

# HOBBIES WEEKLY

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SEPTEMBER 21st 1955

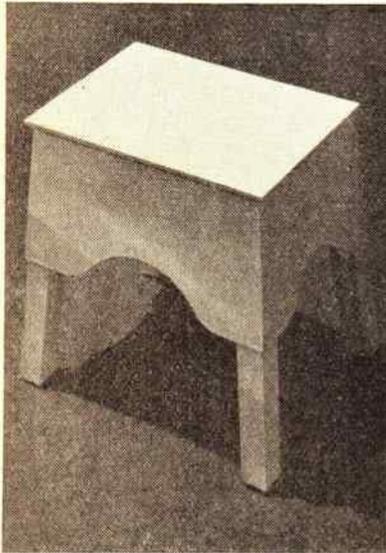
VOL. 120

NUMBER 3125

Full instructions for making—

## A HANDY STOOL FOR THE KITCHEN

By Gordon Allen

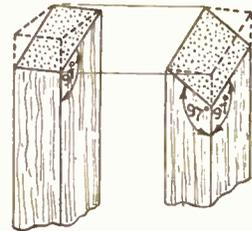


square straight-grained hard timber 16½ ins. long. Make sure they are perfectly square at their ends. To 'stagger' the legs and at the same time ensure that their feet will lie flat on the ground it is necessary to cut both ends of each leg to the angles shown in the illustration. Do this with a tenon saw, using pencil lines drawn round the four sides of the timber as a guide (see Fig. 1).

step. With a sharp pencil mark the shapes required by running the pencil down the leg edges. Cut them out and with a fretsaw curve recesses 2½ ins.

CUT AWAY

CUT AWAY



1ST CUT

2ND CUT.

Fig. 1

### Level Surface

Now cut the 'step' from ¾ in. ply, and after trimming and glasspapering, place it on a level surface. Glue the legs in the corners of the step leaving ¼ in. overhang. Although the legs will be pointing upwards and at an angle they will balance in this position without support if hot glue has been used. Check alignment of the legs while the glue is still 'tacky'.

When the glue is thoroughly dry the end gussets are fitted (Fig. 2). Hold the smaller sheets of ⅝ in. plywood against the legs with their edges touching the

deep along their bottom edges as shown. Mark these out with compasses or by drawing round the edge of a plate. Glue the gussets in place and finish by putting in a double row of 1 in. panel

● Continued on page 389

**M**ANY housewives would like a light, handy stool to fit into that spare recess in the kitchen. The virtues of the stool described here are manifold. Instead of having to drag up a heavy chair to reach down the pots and pans, the tins or the bottles, one merely has to slide out this light and handy stool. And it's only two nights' work, the total cost being 7s. 6d.

Start by cutting four lengths of 1½ in.

All correspondence should be addressed to The Editor, Hobbies Weekly, Dereham, Norfolk

For Modellers, Fretworkers  
and Home Craftsmen



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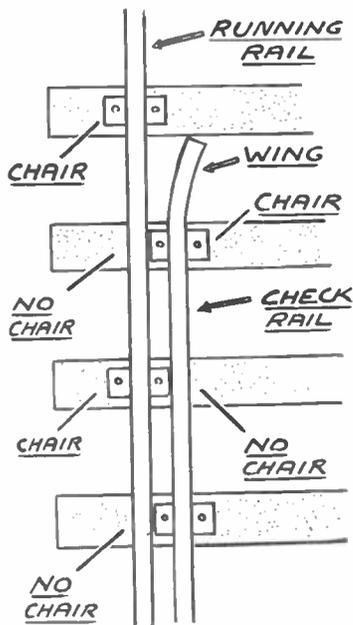
# STOP THOSE DERAILMENTS

**I** ALWAYS think that it is very depressing when one sees a model railway on which derailments are continually occurring. Yet derailments can be prevented with a little extra care in track laying, and in particular with the greater use of check-rails at doubtful places—a check-rail, of course, being that third rail that can be laid to grip the inside of the wheels and so give better rail-keeping properties to passing trains.

For some reason model railway makers seem very loath to use check-rails though they are quite easy to lay in, and look well, giving a sturdy appearance to the track at appropriate places.

## Reducing Pressure

The check-rail helps on the railways by taking a considerable amount of the pressure from the further side flange, which helps to prevent derailment on curves and at other awkward spots.



*The fitting of a check-rail by the single-chair method*

From the modeller's point of view, however, it means that the one set of wheels is virtually running in a groove, and so a check-rail can be used to keep the far side wheels right away from any doubtful bit of rail at that side, apart from reducing their pressure.

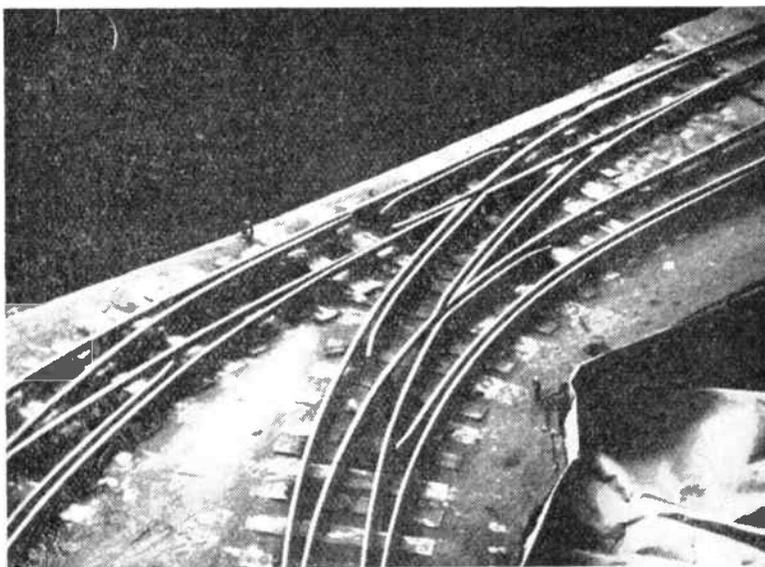
At switches, check-rails are used in real practice in short lengths set opposite

says *H. A. Robinson*

the acute crossing (where the one line passes through the other) to prevent the least chance of the far side wheels striking and riding up on the point. But on model railways where switches are usually of much sharper curvature and taken by trains at a speed that would never be thought of on a real track, they can be extended to give a

number of the special double chairs. But they can also, and to good purpose, be laid by chairing the check-rail with ordinary chairs to every second or third sleeper, leaving the running rail unchaired at that point. This method has the advantage that the 'check' can be adjusted better for the distance from the running rail at special locations.

3 mm. is the correct distance that the check-rail and running rail should be apart on a curve, but there are times



*Gauge 'O' trackwork made by the author, showing the use of check-rails to give safe running through a set of points and around curves*

smooth and safe run through the whole arrangement.

The modeller can also use check-rails with advantage on curves anywhere over which there is high-speed running, where they will greatly eliminate the danger of a pile-up, and in general help the racing trains to negotiate the curves.

## Help in Back-shunting

They can also be employed on sharp curves in goods yards, where, although there is no high-speed running, they help in satisfactory back-shunting — a manoeuvre that is not a strong point in many model railways. Another use for them is at the rail break necessary at a lift bridge. Here by staggering the location of the break in the two rails, both can be fully guarded by a 'check' laid against the further side rail.

Now as to fitting. Check-rails can be added to scale model track by using

when it is better to reduce this figure slightly. With double chairs any varying of the gap is impossible. Laying with single chairs is also considerably cheaper.

It is necessary to leave out the chair on the running rail when there is one put on the check because two ordinary chairs cannot go either side by side, or end to end, on the one sleeper. The absence of an occasional chair is not noticed, however.

Even with tinplate track, check-rails can still be added, though it is not quite so easy. The single rails can come from some old standard lengths pulled apart. A single rail that is to act as the check has the three sleepers left on it. It is then arranged in position and its sleepers secured to the underside of the running rails with a touch of solder at each point of contact. Or if the track is permanently laid, the sleepers can be secured with

● **Continued on page 388**

# AN ENLARGER PAPER HOLDER

A PAPER holder is essential for enlarging photographs, and while the commercially made ones are very good, they often become loose during the course of time. The one illustrated in Fig. 1 is primarily for

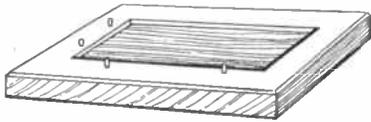


Fig. 1

whole plate prints, but by marking the frame and using a mask, half plate or postcards can also be held. The measurements shown in Fig. 2 arrange for the white border to be  $\frac{1}{4}$  in. width.

A piece of  $\frac{1}{4}$  in. plywood 9 ins. by 11 ins. is required, together with an old exhibition mount or piece of stout

cardboard of the same dimensions. Mark out the mount as shown in Fig. 2, making the aperture 6 ins. by 8 ins., and from the edges mark centres for pegs at

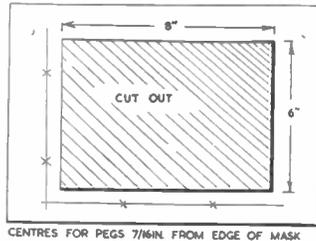


Fig. 2

distances of  $\frac{7}{16}$  in. Nail the mount firmly to the board as a temporary measure previous to drilling for the  $\frac{3}{8}$  in. dowel rod pegs. With the mount

attached, drill this and the plywood to take these pegs. Remove the nails and mount and cut out the aperture. A sharp knife will be required for this purpose, and care should be taken to see that the corners are cleanly shaped. If necessary it is possible to clean up afterwards with a razor blade.

The dowels are then inserted and these, besides holding the mount in position, also act as stops for the printing paper. They should fit quite firmly without glue, but it is necessary that the tops should be rounded and smoothed off.

Paint the top of the plywood a dead black. This prevents the reflection of light *through* the paper while printing, producing brighter prints, particularly on single-weight paper. For focusing purposes a sheet of smooth white paper is placed in the holder. (S.H.L.)

*You should watch those*

## Backgrounds Out of Doors

*says D.Y. Gooderson*

BACKGROUNDS are apt to receive scant attention, especially in out-of-door photographs. Concentration on the main subject becomes so intense, that what is immediately behind is sometimes forgotten. Good negatives can be so easily spoiled by little things which intrude too much. Let the background aid the subject.

Backgrounds vary in their importance and their necessity. They may be an essential part of the picture. In the case of a landscape, the background gives distance to the scene, it helps to create depth and the third dimension. Backgrounds may also be essential although subsidiary to the main subject. As an aid to the main subject, they cannot be disregarded, and often only the one particular type of background will suit the photograph. A third type is that in which the less obtrusive is the background the better. In the latter case, sharp backgrounds only detract from the subject. They are not necessary; the more subdued they are, the better will the subject stand out. Portraits, flower studies and still life are often in this class.

Backgrounds can be controlled for their effect and use. The background of a distant landscape cannot be altered, but the effect of the background can be controlled by the foreground. If a distant



*An animal portrait in which the less obtrusive the background the better. A wide aperture has thrown the background out of focus*

landscape is taken, and the foreground is negligible like a flat field, the background loses in effect, for there is nothing to contrast against it. It will be lacking in depth.

Often the beginner takes a landscape because of the great stretch of countryside. But the foreground is bare, the miles of distant field and hills become a tiny strip across the negative, and the



*A natural snapshot spoiled by the deck chairs in the background*

sky occupies a large proportion of the film. The result is dull and bare. If there are trees, fences, animals or suitable figures in the near foreground, they will provide stronger tonal contrasts, they will break up the foreground, and the background will be thrown back by the contrast, and will assume its proper plane. By moving a few yards the whole effect may be changed.

#### Should Aid Main Subject

An appropriate background may form the middle distance, or it may be quite near. In any case it should be an aid to the main subject. The viewpoint, which controls the subject in relation to its surroundings, may make or mar the photograph. By moving round the sub-

ject, a variety of different compositions can be obtained. The background may in some cases be totally changed.

Finally, by using a wide aperture on a near subject, the background

background. The sky does not intrude, and the subject stands out well against it, but a filter is essential with a blue sky, to bring out the tone.

Whatever the background, aim to contrast it with the subject. Light against dark, and dark against light in the main masses, will ensure that the subject will stand out against the background even when there is sharp detail in the latter.



*A strip of countryside. The foreground is bare. The picture lacks depth*

ject becomes out of focus, and so the subject itself, being sharp, stands out better. The advantage of this is seen particularly in bird photography, where normally the mass of twigs and leaves would interfere with the clarity of the subject.

The sky is sometimes useful as a



*A similar scene, but the foreground contrasting with the background gives distance to the scene*

●Continued from page 386

## Stop Those Derailments

small screws direct to the base board. Care, of course, must be taken to see that the gap is correct.

#### 'Winged' Ends

The ends of all check-rails must be 'winged', that is, bent outwards so that wheels coming in will not catch but be led comfortably into the flange gap.

In model work the winging should be rather longer and of a more gentle angle than is found in actual practice. This is because wheels of models are never so precisely set as in full-sized stock, and some at least in a train may be travelling at a little distance out from the running rail and so will need guiding gently sideways into the check-rail space. A sudden sideways jerk caused by a too square end to the guard-rail might easily bring about over-riding and so encour-

age the very derailment the extra rail is there to stop.

Check-rails, too, it should be remembered, are extremely useful in making model road crossings and dockside layouts, the rails in question being checked on both sides and then a filling of some sort put in between and brought up to the rail heads at the outer faces. This method ensures perfect running of model stock.

### HOBBIES FRETWORK COMPETITION



On the left is a photograph of Mr. John Burbeck of Bromyard, Herefordshire, winner of the Silver Challenge Cup in our 1955 Fretwork Competition.

Did you make sure to get your copy of last week's issue containing full details of the 1956 Competition? If not, write to the Editor,

'HOBBIES WEEKLY'  
DEREHAM, NORFOLK  
for a copy, price 5d. post free.

'Draw-boring' will help to strengthen

# MORTISE AND TENON JOINTS

THE mortise and tenon joint, an extremely strong form of construction in itself, is sometimes strengthened even further by employing the system known as 'draw-boring', in which a dowel is inserted through the assembled joint.

While it is not recommended that cramps should be dispensed with when gluing the joint, this method of construction can assist one function of the cramp, i.e., that of drawing two parts together. Draw-boring cannot take the place of cramps entirely, because the cramp can also be used for correcting twist and for pulling a frame square.

A glance at the sectional elevation in the diagram will show that the hole for the dowel is 'staggered', and it is this

says *K. Blackburn*

at a distance of  $\frac{3}{8}$  in. from the edge.

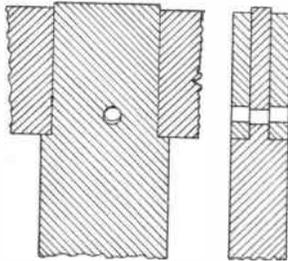
This hole is then drilled, after making sure that the tenon is first withdrawn. Next, the joint is re-assembled; a sash cramp should be used if available. The tenon can now be marked by putting a nail-punch into the hole and tapping slightly. Withdraw the tenon again, and drill the hole through it, not at the spot

indicated by the nail-punch, but slightly back towards the shoulder of the tenon. If a cramp was used when the position of the hole on the tenon was marked, this distance should be about  $\frac{1}{32}$  in. If no cramp was used, make it  $\frac{1}{16}$  in.

A pen-knife is used to make a blunt point on the dowel. When the joint has been glued and assembled, apply glue to the dowel and tap home with a hammer. To complete the joint, the dowel is trimmed off level with the surface of the wood when the glue is dry.

● Continued from page 385

## Handy Stool for the Kitchen



staggering which allows the dowel, when inserted, to exert a powerful pull on the tenon.

When the joint has been cut and fitted, the position of the hole should be marked on that part containing the mortise. The side of the hole should be about  $\frac{1}{4}$  in. from that edge of the wood into which the tenon fits. A  $\frac{1}{8}$  in. dowel is suitable for all but the heaviest work, so the centre of the hole will be marked

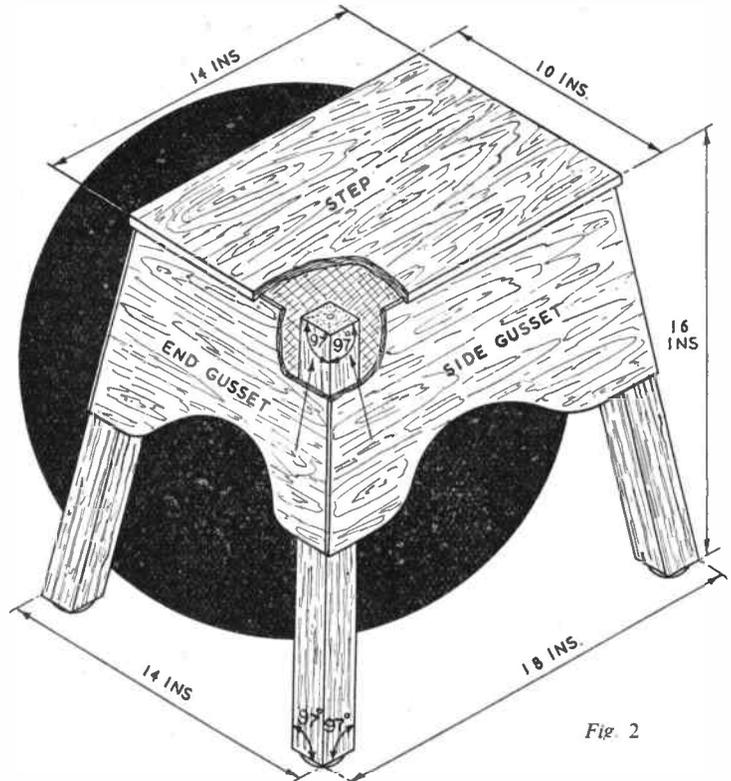


Fig. 2

## For Your Bookshelf

Foulsham's  
Complete Photographer

THIS comprehensive guide to photography includes articles on the latest methods and provides a sound buy for those who wish to take up photography just for pleasure, as a profitable hobby, or as a career. It makes easy and pleasant reading for those with merely a limited knowledge of the subject.

Published by W. Foulsham & Co. Ltd.,  
20 and 21 Red Lion Court, Fleet Street,  
London, E.C.4—Price 8/6.

pins. Make sure that the free edge of each gusset, against the step, is well glued.

Cut and fit the side gussets in exactly the same way. When set, screw four  $1\frac{1}{2}$  in. countersunk screws through the top of the step into the legs.

Final finish in stain or paint is left to the choice of the handyman. Four hard rubber feet can be screwed to the

bottom of the legs.

Requirements: One piece  $\frac{3}{4}$  in. plywood 14ins. by 10ins. for the step; two pieces  $\frac{3}{8}$  in. plywood 18ins. by 8ins. for side gussets; two pieces  $\frac{3}{8}$  in. plywood 14ins. by 8ins. for end gussets; four pieces  $1\frac{1}{2}$  ins. by  $1\frac{1}{2}$  ins. by 18ins. hardwood for legs; screws, glue, enamel, rubber feet.

# All About Miniature Aero-Motors

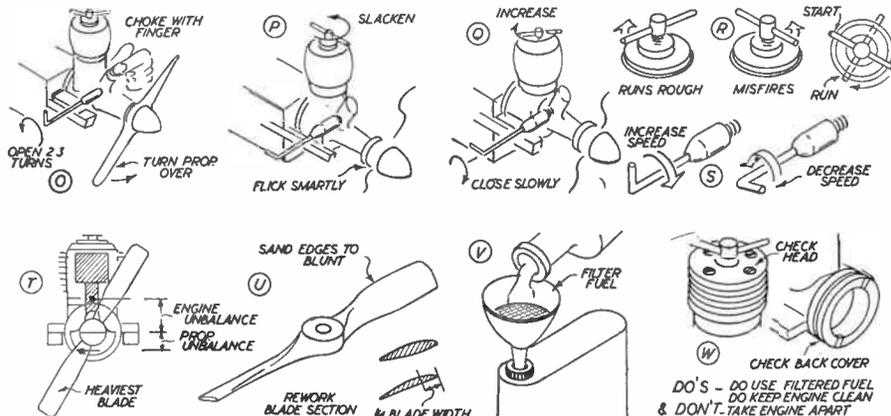
**T**O start the engine for the first time, open the needle valve two to three turns, place the left forefinger over the air intake tube and turn the propeller over two or three times by hand until the fuel line to the engine is quite full of fuel. It will help a lot if the fuel tank is located on a level with the engine. Then, with the finger still choking the air intake, turn the propeller over slowly two more times. Remove the choking finger and flip the propeller

off too much (or not enough compression to start with). Carried to extremes, lack of compression results in the engine 'popping' over without actually starting to run as the propeller is flicked. Normally one starts with a slightly rich fuel mixture, which requires lower compression, and then advances the compression up to the optimum setting for smooth, consistent running.

The needle valve control is usually far less critical. If the engine runs rough

and causing this fault. Most engines are inherently unbalanced, and if a propeller is also unbalanced, offsetting the heaviest blade against the piston as in (T) will minimize vibration. A propeller with an out-of-true centre hole is bound to produce bad vibration and should not be used.

Commercial plastic propellers generally pay for a little reworking with a file and/or glasspaper. In the case of nylon propellers, only a file will cut the



over smartly. If nothing happens after three or four flicks, try another choked turn and repeat. One of three things will eventually happen. Either the engine will burst into life and die out rapidly again; or it will fire and start to run rough, almost immediately stopping; or just fill with fuel without firing and become stiff and resistant to further turning over.

In either case the engine is too rich and/or has too much compression, so slacken off the compression adjustment (P). If the motor just 'pops', or starts to run, misfiring badly, then more compression is needed, so increase compression, as in (Q). Starting from scratch with a new engine, and not knowing any of the settings, standard practice is to go on increasing the compression after choking generously until [the engine becomes stiff or 'hydraulic-locked', then slacken off a quarter to half a turn. This should be about right for starting.

The basic rules are, having got the engine running, increasing the compression too much (or too much compression to start with) will make the engine labour and run rough (R). Continual misfiring, on the other hand, is a result of slackening the compression

and throws out a lot of exhaust oil, then almost certainly it is too rich. Closing down the needle valve will produce an increase in speed, up to the point where the mixture becomes too weak and the engine stops abruptly. An engine which cuts after a burst of high-speed running is almost always suffering from a shortage of fuel. Conversely, to slow down a diesel when running, open up the needle valve (S).

The chief factors to familiarise oneself with are the behaviour of the individual engine when the mixture is too rich (if too weak it will stop), and the effect of insufficient and excess compression. It should be possible to leave the needle valve setting alone, once it is initially adjusted for smooth running with any particular size of propeller, and work entirely on the compression control for starting. Slacken off compression about one-quarter of a turn, choke and flick to start. Then increase compression back to the best running position as the engine warms up.

Some engines vibrate badly when running, others are relatively free from this fault. If vibration is present to an uncomfortable degree, check first that the propeller is not badly unbalanced

material. First remove any flash from the edges and tips which can cut the fingers badly when starting. Then get to work re-shaping the blade section to a flat underside with the maximum blade thickness well forward (U). It is possible, sometimes, nearly to double the efficiency of the propeller by these methods.

For trouble-free operation, always filter fuel from the bottle or original container into the fuel can (V). This may seem an unnecessary precaution but even the smallest speck of dirt can clog the spray hole in the engine. Also some fuels-containing castor oil tend to precipitate white solids on standing. Provided this is filtered off, the fuel is still all right for use, but such a sediment poured into the tank may clog the fuel line.

The only points to note on the engine itself are to check that the head or cylinder jacket does not work loose during running, also the crankcase backplate. Either fault can cause loss of power, or even make the engine impossible to start at all, for no clearly apparent reason. Once an engine is properly set up and adjusted, it should start every time with the minimum of trouble, and continue to give good service for a long and useful life. (R.H.W.)

# Modelling a Head in Clay

**I**N the first stage the armature was covered with clay. Proceed now to build up the head. Begin once more at the base, adding more clay—still, however, in small pieces. Your purpose is to fill out the large masses. Try to think in terms of solid geometry, visualising the neck as a cylinder, the skull (forgetting for the moment about the hair on its surface) as an egg-shape,

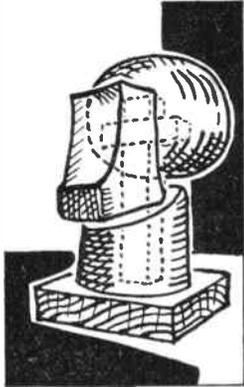
By *T. McCreanor*

shapes first. If you do this properly the smaller ones will give no trouble later on. Keep referring to the subject. Use the

run down the side of the neck from below either ear, and particular attention should be paid to their disposition. Note also the shape and placing of the Adam's apple.

These features are more prominent in men than in women. Consequently a woman's neck is generally slender and graceful, whereas the man's is muscular and capable of suggesting vigorous action. By using this knowledge effectively, you have the means of endowing your model with the semblance of life.

Having completed the neck to your satisfaction, you now have a standard of reference by which you may gauge the size and proportion of the upper



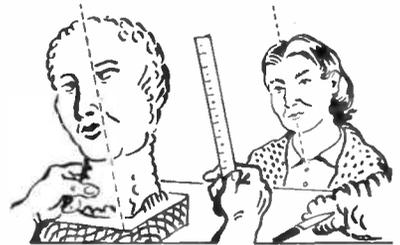
Three basic shapes of the head.



Developing the neck.

rule to test angles and pay particular attention to the overall angle of the head. If you are unsure of dimensions, callipers should be used. Above all, keep turning the model so that you are adding to a new area with each piece of clay. By doing this you keep control over proportions, and avoid bulges which are, to say the least, uncomplimentary to your sitter.

The human neck is the head's support; but equally it is the agency whereby the head can turn and twist in so many directions without the remainder of the body being moved. This action is controlled by the large muscles which



Testing angle of the head.

portions. These are the subject of the concluding article.

All that remains at this stage is to fill out roughly the bulk of the skull and the wedge-like block of the face and lower jaw, and to remember to keep your clay damp with the wet rags.

and the facial mass from the ears forward as a rough block. The smaller shapes, nose, eyes, ears, and cheekbones, need not worry you just now. Concentrate on filling out the large

## AN IDEAL GIFT

# A Set of Inlaid Table Mats

**W**HY not try your hand at simple inlay work? Even if you have never attempted it before, you need not be afraid to make a start. It is really quite easy.

### Cut from Plywood

First of all cut the required number of mats from plywood, about the size of the one shown at (A) on the pattern page. Mark out the position of the inlaid portion and cut along the lines with a knife. Insert the point of the knife and lever up the first layer of the plywood. Clean out well and then cut your pieces of thin wood to fit. Glue them in position and place under

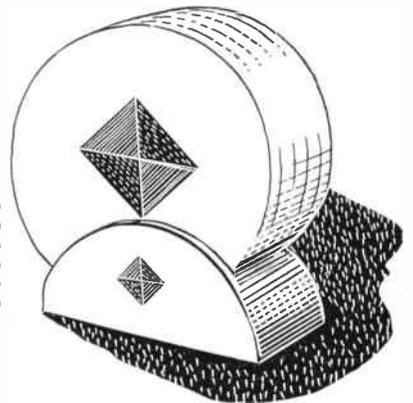
The design is shown  
full-size on page 399

weights to dry.

The stand is made up from two pieces (B) and two pieces (C) (shown solid black). Pieces (B) are  $\frac{1}{4}$  in. thick and pieces (C)  $\frac{1}{2}$  in. to 1 in., according to the number of mats required.

Inlay work can also be executed on the front of the stand as shown.

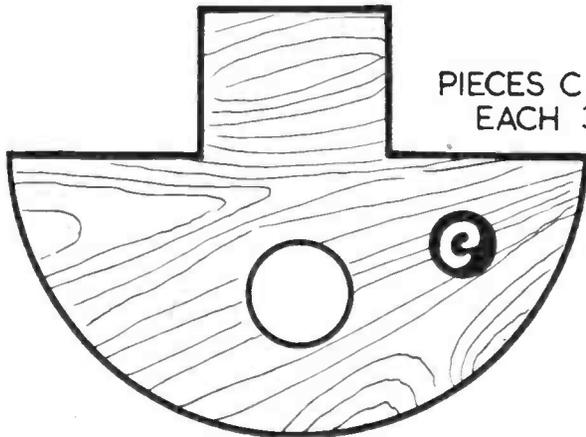
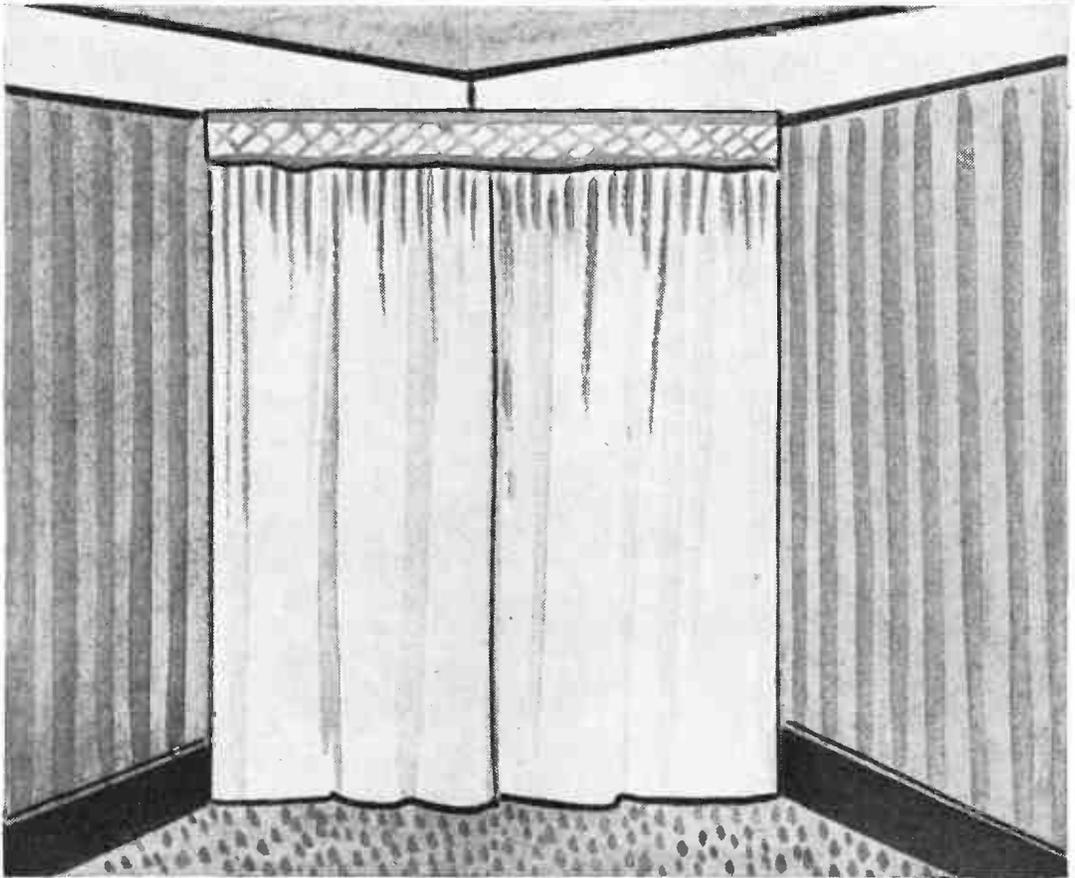
For those who do not wish to use inlay, the fretted overlay, shown in black, can be glued on the stand. In



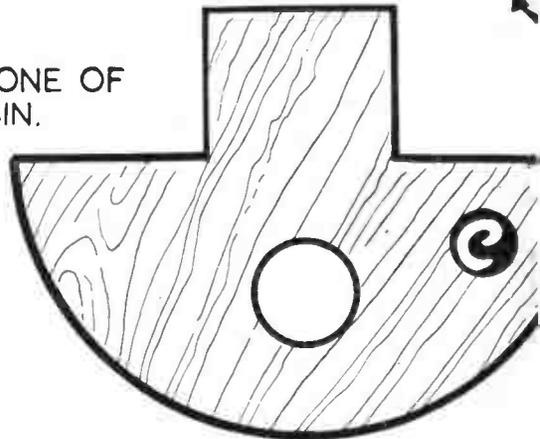
this case the mats will be left plain.

The underside of the mats can be covered with flock paper, green baize or cloth. Alternatively they can be painted and sprayed with 'velvet spray'. (M.p.)

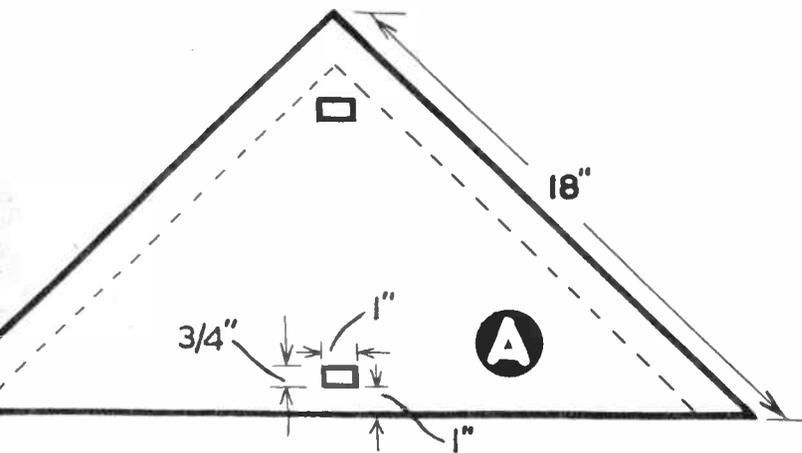
# HOBBIES PICTORIAL GUIDE TO MAKING A



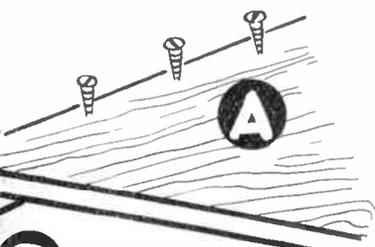
PIECES C. ONE OF  
EACH  $\frac{3}{4}$ IN.



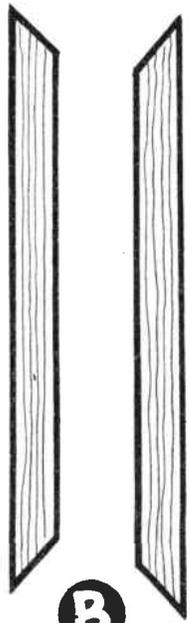
# CORNER WARDROBE



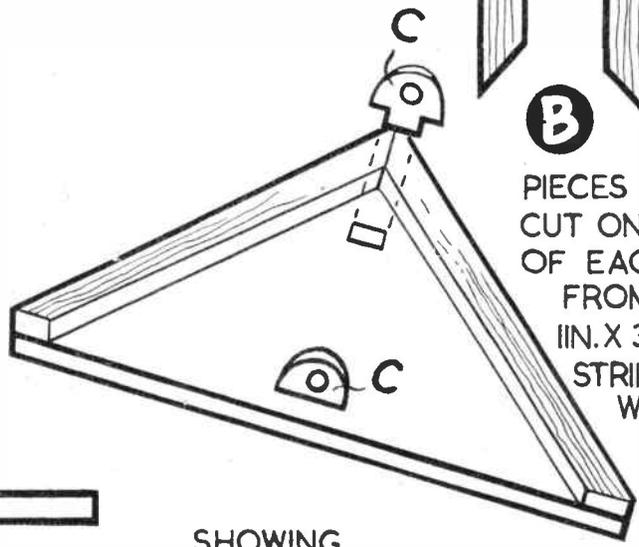
TOP CUT ONE FROM 3/4IN. WOOD



**B** SCREW PIECES B INTO WALL



**B** PIECES B CUT ONE OF EACH FROM 1IN. X 3/4IN. STRIP WOOD

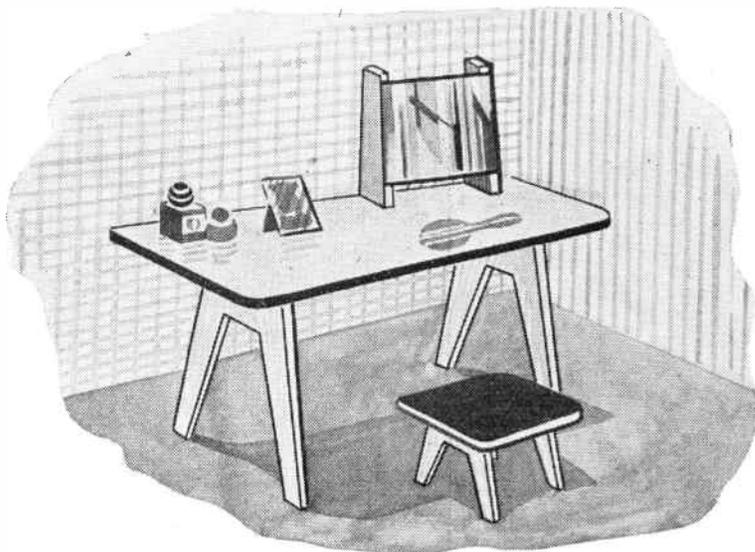


SHOWING UNDERSIDE OF SHELF



1/2IN. METAL ROD 1 1/2INS. LONG

# The second article in our series of contemporary Doll's House Furniture



THE illustration here shows a modern dressing-table, mirror and stool. It is a companion design to the bed previously described. The diagrams below are shown full size and should all be cut from  $\frac{1}{4}$  in. wood.

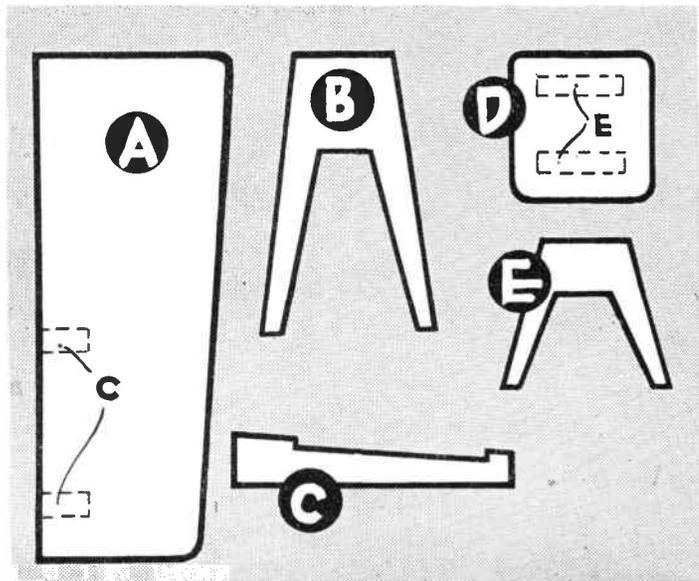
Piece (A) forms the top of the dressing-table and (B) the legs. Note that two pieces (B) are required. They should be fixed to the table top by means of glue.

Two pieces (C) form the uprights

of the mirror which is represented by a piece of bright tin. Make sure that the edges are turned over to prevent accidental injury. The size of the mirror is 1 in. square.

Make the stool from two pieces (E) and one piece (D). Glue them together as shown by the dotted lines.

The finish will of course match the bed described in the first article of this series.



## A TEACHER'S TIPS

HERE are two handy tips, sent by A.R.C., a handicraft teacher:

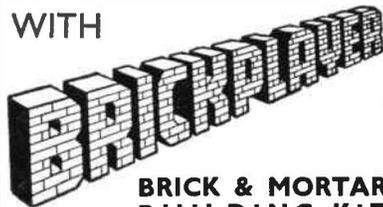
Never set a saw in a temperature which is at freezing point or below, as the tips snap off so easily. Always do this job in a warm room.

If you want a real razor edge on a plane iron, after the normal rub up on the coarse and fine stone, dip the iron in very hot water. Then finish off the edge on a strip of old, hard leather.



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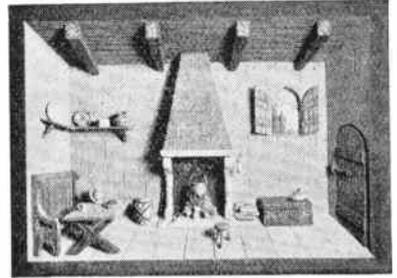
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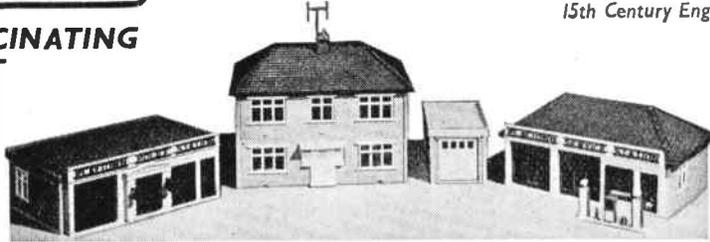
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# Spray-Guns and How to Use Them

By Eric Brown

**S**PRAY-GUNS are especially useful for the handyman who does his own home decorations, as well as for applying a pleasing finish to any article he has made, but there is a right and wrong way of using them. It is not merely a matter of filling the gun and waving it about over the surface of the work. Once the correct technique has been learned, however, the results should be first class.

Spray-gun attachments to fit the household type of vacuum cleaner are available at quite modest prices. The non-trigger type is usually supplied with several detachable jets of graduating sizes for spraying liquids of varying densities.

## Control Screw

The trigger-type of gun is more convenient to use, as it can be comfortably held in the hand, and one has more control over the direction, velocity, and movement of the spray. There is also usually a control screw fitted to regulate the size of the fixed jet and in consequence the amount of spray emitted, which dispenses with the need for detachable jets. These advantages are slightly offset by a somewhat higher purchase price, but for really serious work the trigger type of gun is to be preferred.

The uses of a spray-gun are many. Ceilings can be oversprayed with water when washing off, thus rendering this somewhat messy and difficult job considerably easier. Wallpaper can be very easily and quickly soaked with a penetrating spray for easy removal. Germicides and insecticides can be very effectively sprayed, as can creosote for preserving fences and woodwork. Further uses include the washing down of paint-work, the cleaning of carpets, and, of course, the application of paint, particularly cellulose, for which purpose the spray-gun has gained rapid popularity.

On all spray-guns, both the trigger and detachable jet type, the most important essential is absolute cleanliness in the components of the gun itself, and also the material that is to be used. The jar and jets should be perfectly clean and free of dust. Take particular care that the vent hole in the inside of the cover is quite clear, and that the sealing washer is sound and unbroken.

After use, the gun should be thoroughly cleaned immediately, for if any spraying material is left in the gun, it will harden and prove most difficult to

remove—particularly from the jets and small passages. The best way to clean the gun is to remove the jar and wash out thoroughly. With whitewash and distemper, water should be used, while with paints and cellulose, the thinners as advised by the paint manufacturers are necessary. Note that paint and synthetic enamel thinners must not be used for cleaning out after cellulose has been used. This will cause it to thicken and coagulate.

After the jar has been cleaned, the jets should be removed and thoroughly washed out, and all the interior of the top cover wiped with a soft mop brush, making frequent applications of the cleansing medium.

The jar is then filled a quarter full of the thinners or water as the case may be, the jet replaced, and the cover screwed down, and the whole gun shaken vigorously for a few seconds. On the detachable jet type, there is a control hole in the upper side of the cover. This must be covered with a finger during the shaking operations, otherwise the cleansing fluid will spill. The vacuum cleaner is now switched on and the cleaning fluid sprayed through the jets for a few seconds to ensure that all the passage ways are thoroughly cleared, and the spray gun is then placed in a warm place to dry off naturally. Drying with cloth is not recommended, as small pieces of fluff may clog the jets.

## Clean Thoroughly

Where a cylindrical type of vacuum cleaner is used, the dust-bag should be thoroughly cleaned internally and externally, and the cleaner run free for a minute or so to remove any possible traces of dust. Should the air-delivery be rather poor, it would be advisable to remove the dust-bag during spraying operations, but this is not really recommended, for the dust-bag forms a most efficient air filter, and its removal will almost certainly cause the minute specks of dust which are always present in varying degrees in the atmosphere, to be deposited on the work. With distemper and flat finishes this is not really important, but with brilliant finishes, such as enamel and cellulose, the presence of dust is fatal to good results.

The spraying material should be thinned to the correct consistency with the appropriate thinners, and the paint receptacle on the gun filled to two-thirds. Avoid overfilling, otherwise the gun will not work successfully.

When spraying a big area the gun should be held about 12ins. from the left side of the article, and brought steadily and evenly across to the right side. The gun is then slightly lowered and is brought slowly across to the left again. In both directions the areas of spraying should overlap.

## Different Technique

Where large areas have to be sprayed with a quick-drying finish such as cellulose, a slightly different technique is used. With the above method of application, the cellulose will be dry or nearly so with the return sweep of the gun. This will tend to make an uneven application, as the edges must be kept 'alive' to ensure a perfect blending of the spray strokes. In these circumstances, the gun must be continually swept from left to right, removing the thumb from the control hole at the completion of each stroke to stop the spray: the gun is then repositioned again on the left side and slightly lower down to cover a fresh surface, the thumb replaced over the control hole, and the gun drawn steadily and evenly over the work. The procedure is thus continued until the work is finished.

The speed of the gun is adjusted by the spray emitted, and should be regulated so that an even, smooth coat is deposited without any runs or 'tears' forming. Another important point to note is to hold the gun perfectly parallel to the face of the work.

With the trigger-operated gun, which has no detachable jets, the method of application is precisely the same, the only difference being that the spraying control screw at the rear of the gun is adjusted to suit the material being sprayed, and that the trigger is released at the end of each run to shut off the spray when dealing with large areas.

Never wave the spray-gun backwards and forwards over the work; it will be almost impossible to attain a smooth and even finish; and 'runs' will almost certainly result. The only correct methods of application are those described above; any deviation will almost certainly result in failure.

If it is necessary, vertical sweeps can also be made, again working on the principles outlined.

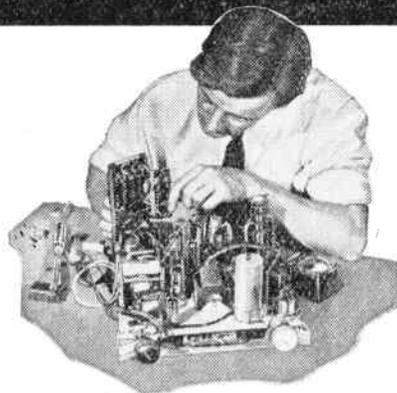
When spraying ceilings the finish should be well stirred until it attains a thin cream-like consistency. Using the medium-size jet in the spray gun, the jar is filled to approximately two-thirds of its capacity. Hold the spray-gun about 18ins. from the ceiling and at an angle of approximately 45 degrees.

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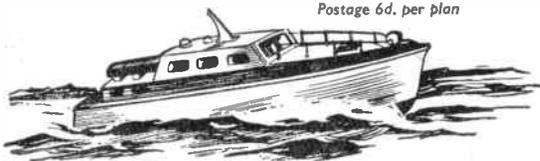
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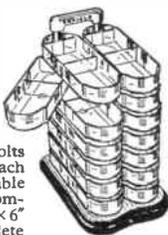
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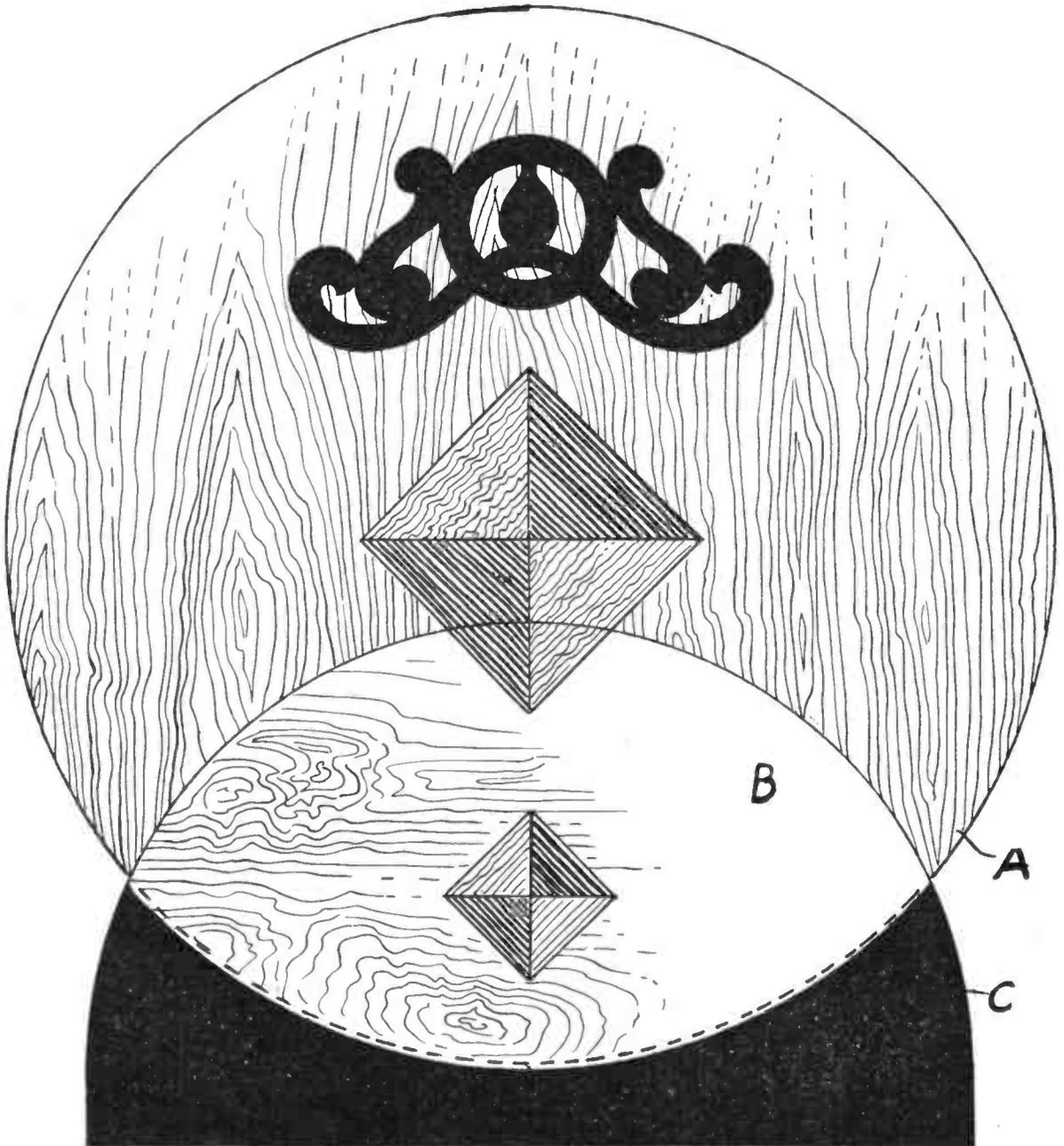
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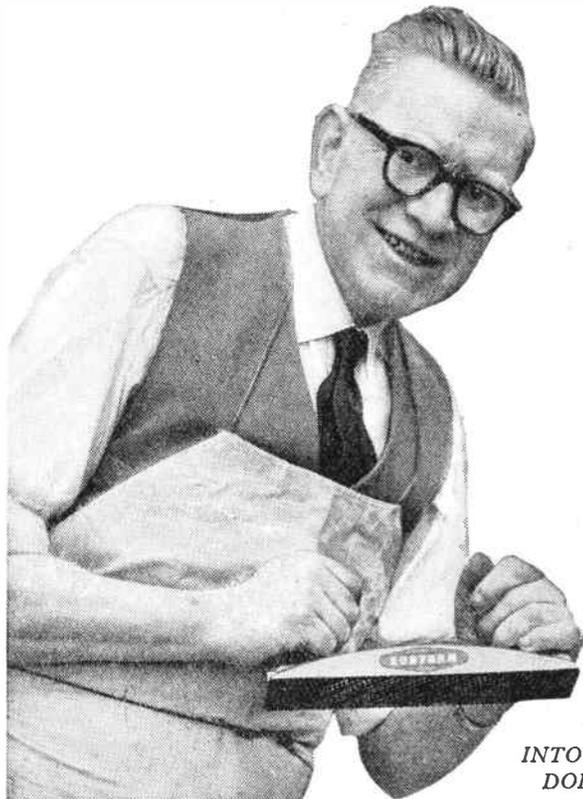
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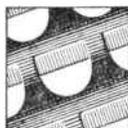
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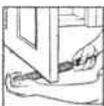
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