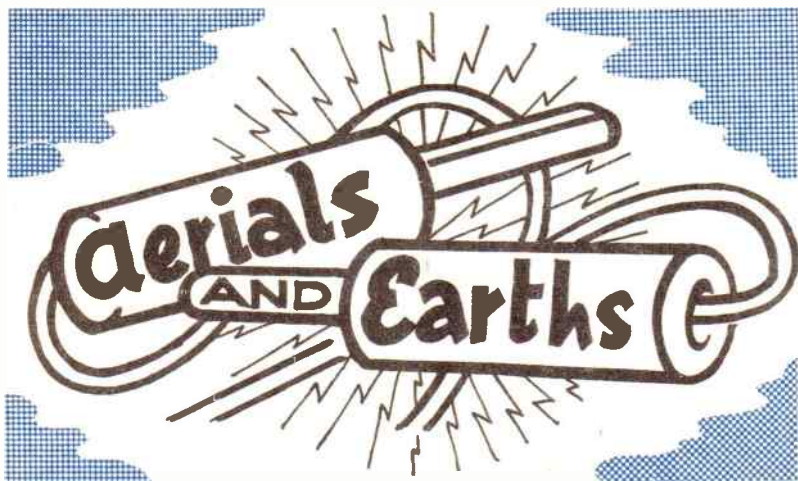


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AIDS TO EFFICIENCY—BY 'RADIO MECH'

READERS who have constructed some of the receivers described in past issues may welcome a few extra details about means of erecting aerials, and providing earths. This information will also allow best results to be obtained with a ready-made crystal set or valve set, which may have been somewhat unsatisfactory because of an inefficient aerial system.

A good aerial should be well insulated so that the weak strength of the signal picked up is not lost by leakage to earth. Out-door aerials are best suspended upon egg or aerial insulators, at least one being used at each end of the wire. The down lead should also be away from gutters, etc., and should, if possible, enter the house through an insulated tube.

The longer and higher the aerial, the stronger the signals from it. This can be very important with a crystal set, or small valve set. A good out-door aerial can be made from 45ft. to 60ft. of wire, this forming the horizontal portion and down lead in one uncut piece. Circumstances such as the position of a building, tree, or pole used to support the far end of the aerial will usually decide what length can be erected. If only 20ft. or 30ft. of wire can be put up, this will normally do well, even for a crystal set.

When space is very limited and there is nothing to which the far end of a horizontal aerial can be attached, a vertical wire may be possible. This can be quite efficient if not too near the house walls.

There is no need for any aerials of this kind to be exactly horizontal or vertical, the angle of the wire depending upon the method of supporting it. Suspension points can often be arranged by fixing a short pole to a shed, tree, or a high corner of the house.

For such outdoor aerials, 7/22 wire (seven strands of 22 SWG) is often used. The kind of wire is not important, provided it is fairly strong.

Indoor aerials

These can be made from thin, plastic covered flex, or from single strand insulated wire. As inner walls will be dry, insulators are not necessary.

Sufficient volume can sometimes be obtained if the wire is run at floor level round the skirting, or under the carpet. This is particularly useful in upstairs rooms. The wire may also be fitted at ceiling level, or upon a picture rail. As with the out-door aerial, a single length of uncut wire is best. It should be as long as can be arranged, without turning it back upon itself. It will thus usually run along two walls of the room, with a few feet extra to reach the receiver.

Such aerials are not satisfactory in metal dwellings. In other houses, satisfactory operation of a crystal set is usually possible with an indoor aerial, although volume will be less than with an exterior aerial. With valve sets, a length of wire along one wall alone will usually do.

When there is plenty of amplification for the purpose in view, a short 'throw out' aerial can be used. For this, two or three yards of thin, insulated flex will suffice, placed anywhere convenient, such as behind furniture, or along the floor.

Earths

An earth must be used to obtain the best possible signal strength. It is thus necessary for proper reception with a crystal set, or for good speaker reproduction with a small transistor or valve set.

The earth lead should go to a metal object actually in contact with the ground. Metal spikes are obtainable for this purpose, with a screw to hold the lead, which may be of 7/22 wire, or flex.

Earth connections can be made to main water pipes, but *not* to gas pipes or hot water pipes. A sheet of metal, or any metal object buried in damp soil will provide an effective earth, but copper or other non-rusting metal is best. If the earth lead is not soldered on, then a really tight bolted or screwed joint should be made.

If the earth needs to be in a lawn, a narrow slit can be made with a spade and the wire pressed down into this for two or three yards.

The receiver

When a crystal set is used, the need for a good aerial and earth has been explained. With no other type of receiver does the actual aerial and earth prove of such importance. This arises because a crystal set does not amplify, but only detects the signals picked up by the aerial. With an efficient crystal set, stations at several hundred miles range may easily be received. But with a poor aerial, and perhaps no earth, reception of even the nearest BBC station becomes so weak that the set is useless.

Similar points apply when loud-speaker reception is wanted with a small set, such as one employing only one transistor or valve, or a battery 2-valver. In these cases, a good aerial and earth can make all the difference between ample volume or weak reception.

With larger valve sets, sufficient volume will usually be available from many stations, even with a poor aerial. But with receivers of this kind it will be found that reception of distant, weak stations is much improved, when the aerial is more efficient.

The subject for next week's free design will delight every youngster and modeller. It is for an electric-powered cabin launch in balsa—a very light and speedy job. P. W. Blandford will give expert advice on wood turning and a beginner's 2-valve battery radio will be described by 'Radio Mech' among other popular features.

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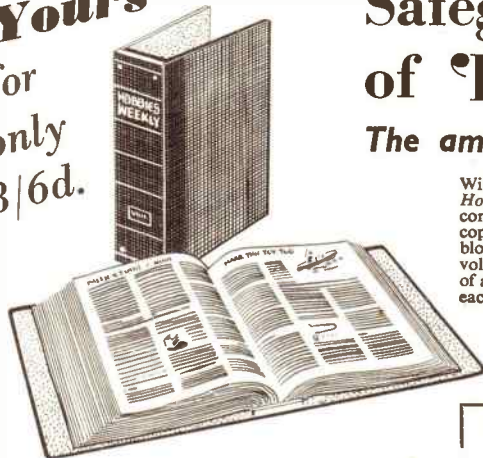
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DURING 1958 'Meadophlogy' (beer, wine and spirit label collecting) took third place in the list of major collecting hobbies. Various breweries throughout the world were pleased about this. When approached about the formation of an International Society of Meadopholiats they offered to help and supply all collectors with free labels.

Notes, news items and other useful information pertaining to the Society will be published at intervals in *Hobbies Weekly*. Meadophlogy has already received a good show in this magazine and enthusiasts are advised to place a



ALMOST every breed of dog has been depicted on stamps and labels. Apart from describing the various breeds in your notes, it's a good idea to include a few dog directions.

Dogs need a variety of food. Vegetable food is as much a necessity to them as to human beings. I have often cured a dyspeptic, sick, despondent dog by the timely prescription of a due amount of carefully chosen food, including a little meat. Every dog should have two fair-sized meals a day.

A dog in good condition ought to have bright eyes, a red tongue, hard, well-developed muscles, and sweet breath. A good master will always see to his dog's own meals in person. He will remember that a clean warm bed is indispensable, and that draughts are as much disliked by, and as injurious to, animals as they are to human beings.

Mr. A. Garratt of 9th Avenue, Slade Park, Headington, Oxford is a great dog fancier. He owns three beautiful English sheep dogs, all of which have won many exhibition prizes. He would like friendly correspondence from fellow readers interested in dogs and animals in general. Mr. Garratt collects stamps and match labels.

regular order to avoid disappointment.

Membership of this society is free, and particulars are obtainable from Raymond Cantwell, 48 Fourth Avenue, Slade Park, Headington, Oxford, England. But please enclose a 3d. stamp for reply with this, and all correspondence concerning hobby advice, pen-friends, etc.

The illustrations show a few of the many covers issued by Flower and Sons, Stratford-on-Avon.

Recently I met Mr. M. W. G. Coyle, the area manager. 'We are very proud of our labels', he said, 'and spend large sums of money on their production'.

During 1959 the Society hopes to catalogue all known labels, study thematics, 'pub' signs, etc., and generally encourage the hobby.





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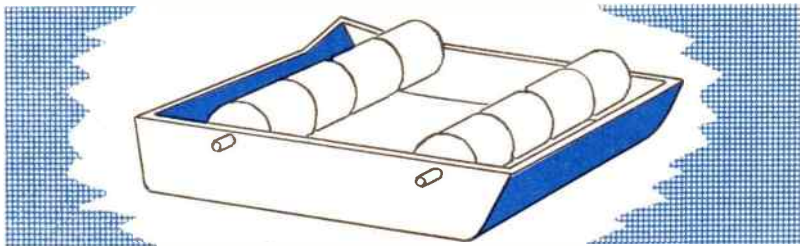
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An Improved Developing Dish

ALTHOUGH film developing tanks are almost universally popular nowadays, they have their limitations and for one reason or another there are some amateur photographers who, through necessity or preference, still continue to use a dish for film development.

When using a dish in the extremely limited amount of light permitted by the use of orthochromatic film material or, worse still, in the total darkness necessitated by the use of panchromatic film, it is very difficult to make quite sure that the film is actually passing through the developer solution without risking scratches by too heavy contact with the dish itself.

In order to overcome these troubles I have devised a modified dish as illustrated. It consists of a xylonite dish which permits the drilling of holes. Two are drilled in each of the two long sides of the dish, one at each end. Through these are passed two glass rods which carry a row of rubber door stops, thus



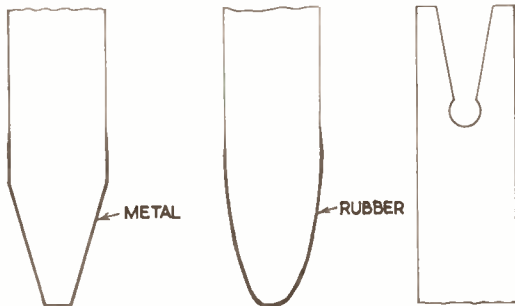
forming two rubber cylinders which are able to rotate freely.

The film is threaded so as to follow round and below each of the two rollers and is arranged with the emulsion side downwards so as to ensure that it is properly in contact with the developer solution. The volume of solution is adjusted so that its level is above the lower edge of the rollers but still lower than the axles so that leakage will not occur through the axle holes. Threading is very simple even in pitch darkness and there is no difficulty in holding the film, both

ends together, with one hand while the developer is poured in with the other.

The axles could just as well be made from some form of plastic rod such as knitting-needles of substantial pattern, but it is better to avoid the use of wood because it is liable to absorb some of the solution and this may result in the contamination of following films. Similarly, metal is best avoided because there may be the possibility of reaction with some of the constituents of the solutions with subsequent corrosion and possible damage to films. (H.G.)

Safeguards for Clothes Props



THE home handyman is sometimes called upon to make some clothes props and this is a very simple job to do. However, the following points should be kept in mind when making them.

Don't use timber weaker than 2in. by 1½in. for your props and always plane the surfaces smooth. The bottom ends of the props should not be cut to a sharp point because sooner or later these will break off. Instead, bevel the bottoms to a blunt end and it is a good plan to cover these ends with thin sheet metal. This will make the props more serviceable.

If your washing area is in a concreted court-yard then round off the bottom ends and cover with strips of thick

rubber. This will prevent the props slipping on the concrete.

For the top end, many people merely cut out a V-shaped notch. This does not produce a firm holding to the clothes line. Instead, bore a hole a fraction or so

larger than the diameter of the clothes line and then form a V-cut so that the throat of the cut is slightly less than the required diameter of the line. By doing this, the line will 'click' into position and

will not be so liable to fall away from the prop.

Finally, it is a good plan to apply a coat of outdoor lacquer to your clothes props so that they can be easily wiped over with a cloth each time before using. When not in use, always store your props under cover; don't leave them lying outside exposed to the weather.

Check on Bad Cheques

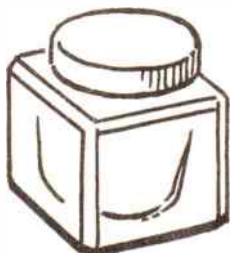
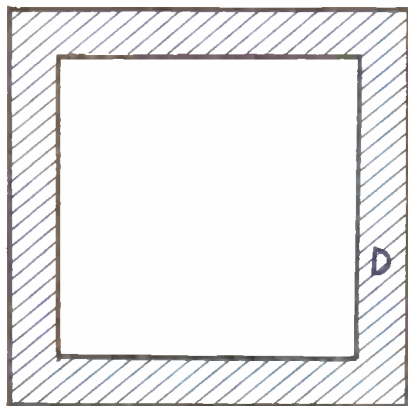
FROM America comes news of an ingenious device which is helping the police to catch people who buy goods over the counter with bad cheques.

Before a shopkeeper agrees to accept a cheque from a customer he asks him to lay it on top of a glass plate which is set into a simple box, and to hold it with his hands out flat. A camera inside the box then photographs both the customer's cheque and fingerprints. The film is of considerable length and is developed only as required. The whole operation takes but a few seconds. The pictures are of great value to the police should the cheque prove to be worthless. (E.D.)

By Finlay Kerr

'KINGFISHER' INKSTAND

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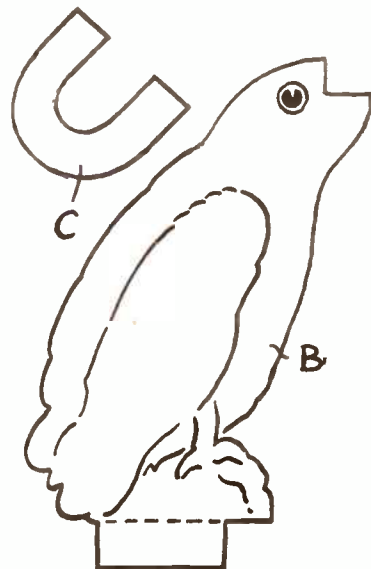
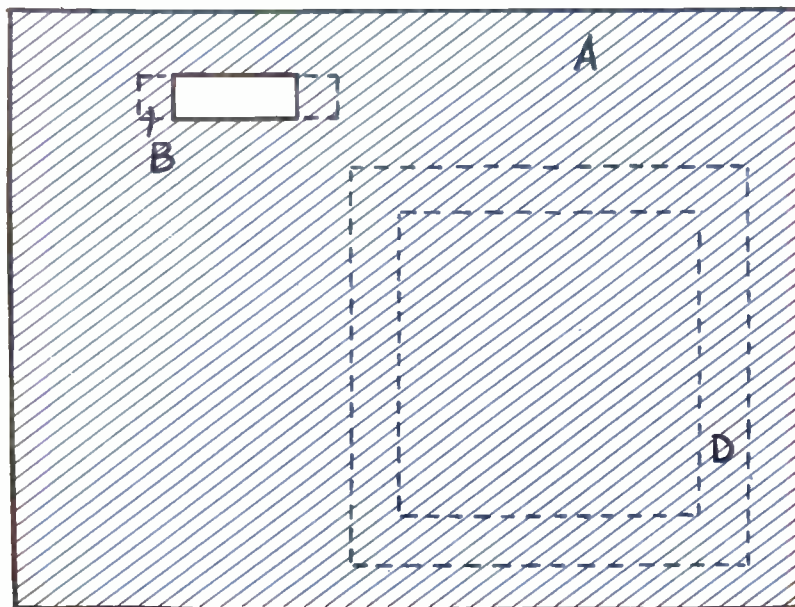
BACK VIEW



USE your fretsaw to cut one of each piece, (A), (B), (C) and (D) from $\frac{1}{4}$ in. wood. Clean up the edges and then glue piece (B) into the base (A). Glue piece (D) to the base (A) in the position shown by the dotted lines.

The shaped piece (C) is glued to the back of piece (B) and forms the holder for the pen, which in turn forms the beak of the kingfisher.

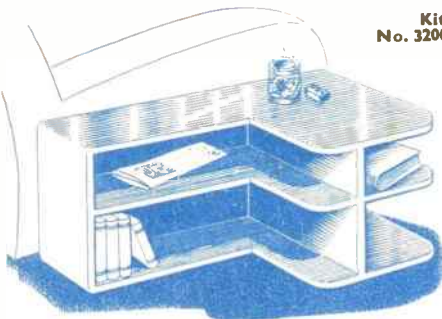
Paint the base black and the bird kingfisher blue and red. Inkwells can be obtained from Hobbies Ltd., Dereham, Norfolk, price 2/- (postage 7 $\frac{1}{2}$ d.) (M.p.)



THINKING OF YOUR HOME?

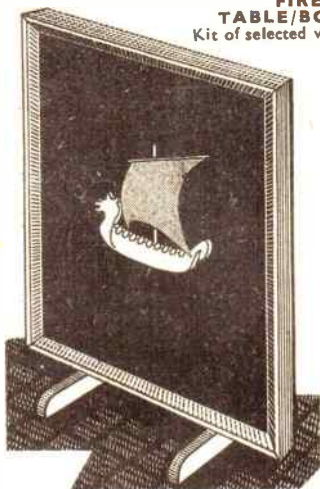
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