

HOBBIES WEEKLY

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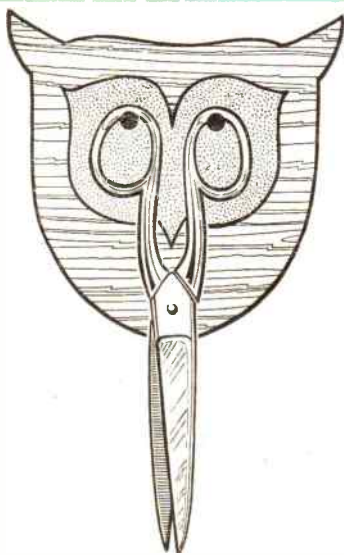
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A housewife will find it handy

NOVEL RACK FOR SCISSORS

this is essential. The ideal length of the scissors is about 7ins.

The next step is to cut the two pieces forming the owl's head. These are shown in the diagram Fig. 1. The squares shown are $\frac{1}{4}$ in., and must be enlarged to $\frac{1}{2}$ in., thus making the head twice the size.

Number the squares as shown in the diagram and commence to draw in the shape. This is easy if you complete one square at a time. There is no need to draw in the whole thing, just complete half, say, the left-hand half, trace it and transfer it to the other side. When the shapes are complete, they should be transferred to the wood by means of carbon paper.

Any kind of wood will do, providing it is free from knots, but, perhaps, obochle is the easiest to cut and work. The background (A) should be cut from

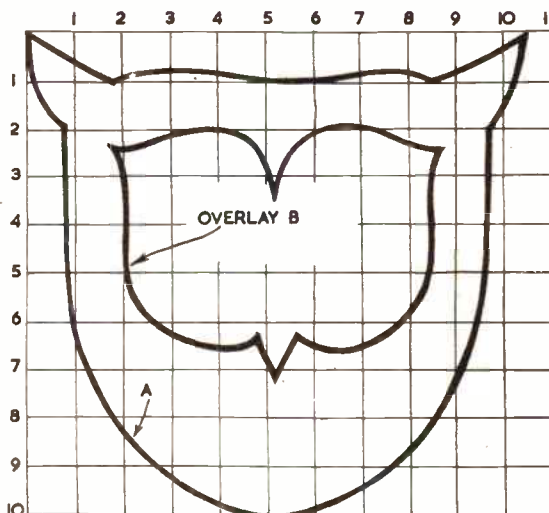


Fig. 1

$\frac{1}{4}$ in. or $\frac{1}{2}$ in. wood and the overlay (B) from $\frac{1}{4}$ in. Clean them up with glasspaper and glue together as shown in Fig. 2.

If the head is to be carved slightly, the

● Continued on page 34

THE WISE OLD OWL

SOMETHING out of the ordinary is sure to catch the eye and if it is useful it will also command admiration. The owl rack illustrated on this page uses a silhouette of an owl's head for a background, and the handles of the scissors are the eyes.

The idea behind the rack is that you should make it as a gift. Of course, it can be made up for your own house, but its chief merit is that it makes such a splendid and novel present.

Choose a pair of scissors with identical handles as shown in the illustration. Since the handles represent the eyes,

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For Modellers, Fretworkers
and Home Craftsmen

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CANEFWORK BASKETRY

ALMOST every piece of basketry work will need to be finished off with some type of border, and this may be either of the open loop or plaited border types.

The open loop is the simplest of all and needs little explanation. With this the upright stakes are left longer than actually necessary by an amount that will vary according to the distance apart of the stakes. Each upright is taken in



Fig. 1



Fig. 2



Fig. 3

turn, bent into a curve, and threaded down into the sides of the basketry by the side of the next but one upright. This looks quite effective if all the curves are made of exactly the same height, and is a reasonably strong border. With the thicker types of cane it may be advisable to point the end of the stake before it is bent down, and the awl may be needed to open up the basketry to permit of the stake being inserted. The open loop border is best suited for small items such as flower pot and tumbler stands.

Plaited borders are considerably more difficult to make, and should be tried out on a practice board before attempting them on basketry proper.

For a comparatively narrow border the following may be used. As a first step three 12" lengths of the same cane as that used for the uprights and two 4" lengths of rather thicker material are cut. One short peg is put between two uprights, sloping to the right. Pegs are in solid black on all drawings (see Fig. 1) and the first upright is bent down over it. A spare 12" length (shaded on drawing) is put on the right-hand side of this, so that a pair of canes are projecting outside the work. Repeat this with the next stake so that the result is as Fig. 1 the loose canes having an 8" projection.

The left-hand pair of canes are then woven under the right-hand peg to pass

over the second set of canes and towards the inside of the basketry between uprights numbered 3 and 4. By bending down the first of these uprights and putting the remaining 12" length of spare cane beside it, one pair of canes will be left on the inside and two on the outside of the work (Fig 2).

By Christopher Allan

The left-hand pair of canes on the outside are carried over the right-hand pair and between uprights numbered 4 and 5. Upright number 4 must be bent down over the inner right-hand pair, and the left-hand inner pair are bent beside upright number 4. There will then be a set of three canes on the outside of the work, as shown in plan form

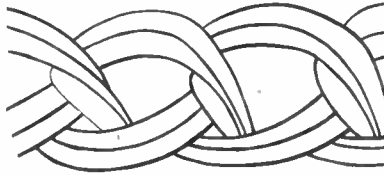


Fig. 4

in (Fig. 3).

To continue the plaiting the outside pair of canes are taken, passed over the set of three and between uprights 5 and 6 the first numbered upright being bent down over this and the left-hand pair so that a pair of canes are left on the inside and two sets of three on the outside of the work.

From here on pairs only of the sets of three are used, so the two left-hand canes of the left-hand set of three are passed between the stakes numbered 6 and 7, stake 6 is bent down with the left-hand inside pair beside it, and the weaving is continued until the last upright has been bent down with the last left-hand pair on the inside of the work beside it.

To finish this plaited border the outside left-hand pair of canes must be inserted in the holes made by withdrawing the first short length of spare cane, and the remaining canes are similarly treated by removing the second peg. This should then leave three single canes and also three pairs of canes on the inside of the work.

The single canes are threaded through and under the plait on the right-hand side of the pairs, while the right-hand cane of each of the pairs on the inside is taken alongside the single canes in the same way before cutting off all spare cane.

This may read as if it is a complicated weaving, but careful following of the instructions will show that it is by no means difficult to make. Fig. 4 gives some idea of the finished weave.

Now for some practical work.

Tumbler mat

Use a 4" diameter plywood base, cut a sufficient number of 6" long lengths of No. 5 cane for uprights, insert them in the holes, and weave a foot track. Turn the base upside down, press down the plywood firmly, and use the randing stroke to work the sides to a height of $\frac{3}{4}$ ", using No. 3 cane. Finish with an open loop border.

Small tea tray

Commence as before, using an oval base 16" by 11". Having worked the foot track use the three rod wale for the sides to a height of rather more than 1", and finish off with the plaited border described above.

Wastepaper basket

This should have a 7" diameter base. Having worked the foot track and pressed the base down firmly on to it, pull the stakes out slightly so that the sides of the basket will slope slightly, and when weaving see that this taper is kept regular. Start with five rows of three rod waling, and then change to the randing stroke until the work measures $7\frac{1}{2}$ " high. Then put on two more rounds of three rod waling and finish with a plaited border.

When any piece of basketry is completed it should be singed to remove hairs. A methylated spirit lamp should be used, a wick projecting through the top of an ink bottle making a very efficient lamp.

Cutting Jigsaw Puzzles

An article on how to cut fully interlocking jigsaw puzzles is one of the many entertaining features of *Hobbies 1956 Handbook*, which costs only 2/- from newsagents, branches etc., or 2/3 post free from Hobbies Ltd, Dereham, Norfolk.

A Brick Pedestal Sundial

THERE is no more suitable ornament for the garden than a well-proportioned sundial, and as one can be built with cheap materials it is a worthwhile project. To support the sundial, which may consist of a metal plate with gnomon attached, a brick pedestal is suggested here, to be built up with from twenty-eight to thirty bricks and some cement and sand.

First mark the position where the pedestal is to be erected, and dig out a 20in. square of soil by about 4ins. deep. This will form the foundation. Take care in the setting out of the foundation to have two of its sides as far as possible due North and South so that the dial, if this should be square in shape will suit the square capping of the pedestal, as the sketch of the finished thing indicates.

Now prepare the concrete for the foundation to just evenly fill the hole, the concrete to be composed of one part cement to two parts of sand and three parts of coarse gravel or finely broken brick. Mix these ingredients in a dry state on a board platform or other flat surface. Note the ingredients are by bulk and not by weight. A good box or a small pail is useful as a measure for the

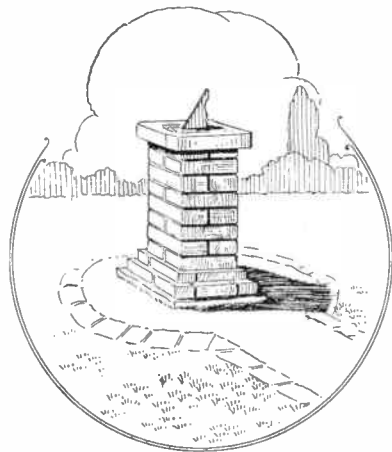
tar composed of one part cement to three parts of clean sand. Put a $\frac{1}{2}$ in. layer on the top of the concrete, and proceed to lay the first course of bricks as (A) in Fig. 1. Lay over this course a similar bed of mortar and then the second course of bricks. Note that course (A) consists of whole bricks, while course B is one brick and a half square. The measurements are shown. Be sure to lay course (B) on (A) with an equal margin all round.

The actual pedestal can now be commenced, and, as seen at C in Fig. 1 each course consists of two bricks laid in such a manner that the vertical joints do not coincide, or, in bricklayer's terms, they "break joint".

An evenly-spread layer of cement mortar is of course laid between each course of bricks, with the vertical joints flushed up evenly with the mortar.

In Fig. 2 the completed base and three courses of the pier are shown. The pedestal can be built to any desired height, from 30ins. to 36ins. being usual. Now make a neat finish to the job by trowelling off loose mortar and filling the joints neatly.

The top of the pedestal or capping is



the sake of strength, but for appearance when the cap is cast in the concrete. In preparing the inside surfaces for the concrete, give them a coating of soft soap so that the concrete will not stick when the mould is removed.

Mix the concrete of one part cement to three parts sand. Shovel this into the mould and ram it well at the corners and angles. Fill up level with the top and clean off neatly with a piece of board. Leave the concrete to harden for a couple of days, then knock away the tray mould to release the casting.

Now lay a $\frac{1}{2}$ in. thick layer of cement mortar on the top of the brick pedestal, set the concrete cap in place and press well down.

Level up carefully with a spirit level in each direction of the cap and leave to harden. Clear away any superfluous

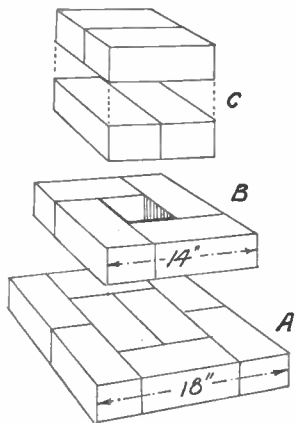


Fig. 1

parts. The dry material being mixed and turned over several times, is then sprinkled with water, preferably from a rose-head watering can, and again turned over until well saturated, but not made sloppy.

Shovel the concrete into the hole, ram it, and then level off the surface with a piece of board. Leave the concrete for several days to harden thoroughly.

Thoroughly wet the bricks before commencing to lay them in place on the concrete foundation. Mix up some mor-

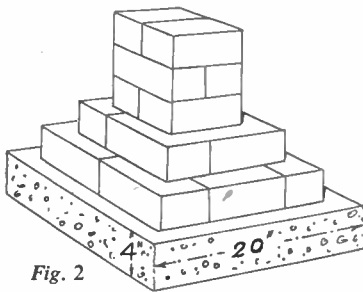


Fig. 2

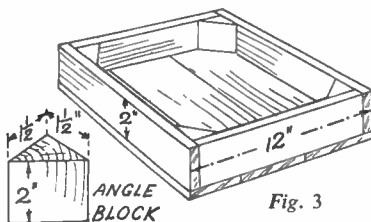


Fig. 3

made of concrete, square in shape for convenience in fitting on to the brick pier. A box mould must first be made and this can be constructed of deal wood or rough box wood about $\frac{1}{2}$ in. thick.

As Fig. 3 shows, it is really a wooden tray with sides 2ins. high, all nailed together securely and with a floor nailed over. The inside corners should have triangular blocks nailed in, not only for

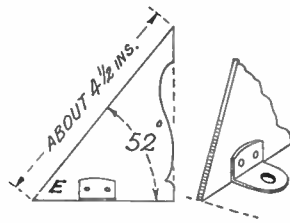


Fig. 5

mortar and leave all untouched for a few days.

If you have decided to make your own dial and gnomon, some careful setting out is necessary. Choose smooth slate for the plate itself. A good piece of roofing slate should answer very well. The size of the slate is immaterial providing it is proportionate to the top of the concrete cap. In our example here

the slate is 9ins. square, and on this with a sharp pointed tool scratch a line deeply to make a square 7ins. by 7ins., and the north and south line down the middle. This is the twelve-o'clock line.

From the south point set up $2\frac{3}{8}$ ins. and run the six-o'clock line across at right angles. Now draw out the pattern for the hour lines as shown in Fig. 4, left hand side. Note that the right side is identical to this as far as the lines are concerned. The numerals for the west side are marked from eleven to four a.m. All the numerals could be put in, in white paint if desired.

The gnomon, Fig. 5, may be cut from brass or any other non-rusting metal, to the outline shown. Drill two small holes near the bottom of the gnomon, and cut out two small angle brackets from the scrap metal for fixing purposes. Screw or rivet these to the gnomon as in the diagram. The gnomon is then laid on the dial with its tip E touching the six-o'clock line, where the hour lines meet.

Holes are drilled through the slate where the angle brackets rest, and the gnomon fixed with small bolts and nuts. Smear the bolts with a little thick paint before screwing up, to seal the holes. The sundial should now be cemented to the concrete top, being laid on a $\frac{1}{4}$ in. bed of mortar. Shallow indents may have to be made where the fixing bolts come.

Fix the dial with the twelve-o'clock line running due north and south. A compass will be helpful here. A simple

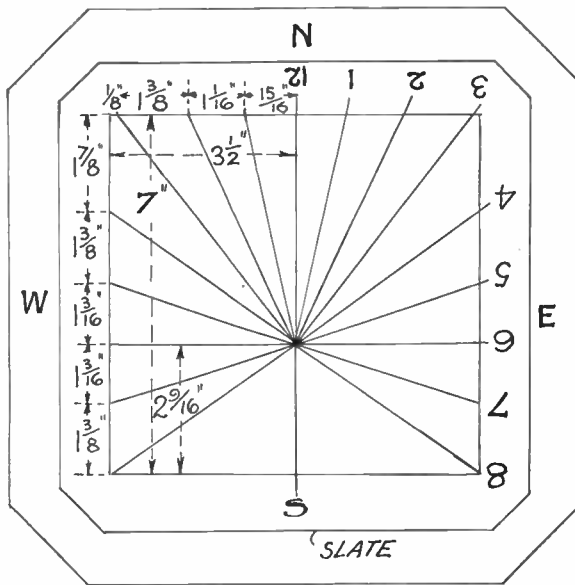


Fig. 4

plan, too, is to draw a north to south line in chalk across the concrete top to ensure that the dial is correctly placed. Another method when setting is by the sun, laying the plate in the wet cement and noting the shadow cast from the sun along the line of the gnomon and along the north and south line. This must be done of course at twelve-o'clock

noon — checked accurately by the clock also. Remember, the tip of the gnomon (E) faces south.

What with the differences between solar time G.M.T. and Summer Time, the sundial is of little real use as a time-keeper, but as an old-fashioned and pleasing garden ornament it has no equal. (S.W.C.)

A Perfect Finish with Varnish

VARNISH is just like old wine, and you have to treat it as such if you expect it to do a good job. During manufacture it undergoes a long period of maturing, being stored in large vats at an even temperature of 65° for a year or more, thus allowing all impurities to sink to the bottom. The vats are drained through taps specially fitted to withdraw these impurities and the process may be repeated several times before canning and forwarding to the retailers for distribution. This care should be extended by the user and it is not good practice to use the last drop from the bottom of a tin.

No Stirring

Another factor often overlooked is that varnish does not require stirring or shaking like paint, for this will introduce tiny air bubbles which will be revealed on the surface of the finished work. Also note the precautions for storing at even temperatures.

To obtain a superb glass-like finish from your varnish, buy the material at least a week before using, storing in the

same room as the work. This allows time for the varnish to settle down and acquire the room temperature. On no account should doors be opened, or windows, to assist drying, as varnish is most susceptible to 'chills' which results in a blue bloom and for which there is no cure.

Common defect

A defect known as 'cissing' is a common occurrence during the application. This represents a series of dry, bare patches where the varnish has either missed, or crept away. As a precaution against this, it is best to wipe the work before starting with a wash leather damped in a weak solution of sugar soap. Surfaces must be quite clean, smooth and non-greasy before applying the varnish. And dust must be avoided as much as possible.

Varnish should be applied liberally and evenly. It may be crossed and laid off as in painting, but with slow forceful strokes and a minimum of brushwork. Brushmarks should disappear within a quarter of an hour, which is the ap-

proximate time for setting. It is wise to examine the work carefully during this period, for runs may be brushed out or any cissing filled in without detriment to the finished result.

The majority of brushes available today are suitable for both paint and varnish, but it is advisable to reserve them for their separate purpose. When not in use, varnish brushes should be stored in clean jars containing linseed oil, and not turpentine or water.

Polishing Paste for Aluminium

A useful paste for polishing aluminium made by melting together in a water-bath 7 grams lard, 14 grams stearic acid and 14 c.c. oleic acid. When the mixture is clear, turn out the flame and stir in 28 c.c. kerosene (burning paraffin). Remove the vessel from the bath and add 56 grams precipitated silica and 7 grams talc. Stir until luke-warm to prevent the solids settling.

PLANNING A LAYOUT

REVERTING to layout planning, it may be said that there are but three fundamental types of indoor model railway layout: the continuous line laid on a shelf around a room, the island type situated on a table in the centre of a room, and the point-to-point run from terminus to terminus. All other indoor types are either variants or combinations of one or the other basic types mentioned. Outdoor railways are in this respect a law unto themselves.

By F. F. Carter

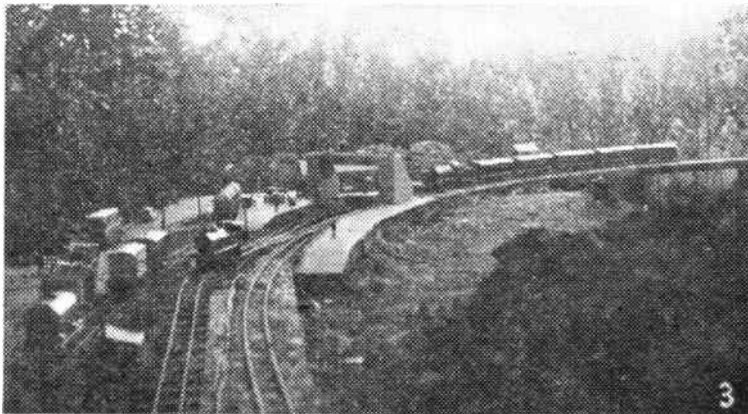
In matters of length of train-run, a little computation will show that a true-scale 'OO' train comprised of ten 60ft. coaches and an express tender locomotive would measure some 10 actual feet on the layout. To accommodate such a train a station platform would have to be at least 11ft. long, which is quite an impossible dimension to go in an average living-room—to say nothing of a box-room!

But though such lengths cannot often be reached in practice, much can be done by illusion to give a length of track an appearance of greater length. Ethically, this idea of illusion may be queried, but length in itself is, in a sense chimerical, for indeed a train moving along at the end run of a long-sided oval track does not seem to have travelled so far as if it had moved over the same distance when the end-run was part of an oval composed of shorter sides than ends.

Illusion of length

Applied to model railway work the great lesson of this is that the appearance of length disappears as the total width of the tracks is increased. Thus, if the greatest impression of end-to-end run or all-round distance is to be obtained, numerous parallel tracks must be avoided. This arrangement, though not increasing the actual length nor helping to accommodate long scale rolling-stock does materially increase the apparent length of track in exactly the same way that long stock decreases apparent length; for short rolling-stock increases the illusion of track length, while long stock destroys it.

Again, the illusion of length is increased if the track is laid on a definite 'point-to-point' system, so that the stations are well separated and a train unmistakably leaves one station and proceeds to the next. In this connection a single line between stations materially



A scene on an outdoor 'O' gauge layout

assists the illusion of length, for just as many parallel tracks apparently reduce the distance apart of any two points, so does a single track give the idea of maximum separation.

Main consideration

The main consideration is that if a long train of long rolling-stock is standing on a length of track, no matter what actual footage it covers, its position will only be considered as one location on the line, whereas a shorter train of short stock, travelling from end to end of the longer train (on an adjacent line) will surely be considered by the observer to have actually travelled between two locations—one at each end of the longer train. Yet the length of the long train is the same in both cases.

Similarly, the idea of dummy building frontages can be made to give the illusion of size to a very cramped station, or a single siding road replaced by three or four roads entering a goods shed will produce the illusion of a large goods yard, which the single siding, though not capable of holding any more wagons than the three or four short sidings, certainly does not give.

Thus it will be understood that apparent length of track, size of buildings, and their mutual disposition, in moderately sized model railways are greatly a matter of small optical illusions which can be increased or annulled by careless arrangement of the various items of which the railway is composed.

Another rather vexed question upon which most model railwaymen seem to disagree is the ideal height for a model layout above floor level.

No particular substructure is needed when a model is at ground or floor

level, excepting when laid out of doors; in which case it is very advisable to have a concrete foundation of some sort to stop derailments due to rain-splashed earth on the track. But it is uncomfortable to be for ever groping on one's hands and knees, to say nothing of the aerial view of the railway one gets from eye-level when standing.

If the line is lifted only 1ft. or so above the ground, some measure of physical comfort, as well as a more realistic viewpoint, is obtained; but above the latter height, some consideration must be given to the purpose of the model as well as to the height of its operators. For the younger folk, 2ft. or 30ins. is ample, but for convenient adult operation and to enable an effective view of stock a height of 3ft. or 39ins. is eminently suitable. But to get the really best angle of vision, however, 3ft. 6ins. to 4ft. should be decided upon, though it must be fully realised that width of baseboard must be reduced in like proportion to that at which height increases, otherwise rolling-stock located at the back of the baseboard cannot be reached easily without standing on a stool.

Use of uplift

For indoor railways, however, there is no objection to the use of some form of uplift, and almost any reasonable height of baseboard can be used so long as adequate protection is provided along its edge against derailed stock crashing to the floor.

Generally speaking, the height of a model railway above floor level is a matter which is best made the subject of individual decision, bearing well in mind general comfort both in construction

and subsequent operation; and it should be remembered that once a start is made at a given height, it is extremely difficult, if not impossible to change one's mind without relaying the whole railway or so straining the timberwork of the base-board that continual trouble will be had in running the trains after the change has been made.

Now as to the various types of track obtainable in 'OO' gauge, and their suitability for subsequent alterations and additions to a layout; for this is quite an important matter which must be considered at the very outset.

If the introduction to the hobby has been made by way of a 'boxed train set' of any particular make, then, obviously, it will be advisable to carry on using the same type of track as is supplied with the set. If, on the other hand, the reader has free choice, and is really starting 'from scratch', then he will be well advised to weigh up the pros and cons of the various commercial makes of track on the market before committing himself to make a start with any particular brand. This is very important, because, generally, the various commercial makes are not interchangeable, nor will they all match up end to end.

Moreover, the rolling-stock of one firm will not always run satisfactorily on the track of another—in fact, in some cases it will not run at all. Again, the electrical arrangements used by one maker will not permit locomotives of another brand to collect their current from another maker's track, and vice versa; and the various methods used of joining the lengths of track together into a continuous run also differ very considerably.

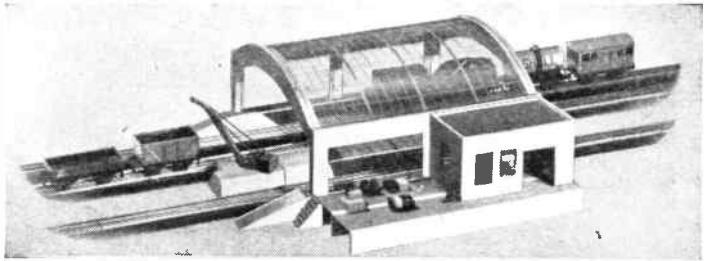
By and large, if the reader commences in the hobby with any particular boxed train set of any particular make, he will be very definitely well advised to keep to that make throughout, using only that firm's track and rolling-stock. 'Mixing the breeds' does not pay by any means.

Consult your dealer

Methods of power supply, voltages, and types of controller also vary from firm to firm, and any attempt to run a hybridised stable of locomotives will only result in indifferent running and—in some cases—in causing irreparable damage to the locomotives themselves.

When in doubt as to the interchangeability of engines, rolling-stock and controllers, it is a good plan to consult one's local dealer, who will be only too pleased to assist in every way, so that, where possible, the best of each make is used in the production of an individual model railway. Do not mix makes without getting expert advice.

In many cases, standard mass-produced locomotives can be made to run at more realistic speeds, and to operate much more perfectly, merely by



A station layout (Courtesy Trix Ltd)

the use of a controller with better electrical characteristics and capable of giving a finer control of speed. But before such amendment is made, advice as to voltage, amperage, and other matters should be sought to ensure that the wrong type of controller is not used and damage done to the power units.

If the reader is going to make a start on a true-scale model line, then, of course, the foregoing remarks are somewhat out of place, for he is not committed to any particular make. The choice is his, and he can pick the best from any manufacturer's list and go straight ahead. But even so, the inestimable advantage of a chat with his local model engineer will pay good dividends—the time will be well spent.

There are many pitfalls for the beginner which can easily be avoided if they are thrashed out *before a start is made*, and half the seeming complications attendant upon the building and running of a model railway can be cleared up by half-an-hour's chat with

a man who knows. A model railway, like any other project, is better designed and better built if all angles of the scheme are considered at the very outset, for a model line, like a full-sized one, should not be started until all the facts and figures are known—size of layout, scale, and the financial aspect. It is sheer waste of money to purchase promiscuously 'bits and pieces' of indiscriminate brands without having any pre-arranged working plan.

So do not start to lay any track or build any railway structures until a full survey of the 'land' upon which it will be laid has been made. Do not purchase this or that item without having due regard as to its suitability for inclusion in the prearranged scheme of things, and always remember that a few hours, even weeks, spent on paper-and-pencil planning are the key to the production of a better model railway which will never fail to give pleasure and which will be capable of extension and improvement as time and finances permit.

A Party Centre Piece

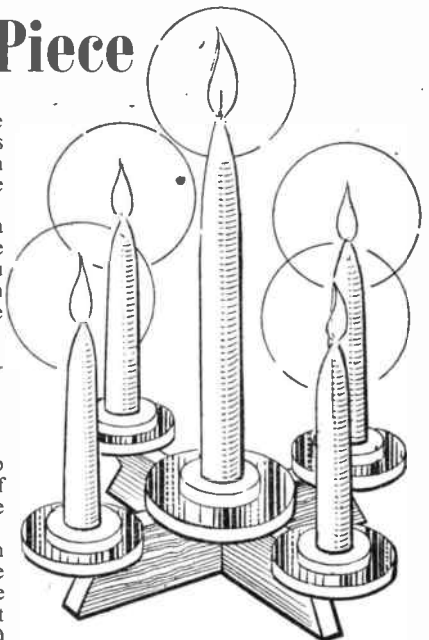
MAKE this novel candle centre piece to decorate the table. It is ideal for special occasions such as birthday parties; and adds a festive touch to the dining room.

The whole thing is easily cut with a fretsaw as you can see from the full size drawings on the pattern page. You require two pieces (A & B) cut from $\frac{1}{2}$ in. wood to form the base. These are halved together and glued.

Patterns on Page 47

The centre candle holder is made up of one piece E and one piece C. Each of the other four holders consists of one piece D and one piece C.

Glue them all together and finish with plastic enamel paint. Give two or three coats until a high gloss is obtained. The candles should be trimmed to fit securely in the holders. (M.p.)



A MODERN CABINET

DESIGNED originally as a kitchen cabinet to be finished by painting, the same construction can be used for other types of cabinets with similar, or modified, dimensions, in painted or polished wood. In the latter case the only change is that $\frac{1}{4}$ in. plywood must be used for all panelling, in place of the $\frac{1}{2}$ in. hardboard, which is a cheaper alternative for a painted cabinet. The bulk of the framework is cut from $1 \times \frac{1}{2}$ in. stock.

Now cut two 8 in. lengths of 1 in. square stock, making sure that they are exactly equal in length, and cut the $\frac{1}{4}$ in. rebate, as detailed. Two $7\frac{1}{2}$ in. lengths are cut from $1 \times \frac{1}{2}$ in. stock for the bottom members. Check your material thicknesses at this stage to make sure that the two sizes give you a square assembly.

Join the back and front frames with the four cut pieces, all joints here being butted and glued and pinned. When cut, trim the top edges at each end to con-

glued to the inside of the panelling. These strips can also be pinned or screwed through from the outside, if you are not too happy about relying on glued joints. If you have no better ideas, simply fit the shelf at mid depth, i.e. 9 inches from the bottom of the frame to the top of the shelf brace. The shelf itself is a panel of hardboard cut to fit and glued in place.

Make sure that the front edges of the cabinet are flush and true and then attach the facing strips of $1\frac{1}{2} \times \frac{1}{2}$ material. Glue should be sufficient to hold these, but again they can be pinned as well, if you prefer. These facing strips are assembled 'square' (Fig. 4) and trimmed down to conform to the curve of the top cabinet edges when set.

The cabinet is virtually finished at this stage, except for rounding off the top edges and generally smoothing with glasspaper. Drive any visible pin heads down below the surface and fill the holes flush with stopper.

The doors are made as detailed in Fig. 5. The frames have mitred joints at each corner and can be assembled directly on to the cut-out panel, provided you have cut this true and square. Check that the two door panels fit in

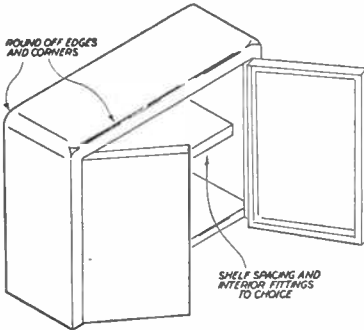


Fig. 1

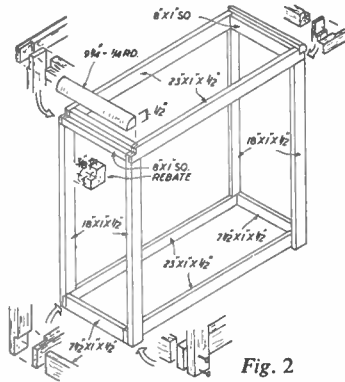


Fig. 2

Other material required includes —

- 16 in. 1 in. square
- $18\frac{1}{2}$ in. $\frac{1}{4}$ in. quarter round
- 5 ft. $1\frac{1}{2} \times \frac{1}{8}$ in. strip.

$\frac{1}{2}$ hardboard or ply in the following cut sizes:—

- $23\frac{1}{2} \times 9\frac{1}{8}$ in. — one off
- $17\frac{3}{8} \times 9\frac{1}{8}$ in. — two off
- $17 \times 10\frac{1}{2}$ in. — two off
- $23 \times 8\frac{1}{2}$ in. — 1 off
- 23×18 in. — 1 off

Additional panelling and $\frac{1}{2} \times \frac{1}{8}$ in. strip for shelving, as required.

The finished cabinet is shown in Fig. 1. The doors have the appearance of solidity and are set in flush with the front of the cabinet. Top and front edges of the cabinet are well rounded and the sides and top 'flow' smoothly together. To realise the best effect it is important that all joints be well made and accurate. Any visible cracks after glasspapering down should be filled before painting.

Details of the frame are summarised in Fig. 2. The corner joints are shown separately for clarity, and all are pinned and glued. The most satisfactory building procedure is as follows.

First cut and assemble the front and back frames, complete, taking care to get these truly square. Halved joints are used on all four corners of the back frame but the bottom member of the front frame is not inset.

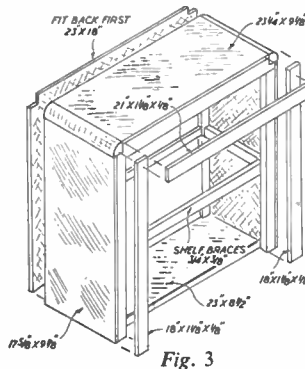


Fig. 3

form to the rebate in the 1 in. square pieces. Then glue in a $9\frac{1}{4}$ in. length of quarter round at each end, flush with the front edge.

The next step is applying the panelling. The back panel is fitted first (Fig. 3), cut to size, trimmed to fit around the protruding quarter-round strips and glued and pinned straight on to the back frame. Trim off flush with the edges of this frame. The top and side panels are then fitted, overlapping and thus covering the raw edges of the back panelling. Again pin and glue and trim flush when set.

Shelf braces can be added at this stage, cut to fit from $\frac{3}{4} \times \frac{1}{2}$ in. stock and

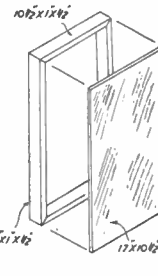


Fig. 5

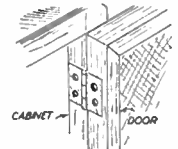


Fig. 6

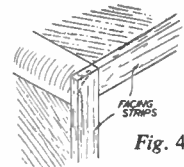


Fig. 4

place on the cabinet before completing the assembly. When set the doors are hinged as shown in Fig. 6, two hinges being required for each door, set flush.

If you have worked to close tolerances, and mounted the doors 'tight', it should be impossible to close them as the inner edge of the frame of one door will tend to foul the edge of the other. This is relieved by chamfering off the edges towards the inside until the two doors will close snugly, leaving just a hairline crack visible. If you do make a hash of this and finish up with a rather ugly gap, this can be covered by a strip of half round moulding, glued to one door.

(R.H.W.)

Concluded from last week

A Working Model Cruiser

THE motor can now be fixed to its bed (piece 28) as shown in Fig. 3A. Glue will hold the motor satisfactorily, but it can be screwed down if preferred across pieces 13. The rubber band can now be placed round the pulleys on the propeller shaft and motor. The pulleys, of course, should be in perfect alignment and the rubber band should be just tight enough to turn the motor when the propeller is rotated by hand. Adjustment to the tension of the band can be made if necessary by placing a piece of card under the bed of the motor.

To skin the deck, cut a thin card template to fit over the whole of it, but remember to cut away openings for the battery and motor (Fig. 10). Use the card template to mark out the plywood, and when this has been cut out, glue and pin in place by the same means as described for the sides. Incidentally, before fitting, lead the wires from the switch out on to the deck.

All is now ready to make up the cabins. The forward cabin consists

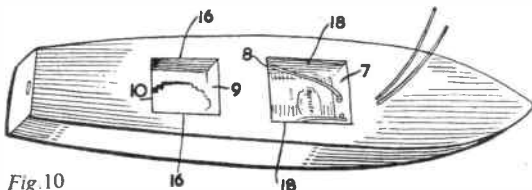


Fig. 10

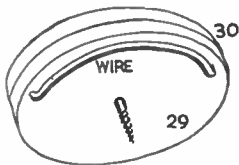


Fig. 11

of pieces 31, 32, 33, 34 and 35 glued together as shown on the design sheet. This assembly must be shaped according to the dotted lines on piece 31. The edges will also have to be trimmed to a nice curve ready for fitting the sides. The sides (pieces 36) are cut from thin ply and glued round. Note that overlap is allowed for trimming off after gluing.

Before attaching this forward cabin to the model, add the power switch, which consists of a lifebelt screwed on the roof. The construction of the switch is shown in Figs. 11 and 12. Glue together two pieces 30, which are in turn glued to piece 29. The tops of pieces 30 should be slightly rounded and ropes are not added until after painting. On the underside of the lifebelt fix a hoop of medium gauge wire (Fig. 11). This is pushed into the underside after sharpening the ends and bending upwards, and forms the main

Make it Easy

Hobbies Kit No. 3154 contains all the necessary wood and materials, including a Mighty Midget motor and propeller unit, needed for this grand cruiser. Kits obtainable from branches and stockists or post free from Hobbies Ltd., Dereham, Norfolk, price 45/-.

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body of the switch. Lead the switch wires through the top of the cabin (piece 34) and then back again into the cabin, twisting them together underneath as shown in Fig. 12. This will leave two bared lengths of wire on top of the cabin (Fig. 11). Contact is made by means of the semicircular hoop of wire on the underside of the switch. Make

sure, of course, that the switch is positioned so that the connection makes good contact with the bared wire on top of the cabin.

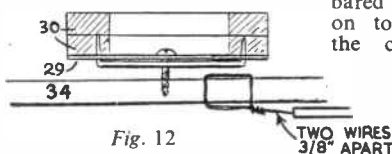


Fig. 12

Transparent material is glued inside pieces 36 to form windows, and curtains can be painted on the inside. The cabin is now glued in position as indicated on the picture of the finished model.

The rear cabin is made up on a different principle to the first because of shaping difficulties. The sides are made up of pieces 37 and 38 glued together as shown on the design sheet; 37 will be the inner piece on each side. Before gluing 37 to 38, note that piece 37 must be glasspapered down on the top edge to form a 1/32in. rebate with 38, thus allowing the 1/32in. plywood top to fit flush with the edge of 38.

Glue pieces 39 and 40 between the sides after shaping piece 40 to section. Cover the top with thin plywood and clean up the assembly with glasspaper. Fit windows and paint curtains as described previously.

This cabin must be removable to allow access to the motor. For this purpose, two short wire pegs should be let into former 8, allowing them to pro-

trude about 1/4in. Corresponding holes should be drilled in piece 39. At the rear end of the cabin a small piece of waste wood is glued in the centre at the bottom, and this slips under a made up block glued to the deck, as is indicated on the design sheet.

The battery cover, which is also removable, is made up from waste wood to make a neat fit. The assembly of the steps is shown on the design sheet and the lifting handles consist of 1/4in. square stripwood glued to the top insides of the battery cover.

The windscreen is made up in two separate sections, which are joined in the centre by gluing a strip of thin card in position at the required angle.

Make hand rail supports from wood and the hand rails from medium gauge wire glued in position. Cleats, fair-leads and bollard are shown on the design sheet, and their positions can be obtained from the picture of the finished boat. A wheel can be added on the port side of the cockpit, and a small seat (not shown) can also be placed in the cockpit. Note that cleats are sharpened and pushed into holes drilled on the edge of the deck. Fairleads are glued into slits made with a sharp knife.

Round off some 1/4in. square stripwood to a semicircular section and glue along the sides at the deck line to form the main rubbing strakes. Similarly, shorter strakes are fitted along the stern.

All is now ready to clean up and paint the model. It is suggested that the decks be varnished and the planking indicated by marking lengthwise with a hard pencil. The sides and hull should have several coats of plastic enamel paint applied. Two coats of white are advised for a start. Below the waterline is painted green and above it mahogany.

Here is the method used in order to define the waterline. After the white paint has dried, take a brush full of ordinary watercolour paint and run vertical lines at intervals down both sides of the hull. With the battery in place, set the boat gently in water which will wash off the watercolour paint and thus determine the waterline.

When all is ready to operate, bend back the long arm of the flat pocket lamp 4 1/2 volt battery so that each contact connects with the screws in former 7—and then switch on. A point to note is, that reversing the battery will also reverse the motor.

Copies of last week's issue of Hobbies Weekly containing the first part on making the model cruiser, can be obtained from the Editor, price 6d. post free.

Simple Pattern Making

ONCE the general principles of home open-casting have been grasped it is comparatively easy for anyone with a few simple tools to take the next step in this fascinating hobby of making your own wooden patterns.

Fig. 1 shows the few simple tools and materials needed. Their uses are as follows:—Tenon saw for cutting the

pieces of wood which make up the more elaborate patterns. The usual 'finishing-off-tools' such as a rasp, files and several grades of glasspaper will also be needed.

The materials required are the same as for practically any other wood-working job namely:—sealer for closing up wood grain, cracks and joints; strong wood glue for the various joints is essential, as most patterns will, undoubtedly, be



Fig. 1—Most of the tools and materials shown here will already be in the hands of keen fretworkers and carpenters

heavier grades of wood; a fretsaw will be very useful if any decorative work is to be added to the pattern; large and small

given some rough usage; high gloss enamel to give the pattern a final surface equal to metal, and assorted nails and screws.

When the final design for the casting has been decided upon, suitable pieces of wood will probably be found in the junk-box. The wood used in a pattern for bookends, for instance, was originally a pair of ladies wedge heels! If screws are used to assemble any pattern, the holes should be countersunk and afterwards filled with plastic wood, or similar filling to restore the smooth surface.

In the design for bookends, thin wood was cut out with the fretsaw in the form of an acorn and oak-leaves, the shape being copied from a book on trees and shrubs. Small fret pins were used to hold the leaves in position until the glue had set.

Before painting with high gloss enamel the pattern must be thoroughly smoothed with rasp, file and glasspaper and coated with sanding sealer, when hard dry use the glasspaper again. This process must be repeated until the pattern is perfectly smooth, if the very best surface is required on the finished coating. The pattern may now be given up to three coats of a good enamel and left until dry.

When perfectly dry, wood screws should be fixed into the back of the pattern, or that side which will be uppermost when the mould is inverted, to help when lifting it from the sand. These screws should be worked until only finger tight, so that they can be inserted



Fig. 2—Ideas for decorative work can be gleaned from books and the intricate outlines are easily cut with a fretsaw

quite easily without disturbing the pattern after the mould has been turned over.

The great thing to remember in pattern making is that the pattern must be perfectly free to slide smoothly out of the mould. Thus, any decorations, or other projections above the surface of the pattern, must be arranged so as to be uppermost when the sand is being placed on and around the pattern.

As with the casting process, the greater the amount of care taken, the better the finished product will be, but even so, first class work may be turned out in little more than one interesting evening. (J.C.M.)

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Fig. 3—Screws being fitted into the back of the finished pattern for bookends to assist in removing it from the mould

hammers; a hand drill with bits of various sizes, including a countersink, will be used when assembling the various

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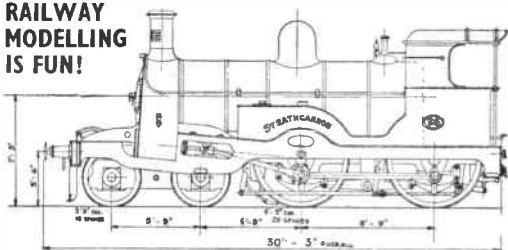
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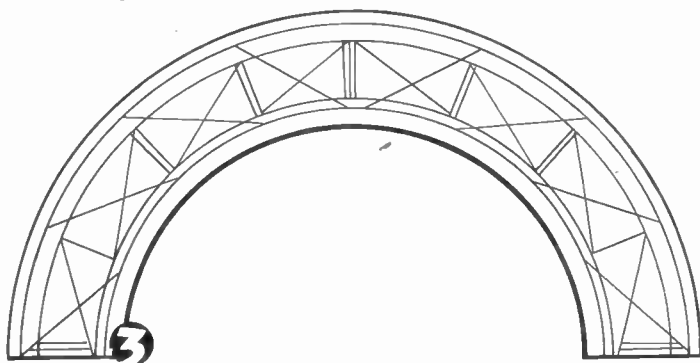
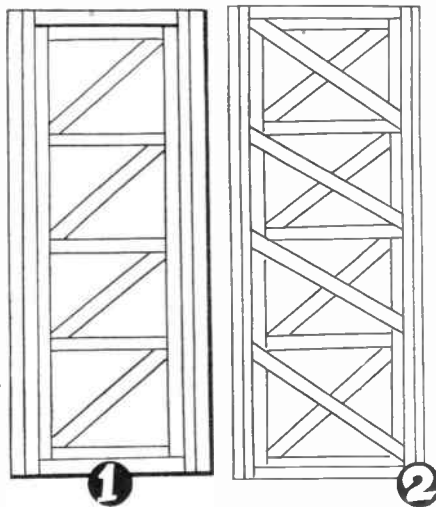
MATCHSTICK MODELS

MATCHSTICKS lend themselves admirably to making models. I have recently made a bridge with a tower at each end fitted with drawbridge and portcullis. All that is required is a plentiful supply of matchsticks, drawing tools, sharp penknife, scissors, paper and glue.

The design is drawn on paper, laying out the angles with the protractor, and the matches are then glued to the paper. Joints should overlap like brickwork to ensure strength, otherwise they will give way. Supports for bridges, sides of buildings and railings to roads can all be started with a simple oblong frame which can then be built up to the desired erection.

To construct the frame lay out the design on paper and glue on the matches (Fig. 1). Each long side should be three matches in depth side by side, breaking joint with overlapping. The end rows of the long sides should be made of long matches and spaces filled in with shorter lengths. Otherwise short matches at the ends are apt to come away when the frame is cleaned up.

Says H. E. Crocker



The inner row is one match width short of the entire length of the frame to allow the end match to be placed in position. Another match is then stuck on side the outer match and finally an extra row of matches is stuck on top of the centre row forming a projecting ridge.

The frame is now divided into compartments of convenient size by a single match glued to the frame at each end. These compartments are then divided diagonally by matches placed from corner to corner of the compartments. Two more matches are now glued on top of the end matches.

An upper layer of diagonals is now placed over the first row, the ends now coming up against the projecting row on the sides of the frame (Fig. 2).

The frame is now complete and when thoroughly dry and set, the paper can be

scraped off the frame. The outside row of matches are added to fit on to the outer row of other frames when making square buildings, such as a tower to take the bridges. The frames should be glued together and tied with string to ensure a fast join. A square object, match box for instance, may be placed in the angles to ensure that they are true right angles.

Towers and houses can be built up with frames glued on top of each other. I use a small steel plane to smooth off the outside edges, so that they fit snugly into each other.

The ends of the diagonals should be cut at an angle of about 45 degrees to position them neatly against the sides of the frame. The width of the frame should conform to the length of the matches, but matches can be lengthened by cutting

one end of each at an acute angle and gluing them together.

Newly placed matches will often come away, so hold them down with a penknife while you remove your fingers. The easiest way of fixing a match is to put the glue on with the blade of a knife and not direct from the tube.

Arches for bridges are made of half length matches glued down on the design. The ends are cut at an acute angle, so that they take the curve easily. Projections can be pared off afterwards. Two arches are drawn out, one on a smaller radius than the other (Fig. 3). Three rows of matches are used, breaking joint, and the centre row has an additional row glued on top of it. The design should include a girder, like the frame in Fig. 1 on top, to be made all in one piece. The ends of the two arcs are joined with cross matches as well as in the centre and each quarter of the arch (Fig. 3). Diagonals are then glued on exactly as in the frames.

Several arches, which are connected with cross and diagonal matches, will be required for a bridge. Hold one end of the arches upright in a clamp and adjust the cross matches to the other arch, glue and allow to dry. Then put on the diagonals, upper and lower row, as for the frame, both on top and underneath the arches.

Gatehouses can be built up of frames and the drawbridges and portcullis raised and lowered by ropes on cotton reels at the top of the gatehouse. As the drawbridge comes up the portcullis goes down. The latter should be weighed to make it fall naturally. The reels revolve on an axis of matches in bearings in the sides of the walls of the gatehouse.

Staining and varnishing is recommended as a finish for matchstick models.

Clean that Flask

BEVERAGES carried in a Thermos flask cannot be enjoyed to the full unless the container is kept scrupulously clean. To cleanse a stained flask, crush some egg-shells and drop them into it. Add a little vinegar and shake vigorously; then half fill with water and allow to stand for some time. The flask should be shaken again before being emptied, and thoroughly rinsed. When standing it upside-down to dry, there is less risk of accidentally knocking over if it is placed inside a jug. When empty, the flask should always be left uncorked. This will prevent it becoming musty.

(R.L.C.)

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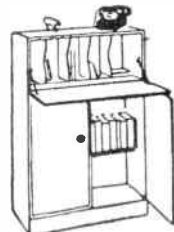
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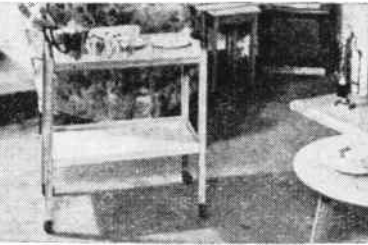
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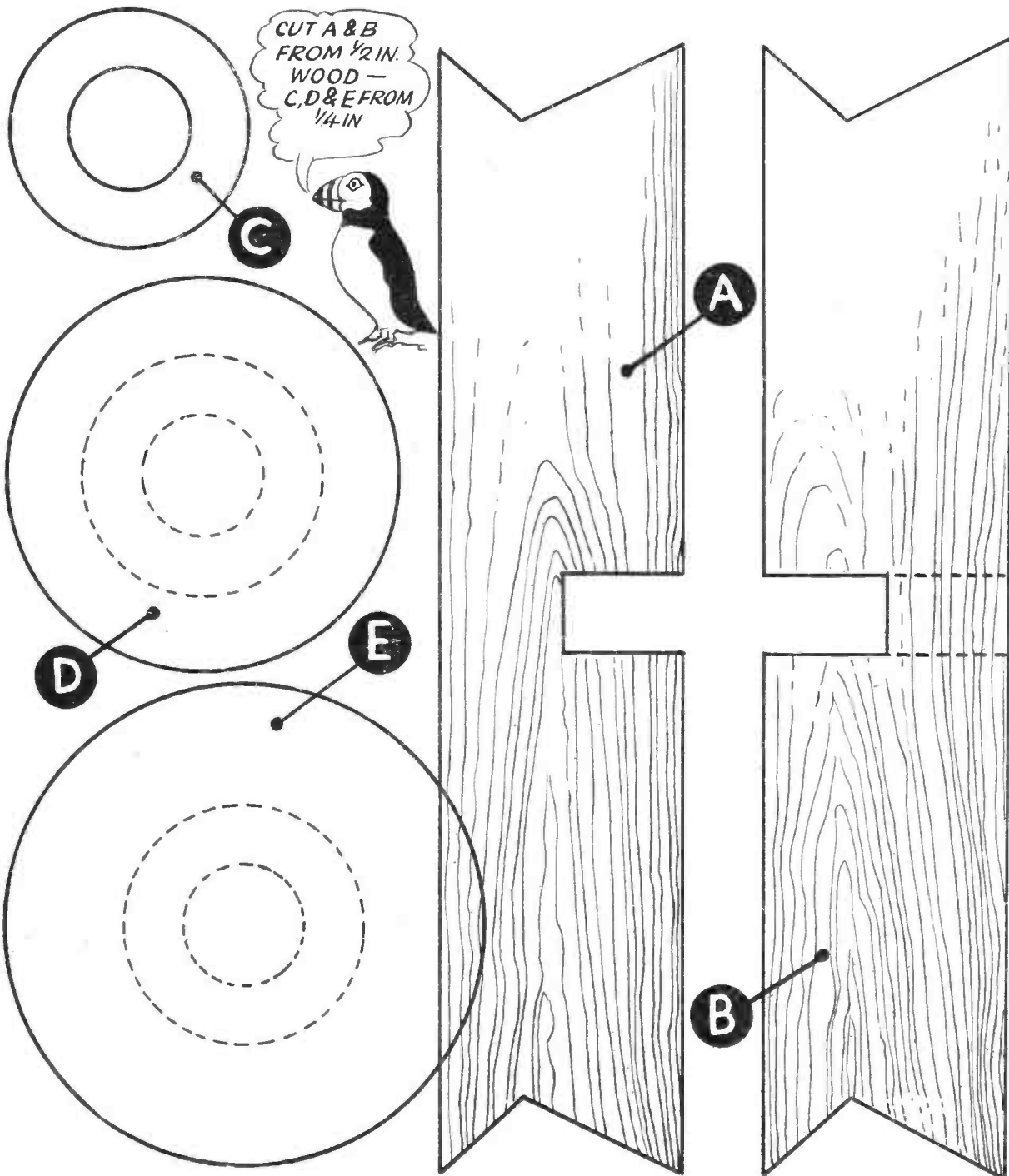
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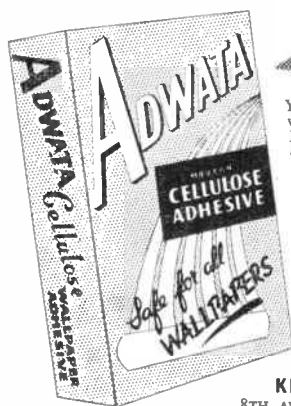


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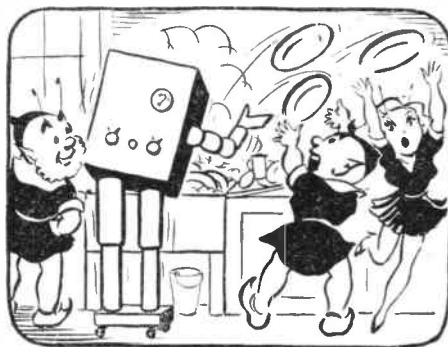
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