HOBBIES WEEKLY

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IN THIS ISSUE

Instructions for making a miniature

MODEL ROTOR-COACH

THIS is the first of a series of miniature models designed to start the young model-maker off on his first venture. They are made almost entirely from soft wood and should present no difficulty at any stage.

The model here is also authentic enough to allow the expert to evolve for himself a true scale model. Other details not shown here can easily be gleaned from photographs in periodicals and newspapers.

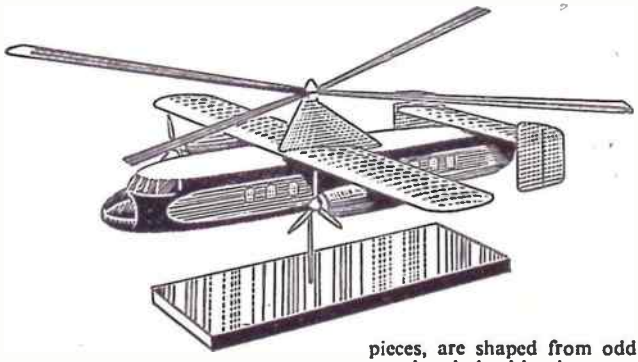
We suggest Balsa or Obechi to be the best varieties to use owing to the soft nature of the wood, which is easily carved and shaped.

How to Start

Cut two pieces (A) from ½in. wood and glue them together. Use a medium thickness fretsaw for the cutting. Round off and shape according to the plan on the pattern page. Next cut the wings (B) from ¼in wood and glue in place after shaping.

The tail (D) is also cut from ½in. wood. Piece (C) is cut from ½in. wood and shaped as shown by the diagrams.

The tail planes (E) are cut and shaped from ¼in. wood and are glued at either end of piece (D). Engines (F) are shaped from ½in. wood with a short flat portion left at the top for gluing on the underside of the wings.



The rotors (G) are cut from cardboard, about the thickness of a postcard. They are glued together before fixing to the top of piece (C). The propellers are cut from similar material. Pin them in place with small fretpins and let them revolve freely. Spinners, the conical pieces, are shaped from odd pieces of wood and glued in place.

Make the base from ½in. wood and stand the model on a piece of knitting needle or a long darning needle pushed into the wood.

Clean up and paint silver all over. The darker portions can be lined in red and the base painted jet black. (M.P.)

Full-size patterns are on page 79

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

For Modellers, Fretworkers and Home Craftsmen

4D

AMATEUR PHOTOGRAPHY

DON'T FORGET WATER SCENES

Says E. G. Gaze

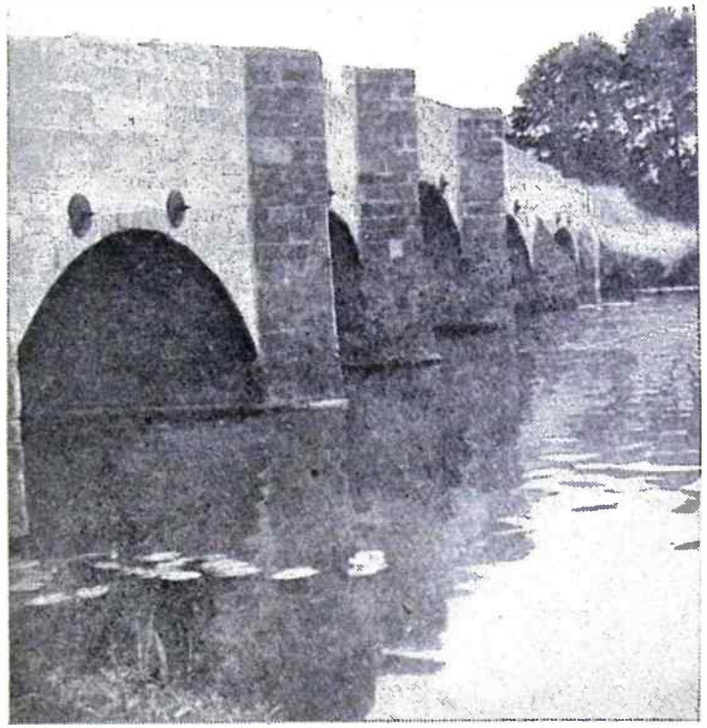


Fig. 1—And rivers have bridges, often old and lovely

WATER covers a large proportion of the earth's surface. As an island people we are surrounded by it—and how many families are drawn by that magnet, the sea-shore, at holiday times? Countless numbers. And inland, too, away from the sea with all its many moods, there is 'water, water, everywhere'. And yet, how many amateur photographers consciously make use of its abundance?

Holiday time comes round once more, and they take out their cameras and attempt to catch some mood of the sea among their other and numerous family-by-the-sea snaps; holidays regretfully end and cases are packed for the return. How many of those amateur photographers give water a thought again until another season brings them coastways?

They forget the rivers, streams, mountain burns, canals, reservoirs and even the humble meadow pond. Yet this wealth of water, somewhere and in some form within easy reach of everyone, is a photographic asset; instead of neglecting or overlooking its possibilities turn it into your most valued photographic friend and picture-maker.

Too much Detail

Maybe now you're thinking of peaceful, long-distance river scenes with soft banks and hazy meadows—but such wide general views are not easy to turn into camera pictures. They are too general; too much fine detail that the eye dwells on in successive planes is lost on the small space of your negative. It is the old story of the part being greater or finer than the whole. A leaning willow mirrored in calm water can make a picture far better for your camera and your album than a wider, general view. You bring detail and masses into a small compass, easier to compose and yet expressive of lazy stillness.

And rivers have bridges—often old and lovely as in Fig. 1. That's fine, you say—but there's no river worthy of the name within easy reach of home. Well, what about the modest brook or the fens, or the very ordinary meadow or farmyard pond?

Old farmyard buildings are often grouped picturesquely near a pond, and farm animals come down to drink or stand in its cool stillness in hot weather. These pictures are just waiting for your camera.

Water in the foreground fills that blank space of 'no-interest' so often found in simple views. Without a pond you get close to cut down the blank stretch of foreground and find you have to miss the old barn roof or some timbered cottage gable on your negative. But find a pond and you can have a foreground that's interesting *and* the barn roof and timbered gable all snug in the picture.

The secret, of course, is that water is always interesting. Calm, it reflects; wind-ruffled, it holds an equal interest for the eye.

The church (Fig. 2) was taken first from the village road on a dull day—merely a record snap of a fine old weathered church. A walk through the churchyard brought the camera to a meadow—and the pond. And there, dull day or not, record or not, was a picture of interest. The same church, with a difference — 'The Church - across - the-Water'.

Canals have a charm all of their own: tow-paths, barges, locks and lock-houses. And many are still in regular everyday use for means of transport. A moat probably needs more searching for, but once found, is well worth the trouble. And houses are dotted about the country adjoining moats still filled with water, as in Fig. 3. Here, then, you find not only some old manor-house or castle, but water to reflect old walls, ancient chimneys and timber-work, water to add interest to the foreground, still or wind-ruffled, clear or lily laden.

We seldom find water the same: it's calm or ruffled, it reflects the sky and clouds and changes with them—it can give more than one picture of the same scene by its very change. So don't neglect water. It's everywhere in some form, somewhere.

Fig. 2—The church with a difference—The church across the water

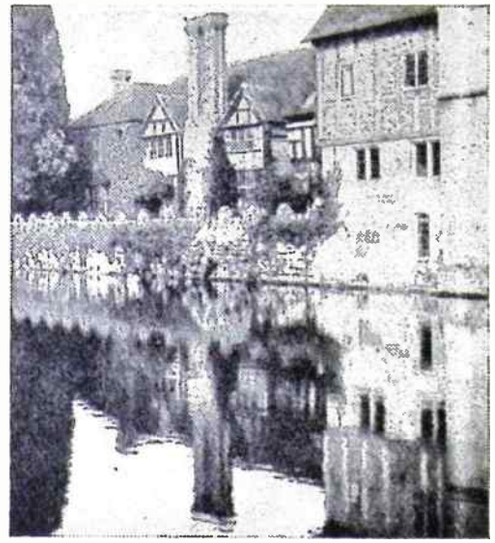


Fig. 3—A fine old house, made finer photographically by its moat

Two final hints. Remember, when you judge your exposure that water is a great reflector of light. Do not over-expose or your print may show a 'blank' space of water. Right in the foreground, too! And, with running water, remember that too fast a shutter speed will stop all movement and will 'freeze' the motion, just as too slow a shutter speed will blur the water's motion. In general, however, water is not running very swiftly and a little blurring is often preferable to complete 'freezing' of movement. Therefore, in general, a moderate shutter speed is all that is required.

Remember—water can be your great friend, your sure picture maker.

Separating Plywood

CAN you inform me of the best method of separating three-ply wood; I find this is ideal for overlays if separated. After cutting out the desired pattern, the wood breaks when being separated, and I should like to know how to remedy this? (F.W.—Romford).

ABOUT the safest method to adopt to achieve your purpose, is to wrap the plywood in wet sacking and cover with a box, not too heavy, to keep the sacking in close contact. Spray the sacking with water at intervals and leave until the plies tend to come apart on insertion of a knife blade between them. The idea is not one to be recommended, as the result may be disappointing, but may be useful in emergency. You would get better results if you cut the overlays after separating the plies, which can safely be done by sandwiching the thin wood between two layers of common box wood, and sawing through all together.

* * *

Damp Sleeping Bag

I HAVE a plastic-covered kapok-filled sleeping bag, and have found that the inside gets very damp, even after being aired after use. Could you inform me of any way of preventing this? There are no air-holes in the bag. When not in use, should it be folded up inside out? (D.H.—Stone).

THE dampness to which you refer—in so far as we can judge from your description of the symptoms—is due to condensation. There is no cure for this trouble. A somewhat similar thing happens with some kinds of plastic waterproofs, due to condensation. The only palliative we can suggest is to line the bag on the inside with a waterproofed linen or similar lining, which should prevent the local dampness from penetrating to the lining or filling.

* * *

Finish for Beech

WHAT kind of finish do you suggest for a child's cot made in beech. An idea for a decoration for the end panels would be welcome? (E.L.—Limerick).

BEECH lends itself well to staining and polishing. A good suggested finish would be to stain a light oak, and french polish over, or wax polish if the latter would be preferred. For decoration you can glue and pin a ¼in. flat or half-round moulding, about 2ins. from the edges of the end panels, and a diamond or rose overlay in the centre. It would have a good effect. Alternatively you could utilise a suitable portion of a fretwork pattern as an overlay. By the way, if you decide to wax polish, add a little varnish or polish (clear) to the stain, to prevent it rubbing up when waxing.

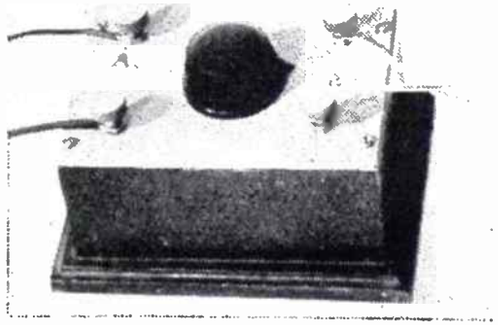
MAKING A CRYSTAL RECEIVER

By F. G. Rayer

THE crystal set is a favourite because of its simplicity, low cost, and independence of battery or mains supplies. The receiver described here is so straightforward that no difficulty should arise even when the construction is undertaken by a beginner. The set tunes medium waves. Long waves may be added, if required, and volume on both wavebands will be fully up to crystal set standards.

Those who have not used such a set may be interested in gaining an idea of the results to expect. For proper results a good aerial and earth are required. With these, satisfactory results may normally be expected up to about 100 miles from a B.B.C. transmitter. At shorter distances volume will be improved. In many areas an indoor aerial will give sufficient volume. The earth is, however, essential in almost all cases.

The headphones should be the usual type, intended for such purposes. Those with headbands are best, but a single earpiece, with a length of twin flex, can be used. The set will operate two pairs of headphones, if required. Low-impedance phones, designed for use with certain ex-service valve sets, etc., should not be obtained for such a receiver, as volume will be much reduced.



Components Required

The simple circuit is shown in Fig. 1. The ·0005 mfd. tuning condenser may be of the solid dielectric type, which is much smaller than an air-spaced condenser. A knob is required for it.

The detector can be any 'crystal diode' type, but should be new, as ex-service or other surplus detectors may not operate well. It is also possible to use the old type of detector, but this will have to be mounted above the panel, so that it can be set by hand.

A suitable piece of Bakelite, Paxolin, or dry 3-ply is needed for the panel, with four terminals. For connecting and winding the tuning coil, any wire of about 24 to 28 S.W.G., cotton or enamel covered, will be satisfactory.

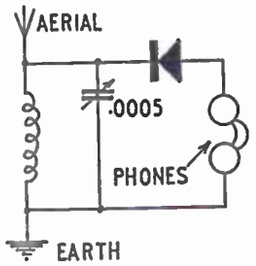


Fig. 1—Circuit of the Crystal Set

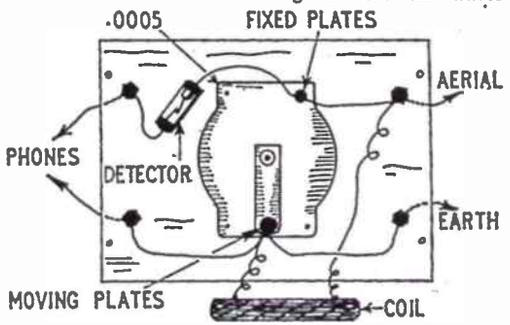


Fig. 2—Complete wiring plan

The panel, on which the receiver is built, is cut to the same size as the case, and held in place by four small screws. Fig. 2 shows all connections, etc., under the panel. A ¼in. diameter hole is required for the usual condenser of this type, which is held in place by means of a large nut on the fixing bush. The knob is secured in place by a small set screw.

Some detectors have wire ends. These may be looped round the terminals. Other types have metal end caps, and the connections should be clipped or twisted to these. Leads must not be soldered, here, as the heating is detrimental to the crystal. Many kinds of terminals are obtainable, and all are satisfactory. They may be of 4 or 6 B.A. size.

The tuning coil consists of 45 to 50 turns of the insulated wire wound in a compact pile on some convenient object about 1¼ins. in diameter. After winding, the coil is slipped off the object and bound with cotton, to hold the turns together. The ends are then connected up as shown. The coil lies in the bottom of the case.

If it is desired to tune long waves only, the coil should have about 250 turns, wound as above. If both long and medium waves are to be tuned, then one coil may be wound with 50 turns, and one with 200 turns. One end of the medium wave (50 turn) coil is connected to the aerial terminal.

The case is made from ¼in. thick wood, and is 3¾ins. by 2¼ins. by 1¼ins. deep. The actual dimensions in no way influence results. The pieces may be jointed, or fixed together with fret nails.

● Continued on page 70

PART 2

Amateur Boat Building

By R. H. Warring

PROFESSIONAL boat builders have to serve a long apprenticeship before they become skilled craftsmen. It may seem strange, then, that the amateur boat builder can usually produce a finished job of comparable standard at a first attempt.

There are several reasons why this is so. Not all amateurs, of course, do make a first-class job of their construction, but mistakes are fairly readily rectified or 'bodged' and only appearance need suffer—not seaworthiness. Where the amateur scores is that he is usually tackling a fairly small craft. A lot of the tricky work is already done (if he has bought a prefabricated kit), the job is *designed* for easy building and the *materials* are relatively easy to work.

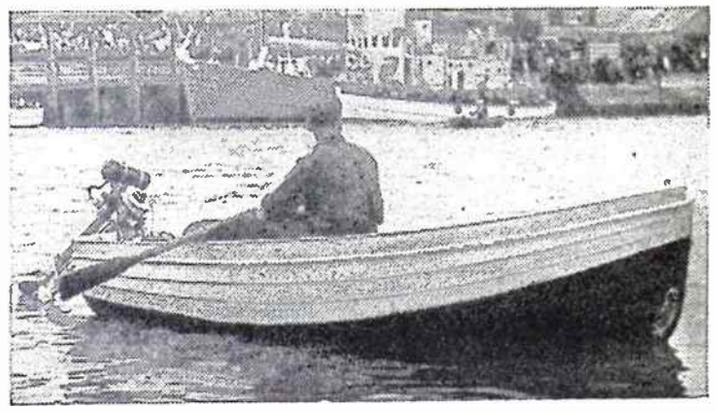
Planked Hulls

A large number of professional hulls, for instance, are planked. The planks are either set edge-to-edge (carvel built) or slightly overlapping (clinker built)—see Fig. 1. Both are tricky jobs, needing experience and practice to do properly. An amateur carpenter would probably find it beyond his limited experience in woodworking. For small hulls, however, planking or 'skinning' in marine plywood is equally suitable. In fact, plywood skinning has certain advantages. There are no gaps between individual planks to be sealed or caulked, large sections can be covered with a single sheet of wood, and plywood is generally flexible enough to bend to curved shapes.

The type of plywood used is of special 'marine' quality. The laminations are bonded together with a resin-type adhesive, which is absolutely permanent and waterproof. There is no tendency for the plies to separate if immersed indefinitely in water—in fact a specimen of ply can be *boiled* in water for hours and still show no ill effect.

This type of ply, together with the special waterproof glues used to join and fix the skin, results in a very dry hull. With just reasonable care a completely watertight hull is produced. The fixing glue itself has gap-filling properties which means that it will fill and seal small spaces left by bad fitting, so here is a further safeguard for the amateur builder. Finally, as an additional safeguard, ply panels are invariably screwed as well as glued in place. To adhere properly the resin glues used must be allowed to dry under pressure. Coating with glue and then screwing in place produces this pressure.

The strength of plywood is also most favourable. Smaller craft up to about 11ft. long are usually 'skinned' with ⅛in. thick ply. This is relatively easy to bend round curves. Larger hulls demand ¼in. thick ply skinning up to, say, 14ft. long—possibly ⅜in. ply for a 16-18ft. hull and ½in. ply for a 20ft. This thickness is now getting too stiff to bend readily, and we enter the realms of double skinning—two separate layers applied one on top of the other in diagonal directions. We have left the realms of simple construction. The guiding factor is, of course, strength as expressed by total ply thickness. Compared with mahogany planking, thickness of ply skinning required is roughly one-half—e.g., ¼in. mahogany planking on a carvel—or clinker-built hull could be replaced on a modified design by ⅛in. ply for a hull of similar strength, much easier to build, and much 'dryer' when afloat. Waterproof plywood has thoroughly proven itself as a shipbuilding material, especially for small craft, and no amateur builder should have any fears on this score. The main thing to remember is that it must be grade AX100 to British Standard Specification 1088. All plywood panels made to this specification are stamped accordingly, and can thus be identified, if you have any doubts on this score.



A typical clinker built dinghy—not so easy for amateur construction, and generally avoided in favour of ply skinning

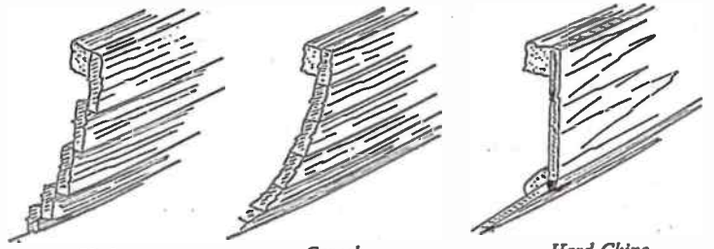


Fig. 1

Built upside down

Probably the other main difference between professional boatbuilding and amateur construction is that the former utilises building stocks on which the craft is built, upright, finished and then launched. Most amateur hulls are started upside down, supported clear of the floor by extensions of the frames which are subsequently cut off when the boat is turned upside down and the deck beams and decks fitted. This dispenses entirely with the need for

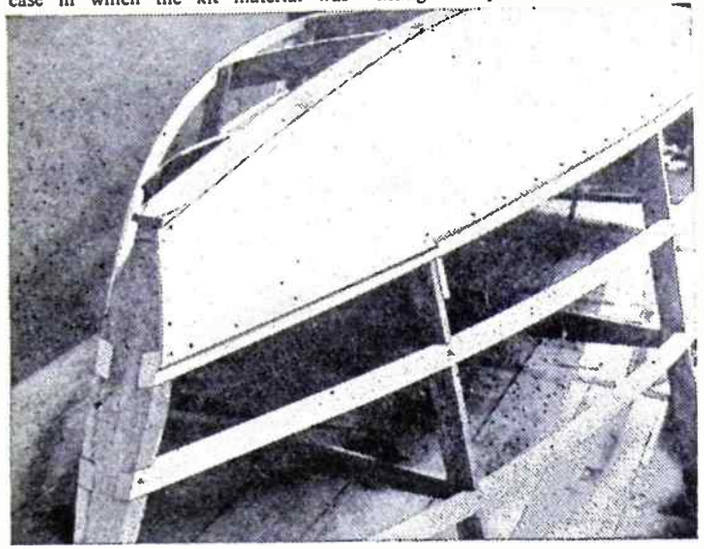
stocks, which are costly and quite useless once the boat has been finished.

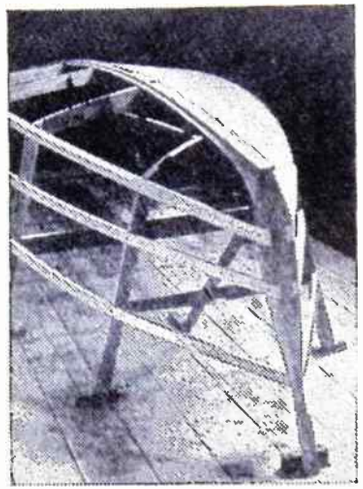
In the case of some of the smaller pre-fabricated kits, the hull is built upside down right on top of the packing case in which the kit material was delivered. With larger hulls a suitable floor space is marked out, wooden blocks fixed on the floor to locate and secure the frame extensions which are all erected in a true vertical position. Struts may be necessary to support the end frames or transomes at their correct attitude.

Building then follows the process of fitting the keel or hog member, the gunwales, chines and any stringers. The completed framework is then faired off, ready to receive the ply skinning. This is cut to rough outline shape—actually fitting in place, temporarily, and marking out—then glued and screwed in position. Trim off the ply neatly and the hull is ready for turning over. Parts to go inside the hull are then added, followed by deck beams and decks, where fitted.

If you can handle a saw, a plane and a chisel, there is nothing very difficult about the work involved. You must be able to work accurately, for in all boat building there is a considerable amount of matching to fit—'trim and try' until a satisfactory fit results and a permanent joint can be made. A lot of it may be *hard* work, too—not so much difficult as tiring. An 8ft. pram dinghy will require something like a thousand screws to be screwed home tight.

One thing, however, you do *not* need a lot of tools. A stiff-backed saw about 12ins. long, a 1¼ or 2ins. plane and a 1in. chisel are essential. Also one or more screwdrivers matched to the size of screws involved. You will also need a number of small G-cramps (3ins. or 4ins.), plus a hand drill and a selection of drills. If you can afford to buy more tools—or can borrow from a friend's workshop—then get a small power drill, complete with sanding attachment; and a pump-action screwdriver. These two extra pieces of equipment will literally save you hours of hard work.





These two photographs illustrate construction of a typical sailing dinghy. Frames are assembled upside down on the floor, secured to wooden blocks. Gunwales, chines and strippers are then added, also the keel members. The ply skin is then glued and screwed in place in panels to complete the hull.

(Photographs by courtesy of the Bell Woodworking Co.)

● **Continued from page 68**

Making a Crystal Receiver

The second end of this coil is connected to the long wave coil. The second end of the latter is then wired to the moving plates terminal of the condenser. A switch of any type, or made from a strip of metal and two bolts, is connected so that the long wave coil may be short-circuited when medium waves are to be tuned.

Signals should be heard as soon as aerial, earth and phones are connected. The earth lead should go to a metal spike or object buried in the ground, or to a descending water pipe. A piece of wire netting, tin, or any similar object will act as an earth. It will be most effective if in damp soil. Proper earth spikes are usually of copper, to avoid rusting. The earth lead should not be unnecessarily long, or some efficiency will be lost.

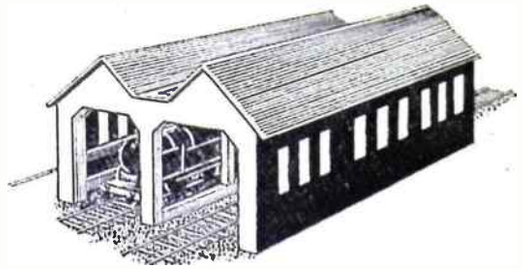
The best aerial is one which is high, fairly long, and well clear of walls, pipes, and other earthed objects. It should be supported by one or more aerial insulators at each end. A single length of aerial wire can form both aerial and down-lead, to avoid joints. If possible, the down-lead should be at least 2ft. from the house walls. About 60ft. of wire, for aerial and down-lead would do well.

Indoor aerials are often satisfactory, though volume is, naturally, slightly reduced. Such aerials are most effective in an upstairs room, but can be used downstairs. The wire should be carried round two walls of the room, near the ceiling. Thin, single-strand wire is satisfactory. Very short aerials, such as are suitable for many valve sets, are not really suitable. Nor are indoor aerials satisfactory in any building of metal construction.

Though a crystal detector is able to operate almost indefinitely, it is best to silence the set when not in use. This may be done by disconnecting the aerial, or shorting aerial and earth terminals with a piece of wire.

FOR MODEL RAILWAY ENTHUSIASTS

A Double-Track Engine Shed for OO Gauge



THE construction of this engine shed is suitable for the model railway not permanently laid. For those who like to change their layouts, or for table layouts during holidays, easily set-up accessories are helpful. The advantage of the engine shed described is that it has no solid base, and can be placed over the rails after they are laid and wherever desired.

Although there is no connection between the outside walls at the base, strength is obtained through the manner of building the ends. The length is given as 12ins. to cover OO gauge engines and their tenders, but this may be shortened to individual requirements. If tank engines only are used, this length may be considerably reduced.

The building is made mainly of wood strips, faced and roofed with cardboard. Four corner posts of ¼in. square strips are cut to form uprights 2½ins. high. Two crosspieces, ¼in. wide, ¼in. deep and 5¼ins. in length are bevelled at the ends to conform to the roof slopes. They are glued to the top of the upright posts, making two ends 5¼ins. in width.

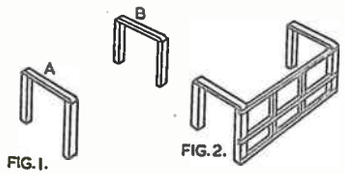


FIG. 1.

FIG. 2.

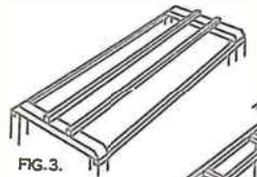


FIG. 3.

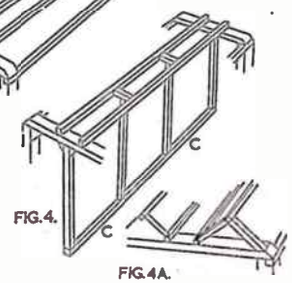


FIG. 4.

FIG. 4A.

(Figs. 1 and 6). Six ¼in. square strips, 12ins. long, are let into the uprights. (Figs. 2 and 5). These may be strengthened by upright pieces, inserted in between. Two strips are also glued on the top of the cross pieces to run the length of the roof. (Fig. 3). Four gable ends to support the roof are then cut either in solid or in ¼in. strips. These extend from the outside wall to the peak of the roof, then down to the ends of the ¼in. strips which run the full length down the middle of the roof. (Fig. 6).

The building is divided lengthwise into two sections by a series of uprights. This is done by laying a foundation strip midway down the full length of the shed. Two small crosspieces are inserted between the two full length strips running down the middle of the roof. These will be 1/3rd and 2/3rds of the

● **Continued on page 73**

KEY TO ILLUSTRATIONS

Fig. 1—The four main uprights with the main crosspieces A and B

Fig. 2—Shows three of the 12ins. long strips let into the corner posts, and strengthened by small upright pieces

Fig. 3—Two roof strips laid on the main cross pieces. These support the flat middle portion of the roof

Fig. 4—The central division showing the foundation strip C, on which the four uprights go to the underside of the roof

Fig. 4a—A gable end shown in strips on the right

Fig. 5—The strips forming the sides. The cardboard surface occupies the whole area of 12ins. by 2½ins. The dotted lines represent the window spaces

Fig. 6—The end uprights, crosspiece, gables and position of roof. The angle pieces for strengthening are shown at D On the left, the gable end is shown made of strips. On the right the gable end is shown made of solid ¼in. wood. Out of this piece two niches are cut to fit in with the strips running the length of the shed

Fig. 6a—The shape of the end cut out of cardboard. When glued to the strips shown in Fig. 6, they form a strong solid mass

Fig. 7—Area of cardboard for right-hand section of main roof. The dotted line represents the shallow cut to be made for bending. For the opposite roof section the cut will have to be made appropriately lower in this area, that is 2ins. from the top, leaving ¼in. at the lower part

Fig. 8—The flat part of the roof running down the middle, showing the rectangles to be cut out

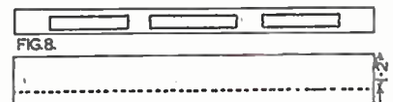


FIG. 8.

FIG. 6A.

FIG. 7.

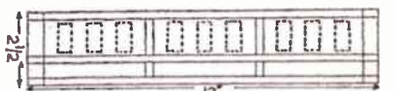


FIG. 5.

FIG. 6.

CONTINUED FROM LAST WEEK

A SCALE MODEL CABIN YACHT

'Venturesome'

THE deck can now be given two coats of white paint. When dry, lay the cabin on the deck and mark its position lightly with pencil. Scratch away a little of the paint along this outline on the deck, so that when the cabin is glued to the deck it will ensure a strong adherence.

The next stage is to skin the transom. Then make up the helm and the pin 23 from medium gauge wire. The helm can now be pushed down through the hole in the keel, and the end flattened slightly to prevent it turning in the rudder (Fig. 8.) The rudder is pushed on after drilling, and dropped into the pin 23. Since water is likely to make the wood swell slightly, allowance should be made by drilling the hole in the keel a wee bit oversize. The rudder, of course, must be quite free to move with the action of the mainsail. To ensure more freedom of movement, a good plan would be to insert through the keel a piece of brass tube of the type used in model aircraft construction.

The two cabin doors can be made from thin plywood or card, and glued in position as is shown in Fig. 9. Make a short bowsprit from $\frac{3}{16}$in. round rod with flattened portion which is glued and pinned to the deck.

The mast, 18ins. long, is shaped from $\frac{1}{4}$in. round rod. Place it in the hole in the deck, push it right home and insert a screw-eye $\frac{1}{4}$in. above the top of the cabin (Fig. 9.) On either side of the cabin, about $\frac{1}{4}$in. back from the line of the mast, insert a screw-eye along each edge of the deck to take the two stays. If it is thought necessary, two more screw-eyes can be fixed to the edge of the deck to make four stays in all.

A running horse is now shaped from medium gauge wire as in Fig. 9. The ends are pointed with a file and inserted in holes made in the deck with a fretwork drill. These holes should be located in the former 3, just in front of the mast. A touch of glue can be added to the points before inserting, to make a stronger job.

Open out slightly a screw-eye and insert it into the centre of the transom on the deck. Next cut the main boom, which is 8$\frac{1}{2}$ins. long, from $\frac{3}{16}$in. diameter round rod. Open out another screw-eye and fix this into the end of the boom. This screw-eye will later be linked up with the one in the mast, and then closed up.

The measurements given in Fig. 10 are for the finished sails, and allowance of $\frac{1}{4}$in all round should be made for hemming. This is indicated by the broken line. Make paper patterns of the sails,

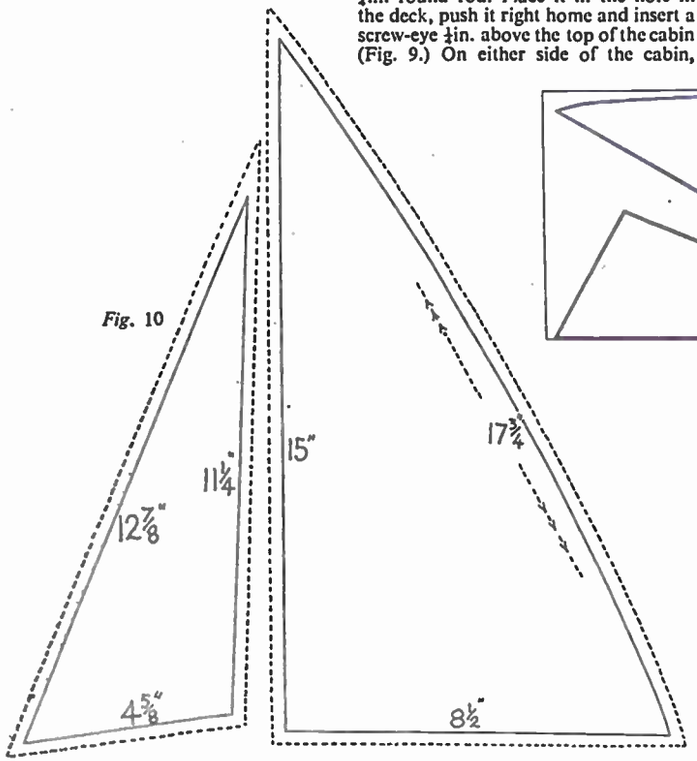


Fig. 10

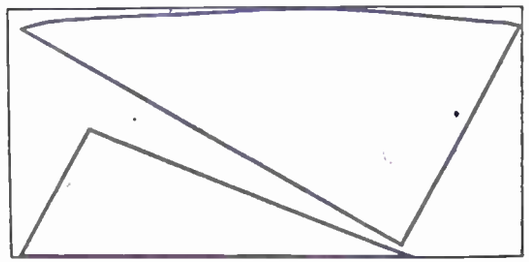


Fig. 11

and lay them out on the cloth supplied with the kit as shown in Fig. 11. Note that the outside edge of the mainsail is curved. Cut out and hem all round and sew five $\frac{1}{4}$in. rings to the edge of the mainsail in the positions indicated in Fig. 12. Now make the jib boom from $\frac{1}{16}$in. diameter round rod 4$\frac{1}{2}$ins. long.

Streamlined Effect

The next stage is to smooth up the keel and round off the edges to give a streamlined effect. The leading edge is finished off fairly sharply. The weights supplied in the kit are each of approximately 1$\frac{1}{2}$ozs. They are screwed on either side of the keel, and will be found to give full stability to the yacht when afloat. Two coats of white plastic enamel paint can now be given to the model. When dry, sit the model in water and determine the waterline. The following colourings, it is suggested, will give a neat appearance to the model: hull below waterline, white: keel, green: sides and transom, green: deck, buff: cabin sides, doors and seats, mahogany: top of cabin, cream. The masts should be left in their natural state and varnished.

When the paint is dry, the sails and running rigging can then be assembled and added to the model. Study Fig. 12 carefully and it will be noticed that the running rigging goes through the ends of the booms and mast at various points. Drill these points before commencing assembly. In each corner of the two sails, make small holes which should be buttonhole stitched all round for strengthening.

Now attach the boom to the mast and close up the linking screw-eye, as already indicated. To the topmost point of the mainsail, attach a length of cord. This is threaded through the hole in the extreme top of the mast, then through the hole in the top of the jibsail. From there the cord goes through the mast again lower down, and then through the two holes of the clew (24) and on through the bowsprit. Pull the mainsail to the top of the mast and tie off round the clew.

Tie off Tightly

The jib boom should now be attached at the forward end by passing a short cord through the hole in the sail, which should be tied off tightly. The next cord is attached to the other corner of the jib sail, threaded through the jib boom, knotted, and passed round the running horse. Then thread through the clew and bowsprit again, tying off on the clew.

The mainsail is attached to the forward end of the boom by a short length of cord running through the corner of the sail and the screw-eye. The remaining cord is attached to the corner of the mainsail, passed through the hole in the boom, knotted, passed through the helm, the two holes in the clew, the forward hole in the boom, and back, to tie off on the clew.

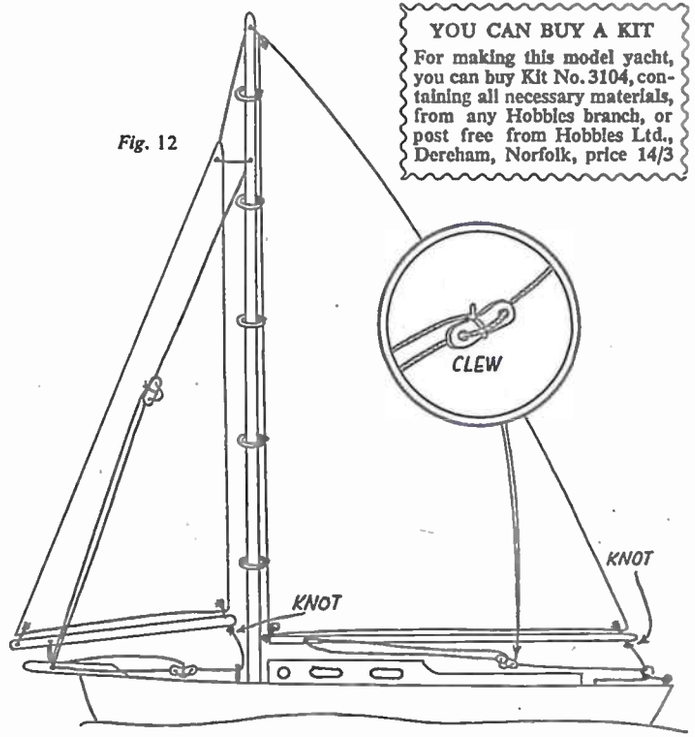


Fig. 12

YOU CAN BUY A KIT

For making this model yacht, you can buy Kit No. 3104, containing all necessary materials, from any Hobbies branch, or post free from Hobbies Ltd., Dereham, Norfolk, price 14/3

The loop of the helm, incidentally, should be open slightly to allow the cord to be removed when necessary. When the yacht has been completed, the rubber band can be placed round the helm and the screw-eye in the transom.

The stays are then fixed by tying pieces of cord from the mast to the screw-eyes on the outer edges of the deck. For effect, a small burgee (flag) can be fixed by inserting a long household pin in the top of the mast. Alternatively a length of wire with flag attached can be lashed to the mast. The flag should consist of a small piece of silk.

Set the Rudder

For use in calm weather when there is not much wind, it is recommended that a larger suit of sails and longer boom be made for fitting to the yacht. When sailing remember that the boat will naturally turn into the wind. The rudder must therefore be set so that this tendency is counteracted. The amount of tension put on the rubber band depends on the strength of the wind.

The yacht enthusiast can add battens in the mainsail if so desired. These are, of course, thin strips of wood stitched into the sail to give increased performance.

And a final word from the Editor—Happy sailing, and may the wind always be favourable.

(D.Y.G.)

● Continued from page 71

OO Gauge Engine Shed

distance respectively. (Fig. 4). Four $\frac{1}{4}$in. square uprights then connect the foundation strip to the underside of the roof—the two end ones to the main cross pieces—the other two to the two small crosspieces. (Fig. 4). Where the uprights join the underside of the roof, angle pieces are glued in the corners to give added strength. (Fig. 6).

Imitation Glass

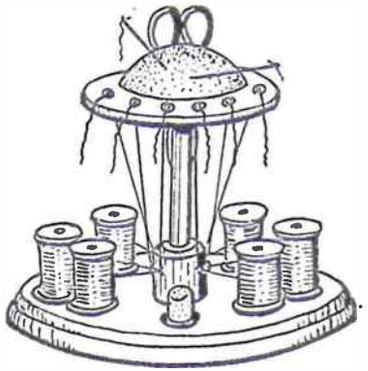
The shapes of the two ends and the two sides of the building are now cut out. The shape of the ends are shown in Fig. 6a. The sides are rectangular, 12ins. by 2$\frac{1}{2}$ins. Windows are cut out of the sides. If glass is added, a good representation is obtained by sticking on the inside, a strip of transparent adhesive tape, such as is used for mending music. (Fig. 5). The two main roof sections are cut out to shape, overlapping slightly at the ends and over the outside walls. A shallow cut is made in order to get a clean bend at the peak of the slopes. (Fig. 7). The central piece of the roof has three long, narrow rectangles cut out. These are covered on the lower side with transparent tape. This section is mounted between the main roof sections. (Figs. 6 and 8).

The whole is assembled by using a strong glue. The cardboard surfacing glued to the strip skeleton, when painted, makes a very firm construction, which can be brightened up by the addition of a few advertisements.

A Needle Worker's Tidy

By W. J. Ellson

THOSE of our readers, or their friends, given to fancy needlework would appreciate the novel tidy illustrated. It holds six reels of coloured silks or cottons and enables suitable lengths to be withdrawn as required without jumbling up the reels and entangling the threads. Accommodation is also provided for thimble and a small pair of scissors. A pincushion tops the lot. Nicely made and finished, it makes a pleasing, useful present.



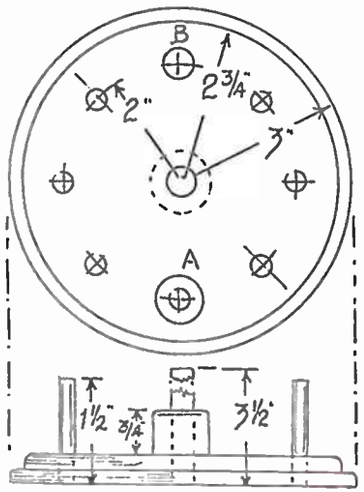


Fig. 1

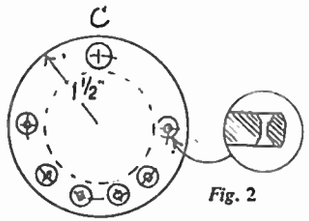


Fig. 2

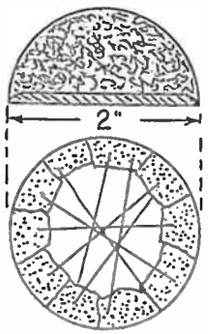


Fig. 3

The body consists of a base, with central pillar for the pincushion and pegs for the reels. A plan and side view of this part are shown in Fig. 1. Strike circles on ¼in. fretwood for the base of diameter given. Both are to be glued together, but before doing so, set out the position for the pegs on the smaller disc first. Divide it into eight equal parts radiating from the centre, then with radius of 2ins. cut across these parts, the intersections marking the positions of the six pegs, thimble hole A, and a small hole B. The latter may not be needed unless the scissors are too long, so leave until that matter is determined later.

Hole for Thimble

At point A, bore a hole through, large enough to admit the thimble quite easily. Round off the upper edges of both discs to a quarter circle, then glue the discs together and cramp up until the glue is hard. In the centre of the base bore a ¼in. hole for the pillar and opposite side of this six holes (¼in. diameter) for the reel pegs. In the centre of thimble hole A bore a ¼in. hole also for a smaller peg on which the thimble can sit.

A round disc of wood, ¼in. thick and 1in. diameter, is now cut out, either in solid wood or pieces of ¼in. thick wood, glued together to make up the thickness. This is bored ¼in. and is fitted over the pillar and glued to the base. A dotted circle on the plan shows its position. On the edge of this, about half-way up, six tiny screw-eyes are driven in to receive and guide the threads on the reels. Position them opposite their respective pegs.

The cap of the pillar, holding the pincushion and having outlet holes for the threads, is shown in Fig. 2. Cut this from thinner fretwood than the base, if available (it is not vitally important), and strike a 2in. circle on it to denote the position of the pincushion. Mark the positions of the six thread holes and bore these ⅛in. Note they are situated on the front half of one disc, and not directly over the pegs below. With a countersinking bit enlarge these holes a trifle, both sides, as in inset. At point C bore a hole large enough to let the blades of a small pair of scissors pass through. Slightly round off the edge of the cap and fit it to the top of the pillar with a screw, well countersunk.

Try the scissors in the hole. If the points of the blades do not touch the base, a hole at B will not be necessary, but if they do, mark where they touch on the base, remove cap and bore a hole for the points to sink in. Make the thread holes very smooth so as not to fray the silk, or cotton, as it passes. A small file would be useful here or a tiny scrap of fine glasspaper wrapped over a pointed matchstick. Fix the cap on permanently, adding a little glue to the point to strengthen it. To complete the body part of the article cut the six pegs from ¼in. dowel rod and glue them, boring the holes for them through, or nearly through, both discs of the base.

Finish

The finish of the article, after some necessary glasspapering, can now be undertaken. This, of course, is a matter of personal choice. Stain and varnish would be the easiest but if a more colourful effect is preferred a coat of poster paint, followed by clear varnish, would look attractive. Or, of course, art enamel could be employed. Whichever is chosen, leave unpainted the pegs and that portion of the cap to which the pincushion is subsequently to be attached.

For the pincushion (Fig. 3) cut a thin disc of fretwood, or plywood, to the diameter given and bevel off its edge, as shown in the sectional view. On this place a small handful of cotton wool, pressing it well down with the hands and moulding roughly to the semi-spherical shape. Cover this with a piece of silk, draw the edges of the material over the disc and bring taut with crossed

● **Continued on page 76**

A. F. Taylor explains

How to Make a Wine Bottle Rack

EVER since the derationing of sugar many people have turned their attention to the old craft of home-made wines. Although made correctly, bottles of such wine may be spoilt by bad storage methods.

Wine bottles should never be stood in an upright position, and there are several reasons for this. The correct method is to place the bottle on its side with the neck elevated at an angle of about 15° to 20°.

Keep the cork wet

The most important point about wine storage is to keep the cork wet, and this cannot be done with the bottle standing upright. If the cork is allowed to dry it is not air-tight and the wine will deteriorate. By placing the bottle on its side, or 'slightly canted' as it is called, the wine will work on the cork and keep it in good condition, and this is very necessary with a sparkling wine.

Nearly all wines, especially the home-made ones, have a certain amount of sediment which collects and falls to the bottom of the bottle. If the bottle is stood upright this is disturbed when pouring out the wine, with the result that the flavour will be spoilt. When the bottle is kept leaning, however, nearly all the wine can be carefully poured out without disturbing any of this sediment.

This article deals with the making of a rack made on the unit system to hold a dozen bottles each, and they can be built up to stand side by side. This method is better than making one large rack, which would be somewhat cumbersome and much more difficult to construct.

The entire rack is made of ¼in. plywood, but ordinary wood can be used instead, in which case it would be advisable to slightly increase the thickness. It is not necessary to make the rack deep enough to take the full length of a bottle, which averages 11¼ins. A depth of 9ins. is sufficient to hold the bottle nicely and leave plenty of the neck protruding for easy handling.

Cut the two sides to the full length of the rack—17¾ins. by 9ins. The top and bottom and the five partitions between these are all cut to the same size—11ins. wide and 9ins. deep.

All these parts can now be glued and pinned together, using fine panel or veneer pins. Care must be taken to get the five partitions fixed at the correct angle, which is about 15° (Fig. 1). A strip of ply 11ins. long and 2ins. wide fixed along the front at the bottom of the rack will give the correct tilt to the bottom shelf.

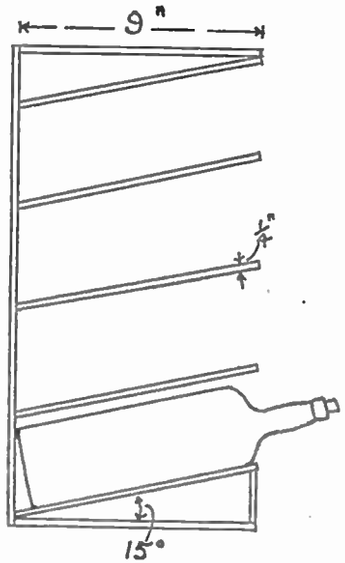


Fig. 1

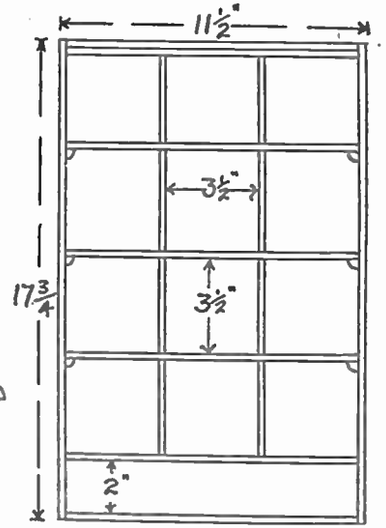


Fig. 2

Probably the best way is to build up the rack from the bottom, fixing the partition on to the dividing bars as you work upwards. Two of these are required for each partition and they are 3½ins. wide and extend from front to back (Fig. 2). The outside ends of the three centre shelves have corner pieces glued underneath them for additional support. These are not necessary in any other position.

A back is not a necessity, but it is much better to fit one. As the bottles are slightly inclined they are liable to slide down the slope. The weight of the bottles may tend to force the rack out of shape and it is for this reason that a back should be fixed. Quite thin ply can be used, provided it is adequately pinned to the partitions and sides of the rack.

Finish

Finishing off the job must be left to individual requirements. If the ply is clean and in good condition it can be left in its natural state or with, perhaps, a coat of varnish to preserve it. You may, on the other hand, decide to give the outside a coat of paint to fit in with the furnishing scheme.

● Continued from page 74

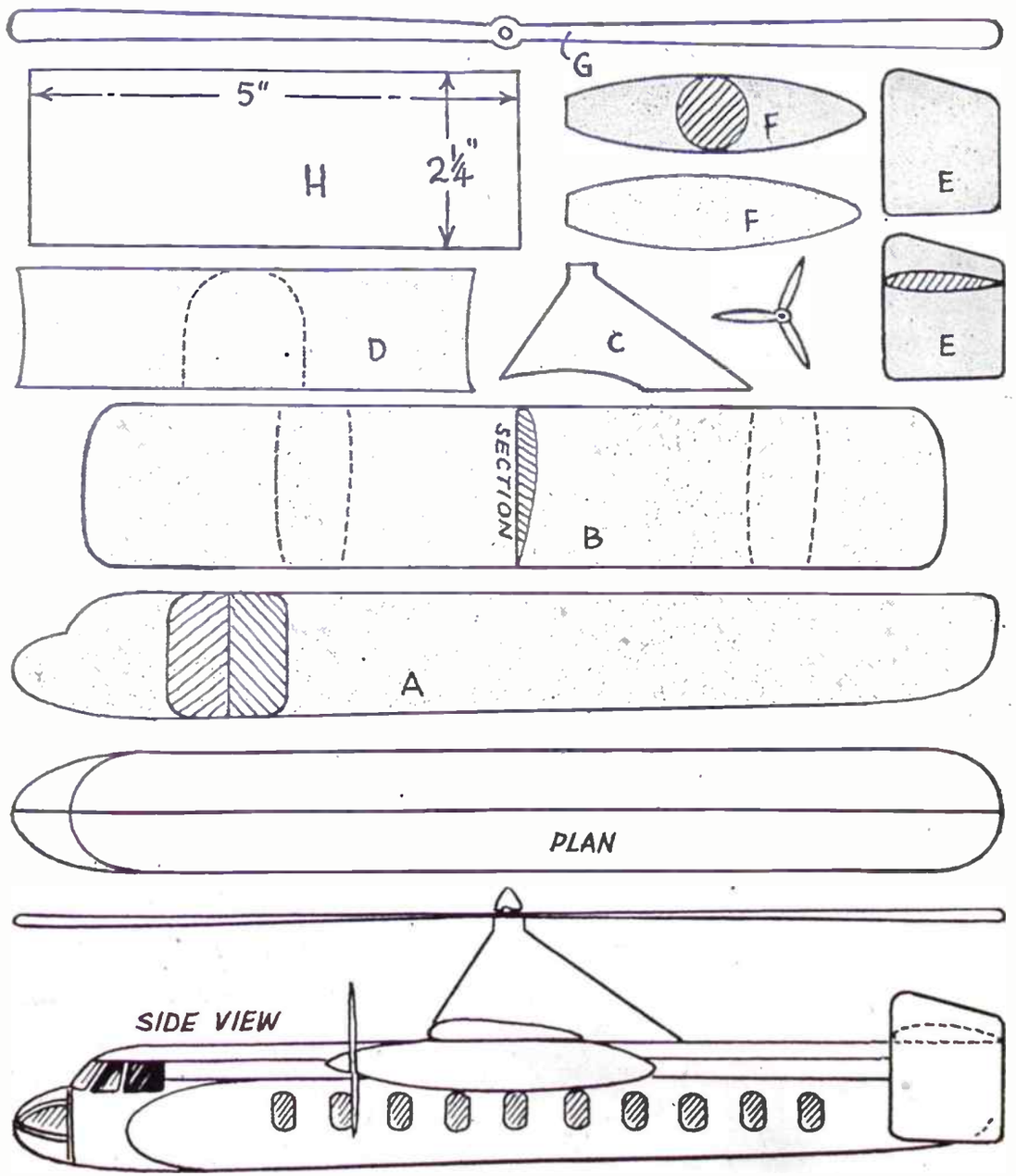
Needle Worker's Tidy

stitches of thread below, as in the underside view in Fig. 3. Make a shapely mould of it, free of creases, press the underside flat and glue the whole to the centre of the cap.

To fit up the article, having provided the reels of coloured silk or cotton, cut from cloth scraps a disc for each peg and push over it until the cloth discs rest on the base. Place the reels over and loosen the ends. Thread these through their respective screw-eyes, then through the outlet holes in the cap. Leave a few inches hanging down. It would be a good idea to glue a circle of baize or cloth, to the underside of the base to enable the tidy to be stood on a polished table top, without fear of scratching its surface.

SEE PAGE 65

Patterns for the Model Rotor-Coach



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