

# HOBBIES WEEKLY

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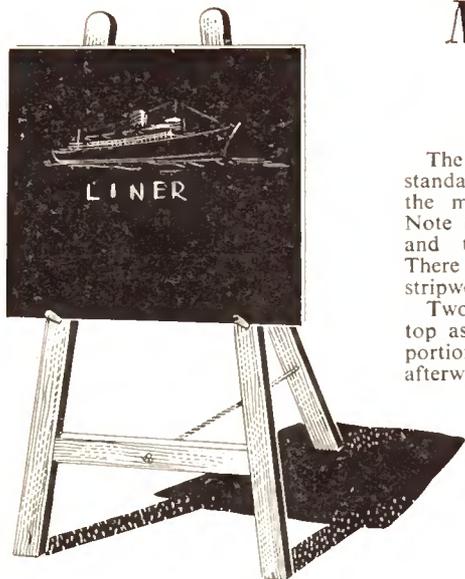


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## *Make this for the children when playing 'schools'*



The easel is made up from lengths of standard stripwood  $1\frac{1}{2}$ ins. by  $\frac{3}{4}$ in., to the measurements shown in Fig. 1. Note that the overall height is 36ins. and the blackboard 18ins. square. There will be no need to plane the stripwood which is all ready to use.

Two lengths should be rounded at the top as shown in Fig. 1. The rounded portion can be cut with a fretsaw and afterwards cleaned up with glasspaper.

See that the upright rails and the cross-rails make the even and correct angles each side before pencilling on the line of the inner edges of the upright rails and the cross-rails. The pencilled lines will denote where the saw-cut comes when cutting down the halving for the lap joints shown in Fig. 2. Note that these joints are lettered in conjunction with Fig. 1.

When the cutting with a tenon saw

## BLACKBOARD AND EASEL

**M**OST children love playing at 'schools', especially when they have a splendid blackboard and easel to use. Why not encourage them in their education by making one yourself?

The illustration here shows a board and easel which has been designed specially for the amateur to make easily. Joints are simple yet strong and there should be no difficulty in making it up in two evenings.

Cut a piece 17ins. long for the bottom rail and a piece 12ins. long for the top rail. Having cut these two pieces with square ends do not yet attempt to cut them to the finished slope, as this can best be done after all the parts are glued and fixed together.

Now measure 8ins. up from the lower ends of the long rails and about 3ins. down from the top ends. Splay them out so that the cross-rails fit exactly in the positions shown.

See Fig. details  
on page 418

and paring away with a chisel have been done the joints should be cleaned up with glasspaper. Put them together temporarily to see that a sound fit has been made. When all the joints fit flush they can be glued together and screwed, countersunk brass screws being used.

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

*For Modellers, Fretworkers  
and Home Craftsmen*



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Bore the holes for the pegs in approximately the positions shown in Fig. 1.

The construction of the back support of the easel is shown in Figs. 3 and 4. The leg is joined to a cross-piece by a lap joint as shown and two triangular blocks are glued and nailed in position. The whole strut is then hinged to the top cross-piece of the frame already made up.

The construction of the board is shown in Fig. 5. Six standard LD6 panels are needed. They are 18ins. by 3ins. by  $\frac{3}{4}$ in. and are joined together at the back by a similar panel cut in half to form two pieces 18ins. by  $1\frac{1}{2}$ ins. by  $\frac{3}{4}$ in.

If plywood is used, extra strength will be required at the back. The

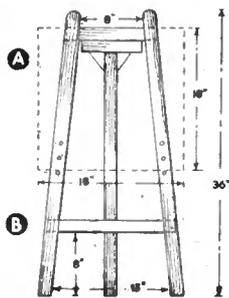
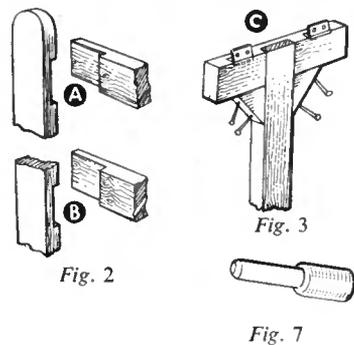


Fig. 1

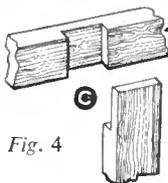


Fig. 4

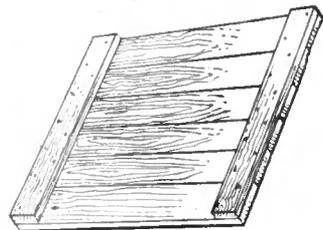


Fig. 5

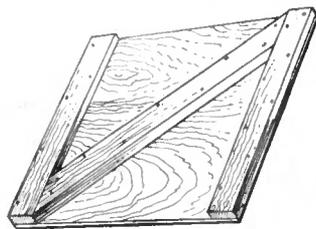


Fig. 6

battens should be of  $\frac{1}{2}$ in. thick wood and arranged as in Fig. 6. This will give a strong board which should not readily warp.

The pegs are made from pieces of waste wood to the shape shown in Fig. 7. They should fit nicely into the holes already bored in the easel.

A good finish may be obtained by

giving the easel two coats of brush polish, lightly rubbed down, with a finishing coat of clear varnish.

The blackboard face must be coated with a special paint which provides a jet black surface free from any gloss. This can be obtained from Hobbies Ltd., Dereham, Norfolk, price 1/- per bottle, packing and carriage 6d. extra. (M.h.)

## Books to Read

### The British Journal Photographic Almanac 1955

ALL the facts and figures needed by photographers in all spheres of work are included in this 640-page annual. There are authoritative articles contributed by experts, and the equipment section will whet the appetite of all interested in the art. There are some excellent photogravure prints, while the colour plates indicate the great strides in this development.

Published by Henry Greenwood & Co. Ltd., 24 Wellington Street, Strand, London—Price 5/-.

### Spratt's Guide to Bird Management

IN this concise little book the care of birds, including their housing and feeding, with chapters on exhibiting, breeding and care in sickness, are authoritatively dealt with.

Published by Spratt's Patent Ltd., 41-47 Bow Road, London, E.3—Price 1/6.

Continued from page 423

## Building an Aviary

about every 2ft. (D). Let the top rest on the sides (E). Fix the wire netting to the insides of the frames with small staples.

Enclose the door in one section (F). Give it a diagonal brace to prevent sagging. Paint all the woodwork. Painting the wire netting black makes it easier to see the birds.

If the shelter is to be a full-depth shed, make it in sections and cover them with matched boarding, weather boarding or asbestos. One side bolts to the flight frames. In this there should be an entrance opening at a convenient height, not on the ground. This should be of ample size, with a means of closing (G). Build in one or more windows, depending on the size of the shelter. If opening windows are used, there must be netting on the inside of the frames. Similarly, the entrance door should cover a safety door, which can be light framing covered with netting (H).

If a smaller shelter is used it may be built into part of the flight, preferably raised off the ground. Construction should be generally similar to the shed. In a very small one, it might be most convenient to have an opening roof for inspection and cleaning, lined with a

safety door. Include a window of some sort in even the smallest shelter.

The usual oval perches may be fitted in the shelter and the flight, but branches and boughs will give a more natural appearance. There is scope for artistic treatment in the arranging of rockeries and the growing of plants, although you must be prepared to replace many plants frequently, as the birds attack them or foul them.

The outside of the shelter should be painted to match the flight, but inside it is best painted white or lime-washed.

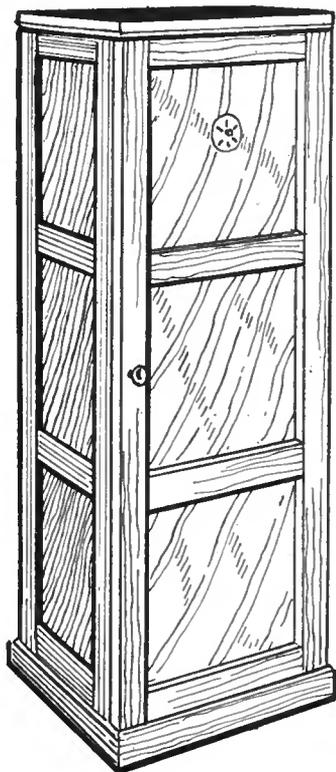
### GRAND FREE DESIGN

The Oct. 19th issue of 'Hobbies Weekly' will contain a free design for a modern garage and filling station. Make sure of your copy and tell your friends about this grand offer

Space limited? — Make this

# STORE CUPBOARD

Says *W. J. Ellson*



thickness of the wood used for the sides. They are 18ins. long and their length must be shorter than the overall length so that they will fit between the sides when the door is closed. Cover them with plywood or hardboard, as before, that for the top being pinned on the outside, while that for the bottom is on the inside.

To fix the frames together, screw a

## CUTTING LIST

Side Frames (4)	5ft. 6ins. by 3ins. by $\frac{3}{4}$ in.
" "	(6) 1ft. 6ins. by 3ins. by $\frac{3}{4}$ in.
" "	(2) 1ft. 6ins. by 4ins. by $\frac{3}{4}$ in.
Door Frame (2)	5ft. 4ins. by 3ins. by $\frac{3}{4}$ in.
" "	(4) 2ft. 0ins. by 3ins. by $\frac{3}{4}$ in.

## PLYWOOD PANELS

2—5ft. 6ins. by 1ft. 6ins.; 2—5ft. 4ins. by 2ft.; 2—1ft. 10ins. by 1ft. 6ins. (approx.); Shelves, etc., 4—1ft. 10ins. by 1ft. 5ins. (approx.).

Remainder from spare wood.

**E**VEN when a good pantry is available, a store cupboard is generally welcome in the house.

The cupboard described here has extra depth and is capable of containing much that might overcrowd the pantry. Simple in construction and economical in timber, it can readily be constructed by any handy woodworker.

The sides and door are framed with  $\frac{3}{4}$ in. by 3in. wood, with the sole exception of the bottom rails of the sides, which are 4ins. wide instead of 3ins. A side elevation (Fig. 1) and front elevation (Fig. 2) supply suggested dimensions. A simple halved joint is used to fit these frames together, but to prevent cross-grain cut at the ends of the rails being visible the halved joints at the front edges of sides and door are stopped short by  $\frac{1}{4}$ in. as in detail (A). The door frame (half of which is shown in Fig. 2) is similarly framed but note that it is 2ins. shorter in height.

These frames, glued and nailed together, are then covered on their inside faces with plywood or hardboard, glued and pinned in place. Panel pins are the best for this part of the work, as they are easily punched down level afterwards. The top and bottom of the cupboard are similarly framed but in these cases no cross-rails are necessary. The size of these frames is dictated by the

each end to fit over the battens. A similar wood bar is nailed across the top frame to cover the top edge of the door, as at (C). Similar strips are nailed each side of this, but these should be flush with the outer face of the cupboard sides. To all these strips, nail a moulding or bevelled strip, mitring the corners to form a cornice. To the bottom strip (B) and cupboard sides, nail  $\frac{1}{2}$ in. by 2in. strips of wood, as a plinth. The upper outer edges of these should be bevelled for a better appearance.

Across the sides, inside the cupboard, nail 1in. square battens on which the shelves will rest. The number of these and their distances apart can be decided to suit personal requirements, but if a suggestion would be welcome, a distance apart of 12 ins. starting from the top is generally most useful. Now hang the door with a pair of 1in. by 3in. strong iron butt hinges. Cut a recess for the leaves both in the front edge of the cupboard and inside face of the door. If the cupboard fits flush against a wall it may be found that a back is unnecessary but in most cases it will be found useful to nail a plywood back on to the framework of the sides.

As a substitute for the conventional shelves, a top and bottom shelf of the shape at (D) (Fig. 4) is suggested. This is an improvement in both positions, as it allows articles on the shelf above or below

● Continued on page 428

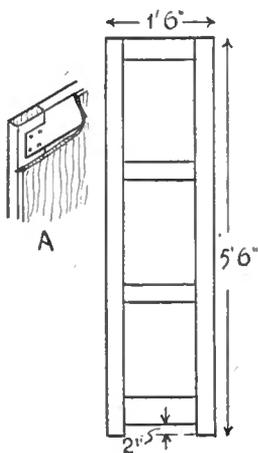


Fig. 1

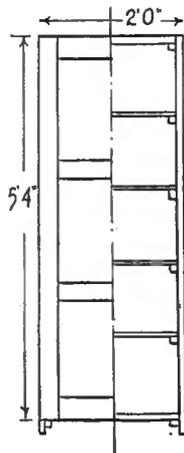


Fig. 2

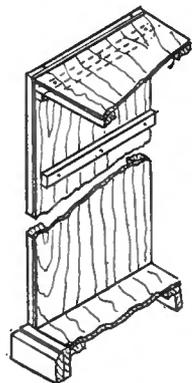


Fig. 3

# ATTACHÉ-CASE PORTABLE

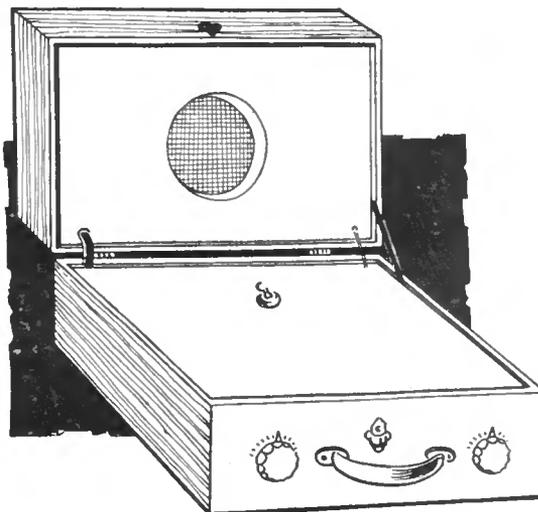
By F. G. Rayer

READERS appear to be interested in constructing a small portable, and that described here should suit them. In practice, the 4-valve superhet type of portable is most efficient, but the construction is rather complicated, and the cost of components relatively great. Instead, a 3-valve 'straight' circuit has been adopted. Because of the presence of reaction, sensitivity is almost as great as with the superhet, and construction is very much simplified. The circuit is, in fact, the simplest which can be relied on to provide satisfactory speaker results.

### Three Valves

The valves required are the 1S5, 1T4 and 1S4. These may be obtained readily. Equivalents by other makers are also easily obtainable, but care should be taken to ensure they actually are equivalents, or no results may be obtained. For low tension, a 1.4 V supply is required. This is provided by any so-called 1½ V dry battery, such as used in torches, etc., or especially made for all-dry portables. With flash-lamp batteries having several cells, the cells must be rewired in parallel. When this is done, 3 V or 4.5 V batteries will be suitable, as they will only deliver 1.4 V. For high tension, a 60 V or 67½ V battery is suitable, or an eliminator, when the set is used indoors.

The other parts required by the circuit, Fig. 1, are as follows:—three B7G valveholders, .0003μF and .0005μF solid-dielectric variable condensers, .0003μF, .005μF, .1μF and .5μF 350 V paper condensers, .01μF mica con-



denser, 25 to 50μF bias condenser, H.F. choke, on/off switch, 30,000 ohm, 100,000 ohm, 600 ohm, ½ megohm, and two 2-megohm resistors, small loud-speaker with transformer for battery-type pentode, intervalve coupling transformer, ratio about 1:3 to 1:5.

Care should be taken not to confuse the resistors, as if wrong values are wired in, the set may not function. Resistance values should be within 20% of those shown in Fig. 1.

A diagram showing the general layout of the set appears in Fig. 2. Both frame aerial and speaker (with transformer) are in the lid. This gives best signal pick-up, as the aerial winding is

well clear of batteries and other parts. It also enables the speaker to come in the best position for reproduction.

The bottom section of the case has the set in the front, and batteries behind a partition towards the back. This allows the whole set to be built upon a single metal strip or chassis. When the set is carried the valves are upright, and thus unlikely to fall out of their holders. In addition, the two variable condensers are operated through insulated extension spindles. This eliminates the great disadvantage so often found in this type of circuit—hand capacity, where tuning is influenced by the position of the user's fingers on the control knobs.

When set and batteries are in place, a piece of 3-ply covers the whole, being screwed to the corner blocks of the cabinet. The on/off switch is mounted on this piece, and wired directly in the L.T. positive lead.

### Lid Section

The lid is shown in Fig. 3. The loud-speaker panel is of 3-ply, and fits inside the edges of the lid. A 3-ply frame, upon which the aerial is wound, is secured with thin panel pins to the panel. When the speaker is fitted and the aerial wound, the whole is pushed into the lid and the panel held to the corner blocks by four small screws.

Three leads come through the left-hand lower corner of the panel, for frame aerial connections. Two other leads pass through the right-hand corner, for speaker connections.

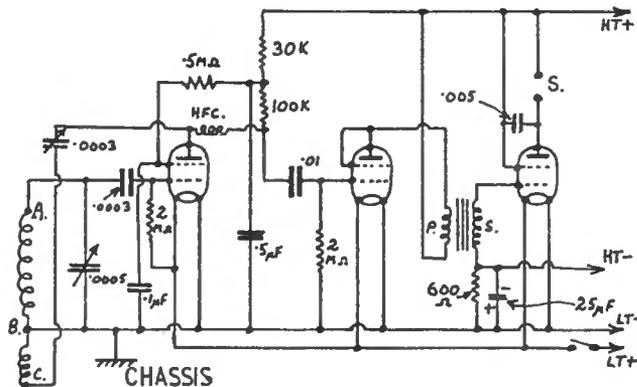


Fig. 1—Showing the circuit



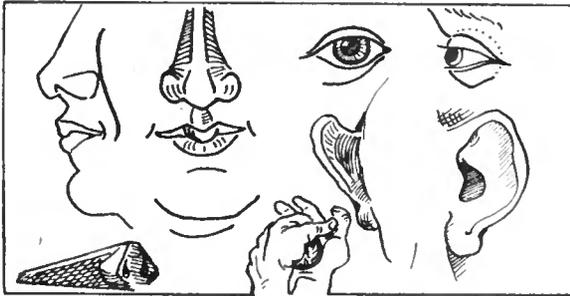
# Modelling a Head in Clay

By Thomas McCreanor



**T**HE model has been developed roughly to the bulk and form of a human head. You must now try to give it something of the personality of your subject. Your success will depend to a large extent on the accuracy of your observation, and how you manage to express what you have seen.

Before proceeding, therefore, scrutinise carefully the details of the subject's face. Try to discover what is his most striking feature first of all. For instance, he may have a long nose or big ears. Or, perhaps, he has a big chin. It might seem frivolous if not downright rude to



suggest this scrutiny. Nothing of the sort. These details are the only visual aids for expressing a person's character in clay. It is the structural detail that concerns you, not the superficial. Grey hair or rosy cheeks are alike inexpressible. So you must concentrate rather on the roundness or angularity of the cheeks, and the quantity of hair. Compare the size of one detail with that of another—nose with ear, ear with mouth, upper lip with lower jaw. Note especially the slant of the jaw, for this is a good indicator of age.

Having made a thorough study of your subject, return once more to the model to make use of your discoveries.

The neck has been fully developed.

Start now on the lower jaw including the chin and continue up with cheeks and upper lip. It is essential to keep viewing the head from various angles. You may find that one view looks satisfactory only to discover that from another angle everything has gone lopsided. Here is where your mirror will help. Set it in such a position that it reflects the overhead light on to the shadow side of the model. While working on the lighted side you will be able by glancing in the mirror to see what is happening on the dark side. Build both cheeks together to ensure that they are equal in size. Build gradually with small pellets and there is less chance of things going wrong. Bring forward the forehead until it projects almost as far as the chin, leaving sockets for the eyes. Add the nose, a tapering wedge shape, making sure that it is centrally placed. Then the upper lip which, you will notice, overhangs the lower. If you wish you may roll balls of clay to fit into the eye-sockets. Overlay these with thin ribbons of clay for the eyelids. Indent



the head at either side at centre, building the ear around the indentation. Do not attempt anything elaborate here, as it is not in the nature of clay to sustain a complex shape like the human ear. With the hair you may allow yourself as much freedom as you think fits in with the overall effect. Ribbons and whorls of clay may be used with good result.

To finish, press in with the finger-tips any pieces of clay that seem in danger of falling off. You could continue this treatment over the entire surface of the face if you would like it smoother. I would advise you to experiment with a view to obtaining different textures as these help to liven the appearance. For instance, you could pat the clay with the flat of the knife or dimple it with the point.

When you have finished your model all you need to do is put it in a dry place where it will not be disturbed for a few days and it will set hard.

● Continued from page 421

## Attaché-Case Portable Radio

mences. It may be necessary to turn the whole set round, for maximum volume, as the aerial is directive.

Small scales or dials may be fitted to the control knobs. Tuning and reaction will be quite critical. As a worth-while refinement, small epicycle reduction drives can be fitted in the extension spindles, to simplify tuning. The set covers the medium-wave band of about 200 to 550 metres.

Unused ex-service valves may be

purchased cheaply, as can many other parts. If, however, all components are to be obtained new, a large component supplier, such as Coventry Radio, 189 Dunstable Road, Luton, Beds., can supply everything required. Fig. 5 shows the positions in which the valves must be inserted. Small screws hold the completed assembly inside the cabinet. Detailed instructions for building the latter have not been given, as no difficulty should arise here.

*A straightforward job*

# BUILDING AN AVIARY

ANYONE who keeps pet birds soon yearns for something more ambitious than a cage in which to house them. An aviary gives the birds room to fly around, there can be more of them, and the conditions can be made far more natural with branches and plants. The construction of an aviary is a straightforward job which can be tackled successfully by the average handyman.

Size will depend on the available space and the number of birds it is

★★★★★★★★

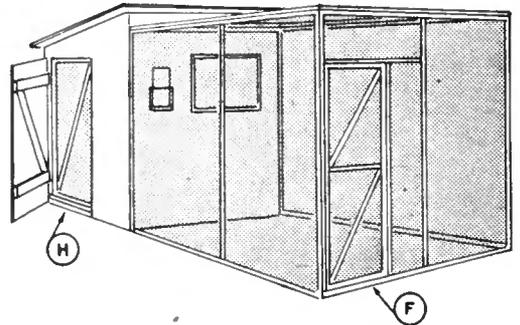
A

*Hobbies*

*Weekly*

*'Special'*

★★★★★★★★

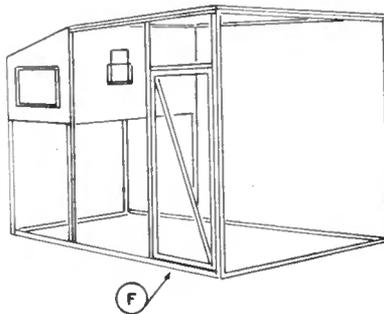
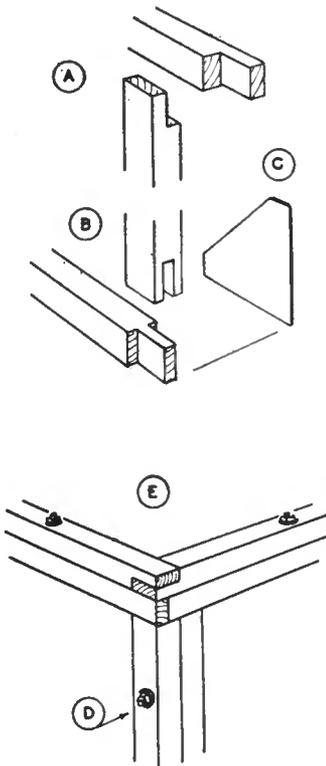


*By P. W. Blandford*

can be a kind of cupboard. In both cases it must be free from draughts, there must be a means of closing the entrance door, and light should be admitted by windows.

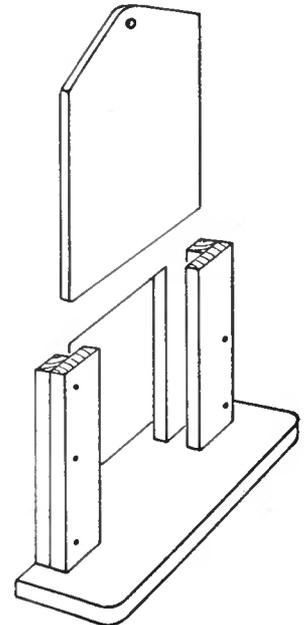
In planning an aviary we must

height of about 7ft. If the width of a section exceeds 5ft., there should be a central upright for stiffness and to



consider the action of vermin. Small mice may get through  $\frac{1}{4}$ in. mesh netting —  $\frac{3}{8}$ in. is better. They will burrow under supports merely resting on the ground. If the shelter has a wood floor they may get through it. A brick foundation laid around the sides will support the cage and help to exclude vermin. As a further protection the wire netting may be carried below the framing and buried in the ground. If the shelter stands on the ground it is better with a concrete floor.

The framing of the flight may be  $1\frac{1}{2}$ ins. square timber, preferably planed. It is best to build in sections and bolt them together. Sizes will depend on the job. Normally they will be the full



G. Entrance opening

prevent the netting being pushed out of shape.

The corner joints may be halving (A) or bridle (B). A triangular piece of galvanised steel sheeting can be nailed on to give additional support (C). Coach bolts, about  $\frac{3}{8}$ in., should be spaced

●Continued on page 418

intended to house. The main part is in the form of a cage, with close-meshed wire netting on all sides and the top. There should be a door to allow you to enter. Although you need not be able to stand up in the doorway, the inside should have enough headroom to let you work in comfort. At one end must be a shelter in the form of a shed. It may reach the ground and be big enough for you to enter or, for a smaller flock, it

# Novelty Weather Indicator

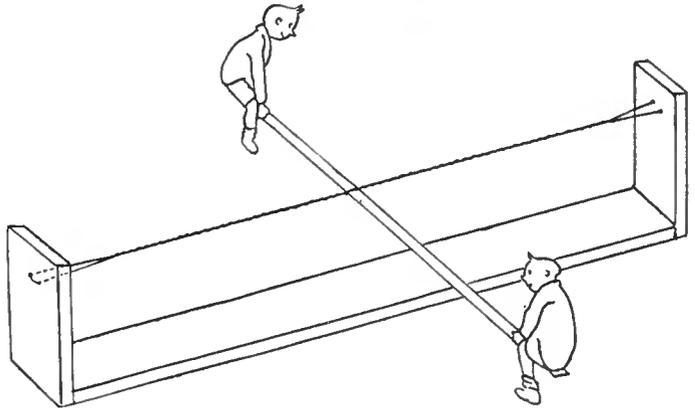
**T**HIS accurate and amusing weather indicator is easily made and at little cost. Weather changes are forecast by the boys on the plank. One rises to indicate rain; the other, fine weather.

The base is made from a piece of wood, 7ins. by 1in. To this glue and nail the sides, 1½ins. by 1in. Use  $\frac{3}{16}$ in. or  $\frac{1}{4}$ in. wood. Drill two holes in each of the sides,  $\frac{1}{4}$ in. apart and 1in. from the base. The plank is a piece of thin card, 4½ins. by  $\frac{3}{16}$ in. A strand of silk is required, from which the silk is suspended (see diagrams). Loop the silk through the two holes in one of the sides. Now twist it by passing one length over the other, say, about two dozen times. Place the plank between the strands, and continue twisting as before. Pass the ends of the silk through the holes in the other side, and hold fairly taut by means of a weight.

## Atmospheric Action

The 1in. high figures are cut from thin card, painted, and glued at the ends of the plank. It is advisable to paint the whole model before assembly.

The indicator depends for its action on the fact that as the air becomes damp the cord slackens and causes one of the figures to rise. When the air gets drier, the cord tightens and reverses the action. The correct tension and the amount of twisting of the cord can be achieved by a little experimenting.

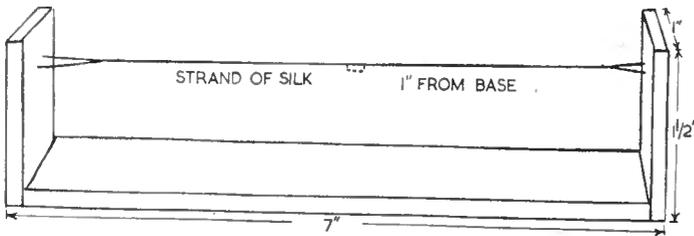


*By Harold Ridgway*

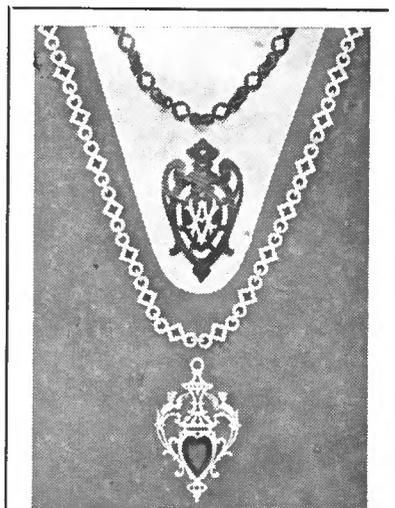
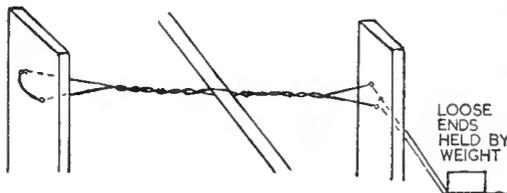
To set the indicator for working begin with the figures equally balanced. Dampen the cord, and one of the figures will rise. This is the wet-weather boy. Accordingly, write the letter 'W' near him on the plank. Next hold the model near to (but not too near) a fire. The cord will tighten and in so doing reverse the action of the see-saw. The letter 'F' should be written near to the fine-weather boy.

You may find the need for a slightly

extra weight in favour of the cord when it is slackening. This will be because the twist is not so strong as when it is tightening. So experiment with a small piece of thin card near to the fine-weather figure. This can be gummed in place when the testing is completed. It only remains then for the holes through the sides in which the ends of the silk pass to be plugged with small wooden wedges. These will hold the cord at the correct tension.



FIGURES CUT 2 FROM THIN CARD 1" HIGH



Fretcutting in plastic—some intricate and delightful cutting by Mr. Sherrard Hamilton, of Downend, Bristol.

*Easy to make*

# A BEDSIDE TABLE

**T**HE main feature of this table, apart from its modern appearance, is the simplicity of construction. It consists of six pieces only—two trays and four legs. There are no difficult joints to make, as will be seen from the illustrations.

## Two Trays

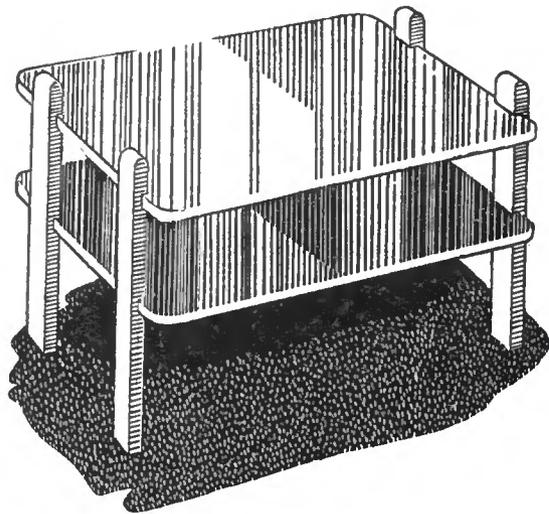
The trays consist of two pieces of  $\frac{1}{2}$  in. plywood, 24 ins. by 18 ins. The corners can be rounded off as shown in the diagrams. The legs are cut from 1  $\frac{1}{2}$  ins. by 1 in. material, and are slotted to take the trays as shown in the diagrams. They are fixed by means of countersunk screws and the heads afterwards filled with plastic wood.

The legs measure 24 ins. long and the  $\frac{1}{2}$  in. slots are cut in the positions shown in Fig. 1. The diagram in Fig. 2 shows a view of the end and gives the necessary measurements. Note that the legs are broken away to reduce the overall size of the drawing.

## Square Across

The joints in the legs should be marked out by placing them side by side and squaring them across. This will ensure them being accurate. Make cuts with a tenon saw and trim out the waste wood with a chisel. Bore holes to take the screws for fixing.

All that remains is to fill the grain and



Six pieces of wood — four legs and two trays — are the only materials needed to make this neat piece of bedroom furniture.

apply a light rubbing of stain. The table can then be polished or varnished. An alternative, and also attractive, finish is obtained by using plastic enamel paint

or Chinese lacquer. If two or three coats are applied, and each coat rubbed down before applying the next, the resulting finish will be excellent. (M.h.)

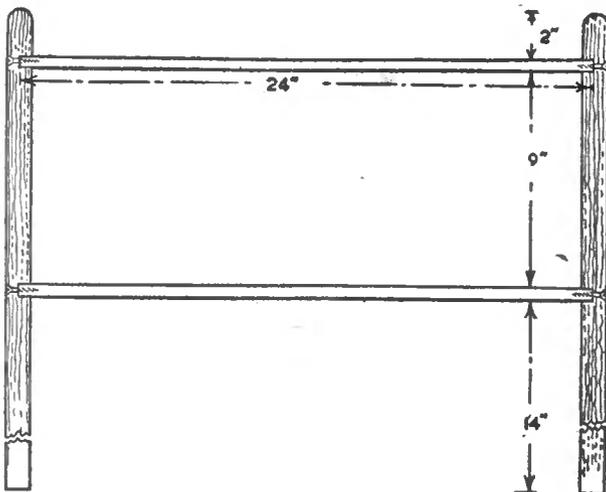


Fig. 1—Slots for the trays

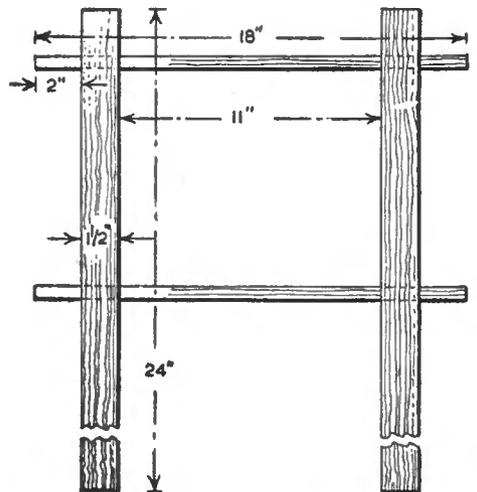


Fig. 2—End view

# Replies to Readers

## Is this YOUR Problem?

### Painting Over Flaky Plaster

**I** HAVE a wall I wish to prepare for painting. This wall has been disintegrated previously, which has made the plaster very dusty and soft. Could you tell me the best preparation to use so I can paint afterwards? (Q.W.—Liverpool.)

**I**F the plaster is not too powdery, the following should be satisfactory. Mix 1 lb. Casco glue in 1½ pints water, then mix the dissolved glue in 1 gallon of water. Apply to the wall and when dry, paint over it. Be sure to remove old distemper beforehand.

coat the back of the painting with a good photo mountant and press the painting on to it and leave it to dry under a press so that the painting dries flat. Any thick strawboard will answer for the backing which should, of course, be fixed with fine nails driven sideways into the frame. Then cover the joints with strips of brown paper to exclude the dust.

\* \* \*

### Cleaning a Gravestone

**C**AN you suggest an efficient way to clean a gravestone which is weathered? (D.L.—Surbiton.)

**T**HE normal method of cleaning a discoloured and weathered stone is to have it sand-blasted or 'steam washed', but both processes, of course, call for professional aid. Some considerable improvement can be obtained by washing and scrubbing with white sand and hot water. This can be followed by painting with any 'cement' paint, either in a natural grey colour or white.

### ☆☆☆ WORTH NOTING ☆☆☆

#### Cleaning Old Coins

**M**OST old coins can be cleaned by washing and scrubbing with a detergent, then washing in clean warm water. Follow by rubbing with metal polish. If this is not adequate, then use a very weak solution of hydrochloric acid, and wash off thoroughly with clean, hot water.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

The lettering could be picked out with dull black or very dark grey paint.

\* \* \*

### Mending Gramophone Spring

**I** HAVE a portable gramophone, the spring of which is broken. Is there any way I can repair it? (K.H.—Northwich.)

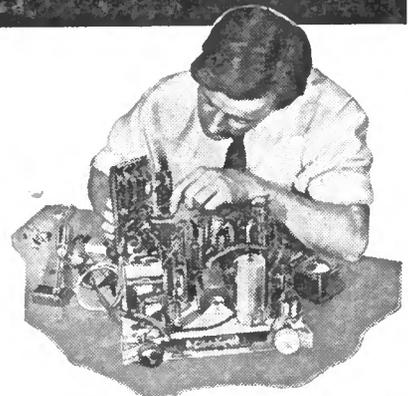
**I**F the spring has broken near to the winding arbor, the broken end should be softened by making it red hot and allowing it to cool slowly. It can then be drilled to fit the stud on the arbor, and be bent over to clasp it, as the old piece will show.

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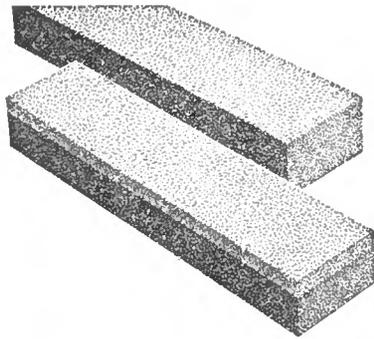
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ADDRESS .....

5/10/55 .....IC. 51

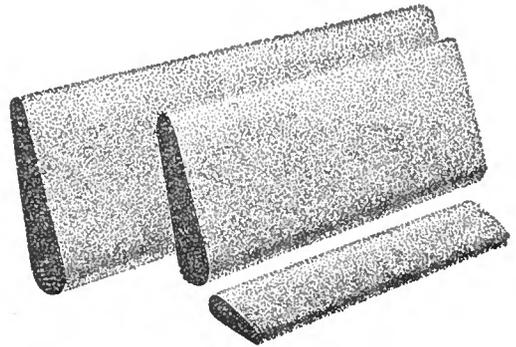
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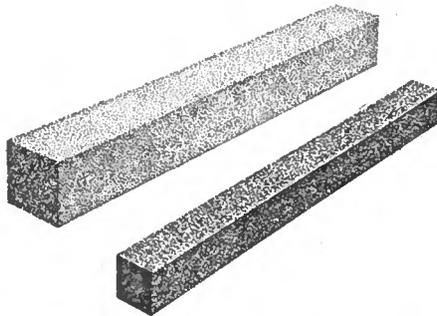
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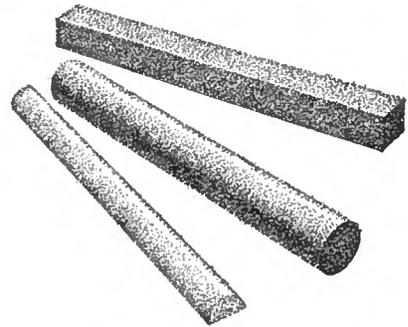
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# PHOTOGRAPHIC AIDS

FOR neat accurate titling, a small guide is useful. There need be nothing elaborate about this, and a few guides of differing sizes may be made in a few minutes.

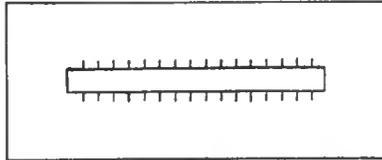
Take a piece of thin cardboard 6ins. by 1½ins., marking out a horizontal slot in the centre. The width of this slot depends on the size of lettering required, but in many cases ¼in. will be quite sufficient. Starting at one end, mark lines at right angles, equal distances apart, and equal to the size of the slot. Ink in these marks and cut out the slot.

In use, the guide is placed on the print mount, or on the album page, and the letters printed through the slot. Equal height of all letters and a straight base results. The vertical marks assist in keeping the letters upright besides being a guide to sizing and spacing.

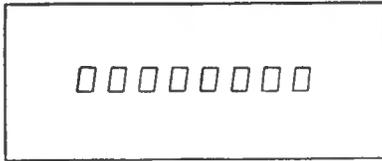
The second guide shown, although based on the same principle, provides for sloping, spaced printing for those who prefer this in the form of *italics*.

Individual slots for letters are necessary here and the best way of preparing the guide is to place a 60

By S. H. Longbottom



**Titling Guides**

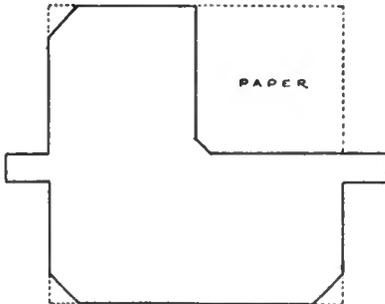


degrees set square on a ruler, marking off at regular intervals. The spacing between the letters is again a matter for individual choice, but the occasional word printed in sloping capitals is pronounced and attractive.

## Testing for Exposure

THE tedious, but essential, task of testing for exposure before enlarging is considerably aided by the simple gadget described.

A piece of thin card 4ins. square is fashioned to the shape of the diagram, using black or opaque card to prevent the penetration of light from the enlarger.



To use the tester a piece of photographic paper about 3ins. square is placed behind the tester and pierced by a push-pin through the centre hole. The wings of the tester are attached to the enlarger baseboard by push-pins where required for the test. Following the first exposure the paper is given a quarter-turn to bring the next unexposed

portion into position for the next test. The same procedure follows until four different tests have been made.

There are two methods of making test exposures; the geometric, where each successive exposure is twice the preceding one (e.g., 5, 10, 20, 40 seconds) and the arithmetical, where a fixed period of exposure is added each time (e.g., 5, 10, 15, 20 seconds).

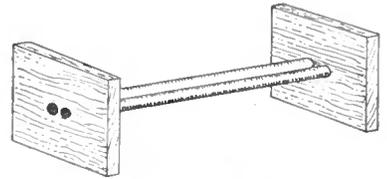
● Continued from page 419

## Commodious Store Cupboard

it to be reached with less risk of knocking over. At the bottom, the space allows for the accommodation of any articles too tall to fit in elsewhere.

The two intermediate shelves are shown made up as trays at (E) (Fig. 4). This is a convenient arrangement, making access to articles at the back of the cupboard much easier. For trays and shelves, plywood, ½in. thick, is suggested as it can be had in wide lengths, is strong, and also light. The sides and backs of trays could be cut from ¾in. or ½in. wood, with a 1in. wide strip along the front.

Fit the door with a cupboard fastener; those of the spring ball-bearing pattern would do nicely. A good addition is



## STRAIGHTENING THOSE PRINTS

NO matter how carefully dried, prints will curl. Often stroking on the back with a ruler is helpful, but the gadget shown is far more effective, and it will not damage the prints.

Construction is from two end pieces 4ins. by 4ins. of either ½in. plywood or hardboard with two ¼in. dowel rods fixed ½in. apart. The length of the dowel rods is a matter for personal decision, depending on the sizes of papers used. If the gadget is to accommodate very large prints, e.g., 15ins. by 12ins., the rods must be at least 18ins. long to allow the paper to pass through at an angle.

The dowel rods must be cleaned and rubbed quite smooth with fine glass-paper to remove all roughness and then given a good polish with a wax floor polish, preferably white.

The straightener is used by holding it between the knees. A corner of the print is threaded between the rods and pulled upwards. This process is repeated with each corner of the print in turn.

If desired an angle bracket may be attached to each end and the gadget fixed to a wall, so that it may also be used for hanging prints or films for drying; or even used as a towel rail.

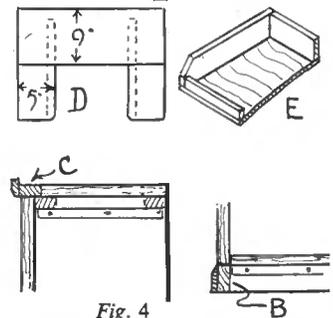
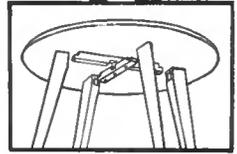
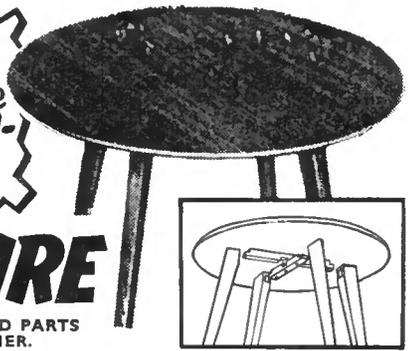


Fig. 4

a ventilator. Paint the outside of the cupboard any colour preferred. If you paint the interior, white is the best choice.

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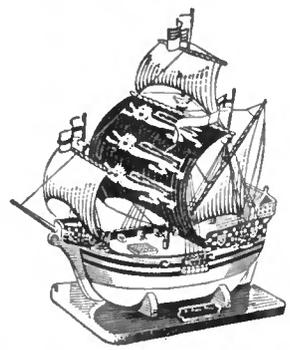
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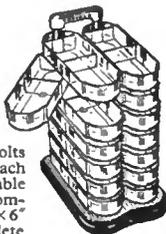
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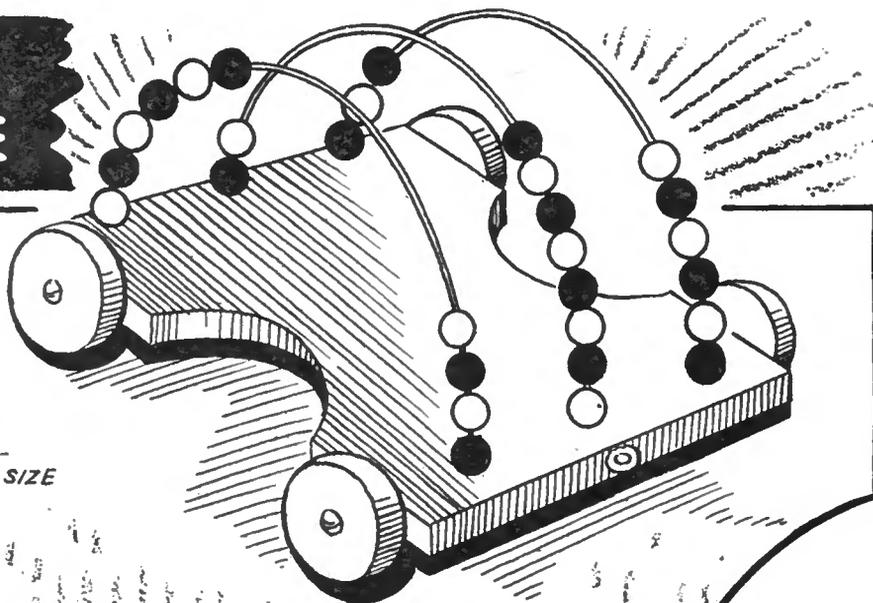
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Cut the wheels from 1in. diameter round rod, using a tenon saw. Bore holes in the centres to take the fixing screws.

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(M.p.)

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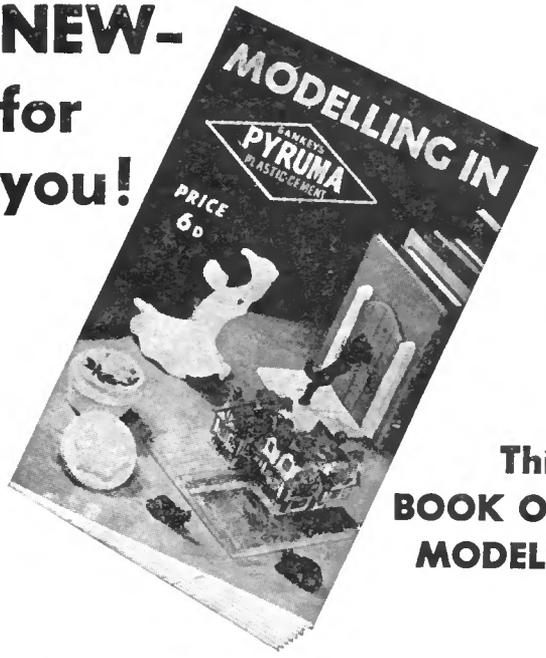
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