

# HOBBIES WEEKLY

JUNE 18th 1958

VOL. 126

NUMBER 3268

IN THIS ISSUE

	Page
Make a Novel Table - - - -	161
Successful Sweet Making - - - -	162
All-Wave Crystal Set - - - -	163
First Aid for Books - - - -	165
Harbour and Sea Snaps - - - -	166
Crossword No. 17 - - - -	167
Making a Moth Cage - - - -	168
Skill Ring - - - -	169
Painting in Oils - - - -	170
Collectors' Club - - - -	172
Models from Scrap Metals - - - -	174
'Britannia' Money Box - - - -	175

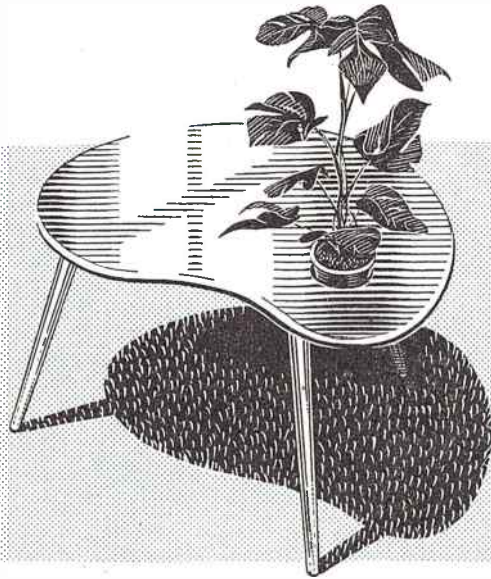


All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk

★ *FREE design inside*

## MAKE A NOVEL TABLE

*(Incorporating a  
pot plant)*



**M**OST people like to have a decorative plant in a pot on a table, but there is always the danger of the plant being brushed off or knocked to the floor and smashed.

The design for a contemporary occasional table obviates this danger by incorporating a receptacle in which to place the pot, thereby keeping it secure.

The table top is of a distinctive pattern and stands on three legs which are 20ins. high. The top measures 24ins.

by 18ins. at its widest point, and has plenty of room for taking a lamp, magazines, a snack tray, ashtray, etc. Construction is extremely simple and can be undertaken with confidence by all. But it will be appreciated that the appearance of the completed table will be enhanced by the time and care spent on its finish.

All measurements and illustrations of parts and their makeup are given on the design sheet. The plywood top is cut

from a 24ins. by 18ins. panel. It will be seen from the design sheet that the top has to be marked out in 1in. squares and the shape drawn in. This can be done direct on to the wood or on to paper and then transferred to the wood by means of carbon paper. Cut out the shape neatly with the fretsaw and clean up well. The edges should be rounded.

The box-like receptacle for holding the plant is made up from pieces 2, 3 and

● **Continued on page 162**

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

4<sup>1</sup>/<sub>2</sub><sup>D</sup>

# Successful Sweet Making

**T**HE correct temperature at which to boil sugar syrup for sweet making is of vital importance, and many batches have been spoiled because this was not fully understood.

With the aid of a confectioner's thermometer perfect accuracy is assured, but it is not absolutely necessary and success can be obtained by other means. You may perhaps find it too expensive to buy such an instrument or else have difficulty in getting one. Many professional sweet makers do not use a thermometer but rely solely on what is known as hand-tests, and are able to turn out perfect confections every time.

Some sweet recipes give the degrees in Fahrenheit to which the sugar should be boiled, while many others just quote hand-tests, and these can be very confusing and even disheartening. It is hoped therefore that the following notes will greatly simplify the problem and present it in an understandable manner.

Sweet making temperatures range from 220° which is the syrup stage up to 320° required for hard toffee, and these degrees indicate exactly the density of the sugar. The amount of water that is driven off controls the density which increases with the temperature up to 320° when no more water remains.

The syrup stage at 220° can just be detected by the hand-test. Dip an ordinary fork into the pan, withdraw and immediately take a portion between thumb and finger which should have been previously wetted with cold water. Now if the thumb and finger are separated there should be a tiny thread joining them but only momentarily.

At 225° the same test will produce a somewhat thicker thread which should not break until the thumb and finger are about a quarter of an inch apart. This is known as the *Thread* test, but some people prefer to call it the *Small Thread* test in order to distinguish it from the *Large* or *Double Thread* test which now follows.

Boiling the sugar for a few minutes longer will raise the temperature to this next degree of 230° or the *Double Thread* test, and as the name implies, two threads will appear between the thumb and finger. The test is carried out exactly as before, but remember to dip the fingers into cold water before handling the sugar, otherwise the rising temperature may cause burning. While the sugar is boiling at a temperature of 230° small bubbles looking somewhat like pearls appear on the surface and this alternative test is called the *Pearl* test.

The *Blow* test, when the sugar has reached 235° requires a slightly different technique, as the sugar is now getting

too hot to handle comfortably. Dip the fork in and remove a little as before but it will be found that the increased density causes the syrup to adhere to the fork and not run off easily. Blowing on the fork however will disperse it, hence the name, and while doing this bubbles may appear on the other side of the fork. A degree or two below 235° produces small bubbles while larger ones form at slightly over that temperature. *Small Blow* and *Large Blow* are the terms sometimes used to denote this stage.

We now come to what is probably the most important sugar boiling degree, the *Feather* test at 240°, which is the correct temperature for cream fondant and many other soft cream candies. Dip the fork into the sugar syrup, withdraw a small amount and blow through the prongs when light feathery flakes will become detached and float about.

The next stage or *Soft Ball* test is reached when the thermometer records a temperature of 245°. Remove a quantity of sugar syrup on the fork and plunge into cold water to cool it. When the sugar is now removed from the fork it may be moulded with the fingers into a soft ball.

The *Hard Ball* stage is reached when the temperature rises another five degrees to 250° and as indicated in the name the same test as before will produce a quite hard and firm ball, which will usually bounce when dropped.

Now for the various crack degrees which are very common ones in candy making and the first is reached at a tem-

perature of 265°. The test is carried out as directed for the two previous ones, but the sugar will break with a snap or crackle and is known as the *Soft* or *Small Crack*.

At this stage the sugar changes from one degree to another much more quickly and therefore needs very careful watching. A few minutes more boiling brings us to the intermediate or just *Crack* degree with a temperature of 280° and a definite snap as the syrup becomes more brittle.

For most of the kinds of toffee the *Hard Crack* degree is needed, which is indicated when the syrup tested has become very brittle and snaps like an egg shell and registers 310° on the thermometer.

Above this degree the syrup starts to change colour from pale amber at 320° called the *Caramel* degree until it becomes dark brown at 350°. This is generally known as burnt sugar or black jack and is only suitable for colouring purposes in the kitchen.

The time taken for the syrup to reach a given temperature is also important and has much to do with the success of the finished article. Boiling point (212°) is reckoned as the starting point, and it should take from 10 to 12 minutes to reach 240°, another 10 minutes to get to 260° and to go from 212° to 310° should take about 30 minutes. Sugar boiled too slowly has a tendency to grain or revert to its crystallized state when made up into sweets.

(A.F.T.)

● Continued from page 161

## Make a Novel Table

4, which are glued and screwed together as shown by the diagrams on the design sheet. This section is then screwed to the underside of the table top in the place indicated. Pieces 4 and 2 are cut from the wood left over from the top piece and pieces 3 are also cut from ½in. wood.

The three blocks into which the legs are screwed (*Hobbies* No. 582, 20in. contemporary legs) are positioned on the underside of the top and secured with glue and screws. Their positioning is indicated by dotted lines on the design sheet and should be adhered to in order to obtain correct balance. The legs screw into these blocks.

Choice of finish is left to the discretion of the worker. Some may prefer painting in shades to tone with the rest of the

room. Carefully done, the table would look attractive if stained and finished with varnish, lacquer or polish. The exposed plywood edges can be painted a dark shade.

When in use, a saucer or tin lid will, of course, be placed under the pot to retain surplus water.

Hobbies Kit No. 3268 for making this novel table contains all wood, contemporary legs, etc. Kits obtainable from branches, etc., or Hobbies Ltd., Dereham, Norfolk, price 24/9 (post free)

Gives worthwhile results

# ALL-WAVE CRYSTAL SET

IT is not usual to provide a short wave band on a crystal receiver, but worthwhile results can be achieved by doing so. The modern type of crystal diode detector operates quite effectively on these short wavelengths, and some transmitters employ much more power than was so even a few years ago. The sensitivity of a crystal set is naturally limited, but as it can be used for ordinary long and medium wave reception, in addition to tuning short waves, the interest obtained from the S.W. band is easily justified.

No mains or battery supplies are required with a crystal set, and this probably accounts for their popularity. When a licence is already held for an ordinary receiver, no further licence is necessary for the crystal set. Damage

On the S.W. band, results are very variable, as must be expected. Using a 45ft. outdoor aerial, the English programmes broadcast by Radio Moscow, Rome, and other high-power stations may be heard at reasonable volume,

~~~~~  
*By F. G. Rayer*  
~~~~~

when conditions are favourable. Morse and amateur transmissions can also be heard occasionally in some areas.

It must be emphasised that volume and range cannot approach that of a

up, and secured to the panel with glue or drawing pins.

The detector should be a new one, in proper condition. Surplus detectors are best avoided, unless tested and passed as perfect. If it has metal ends, or short leads, then longer connections can be twisted or clipped on. Leads should *not* be soldered to such detectors, because heating damages the crystals.

A wooden panel 6ins. by 5ins. will be satisfactory, with baseboard of  $\frac{1}{4}$ in. wood 6ins. by 6ins. Small wooden brackets are cut to hold the panel upright, the parts being held together with panel pins and glue.

A strip of Bakelite or Paxolin 6in. long and about 1in. wide is fitted at the back

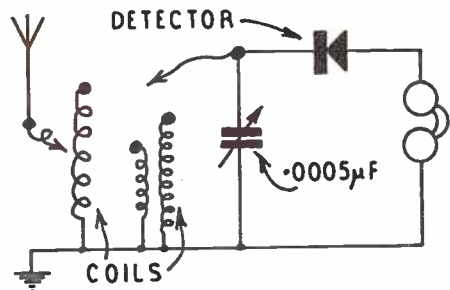


Fig. 1—Receiver circuit

through wrong connections is also impossible — incorrect wiring or other faults will merely prevent the receiver operating, and proper working will be restored when the trouble is rectified. The need to find the sensitive spot on the crystal, by manual adjustment of the catswhisker, is also entirely eliminated with the modern crystal diode.

## Results to Expect

Long- and medium-wave reception will be fully up to crystal set standard. With a reasonably efficient outdoor aerial, two B.B.C. stations can usually be received at very good volume. In some areas, more B.B.C. transmitters may be heard at sufficient volume, this depending upon their distance from the listener. In many localities, long-waves are useful for good reception of the Light Programme, but in some areas, this station is best heard on the medium-wave band. During darkness some of the more powerful European stations may also be heard, at reduced volume.

1-valver. Nor can anything like so many stations be heard. Nevertheless, stations at a remarkable distance may be picked up.

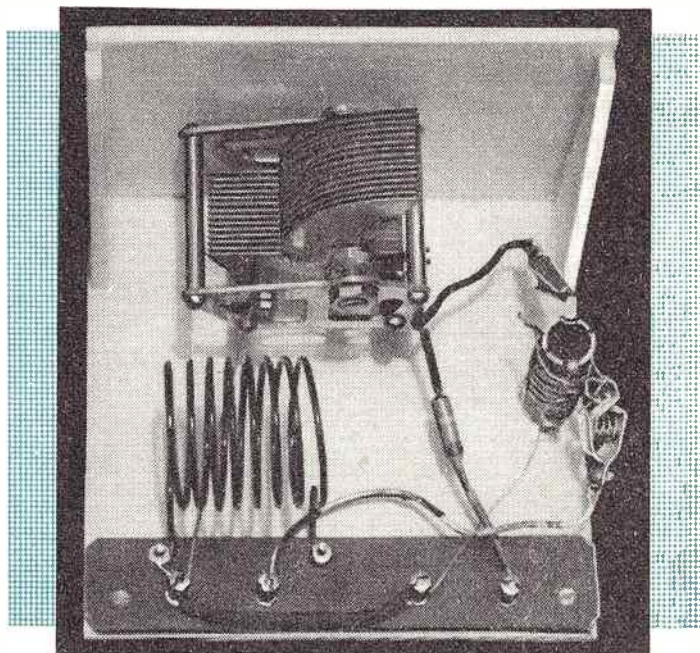
## Components Required

A  $.0005\mu$  F air-spaced variable condenser is used for tuning, with a knob or dial. This condenser may be mounted on the panel, or be of the more modern type which is secured to the baseboard by small brackets. If a simple pointer-type knob is used, a dial can easily be drawn

of the receiver, as in Fig. 2, being mounted on small wooden blocks, so that the terminals clear the baseboard. The tuning coils fitted can be chosen as explained later.

## Headphones

These require special mention, because many ex-service phones of unsuitable type are available, and are sometimes sold for use with crystal sets. Some give very weak volume, and will be unsatisfactory with any crystal set.



The set viewed from the back

The correct phones are of high resistance — usually 500 to 4,000 ohms. They are more expensive than ex-service phones, but give good volume with very weak signals. They will last indefinitely, with care, but should not be used with any mains or battery operated set.

### Waveband Selection

In the interests of simplicity, the coils are selected by taking a crocodile clip to the appropriate point. This allows any number of coils to be used, and also enables a single S.W. coil to tune more than one waveband. However, a switch can be fitted instead, if desired, as explained later.

As shown in Figs. 1 and 2, one clip is used for aerial connection, and one for

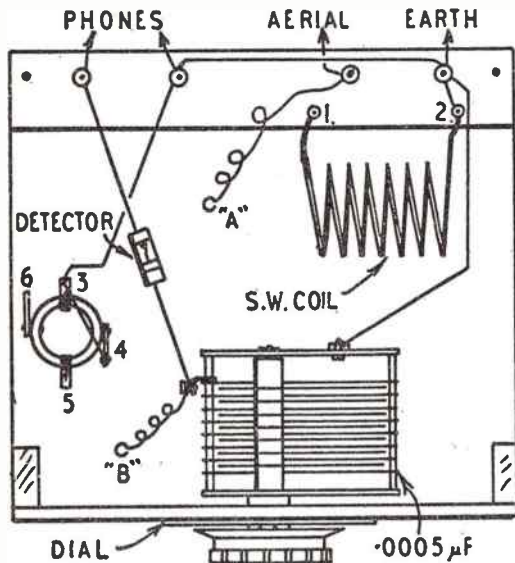


Fig. 2—Complete wiring plan

tuning condenser and detector. This allows direct or other forms of aerial coupling to be tried at will. In Fig. 2, lead (A) goes to the aerial clip, and lead (B) to the condenser clip.

### Wiring Points

All connections are shown in Fig. 2. The moving plates (or metal frame) of the condenser are taken to earth, lead (B) going from the fixed plates. Any kind of wire will be satisfactory for connections, and that obtained for the S.W. coil will be suitable.

One end of the S.W. coil (point 2 in Fig. 2) is taken to earth, as shown. The earthed end of any L.W. or M.W. coil is also taken to the earth circuit. In Fig. 2, tag 3 of the M.W. coil is taken to earth via the earthed phone terminal, which is the same, and avoids too many leads on the earth terminal itself.

### The L.W. and M.W. Coils

Ready-made coils may be used, and the connections in Fig. 2 are for the popular Wearite coils. Tags 3 and 4 are joined, and go to earth, as mentioned. Tag 5 (red) is gripped by clip (B), when this waveband is required, the aerial clip (A) going on tag 6. If a very short, poor aerial is used, volume will be increased by taking clip (A) to tag 5, together with clip (B).

A M.W. coil can be wound by using 85 turns of 32 S.W.G. enamelled wire, turns side by side, on a 1in. diameter insulated tube. One end goes to earth (as does tag 3 in Fig. 2). The other end is gripped by tag (B) when this coil is required. A centre tap, at about the 42nd turn, forms the equivalent of tag 6.

out straight, and a circular object about 1½in. in diameter (this dimension is not critical) is taken, and about 8 turns are wound tightly upon it. The coil is then removed from the object, and pulled out a little, as necessary, so that adjacent turns are slightly separated. Loops are formed at the ends, so that the coil can be held by the two small bolts shown in Fig. 2.

This coil will tune most of the wavebands between 17 and 45 metres, with clip (B) taken to its free end, or bolt 1 in Fig. 2. Lower wavelengths can be tuned by attaching this clip to the coil nearer its earthed end, so that fewer turns are in circuit. Volume will be at maximum with clip (A) going to the same point as clip (B). However, the aerial will cause very flat tuning, with this connection, so that the effect of taking the aerial clip (A) a few turns towards the earthed end of the coil can be tried. The best position depends upon the aerial, and reception conditions.

Higher wavelengths can be tuned by

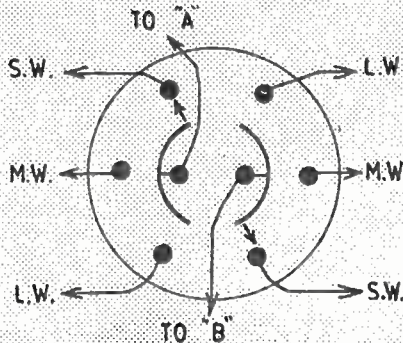


Fig. 3—How to add switching

winding a coil having about 14 turns. When clips are attached to intermediate turns, they should not be allowed to short-circuit to adjoining turns.

### Wavechange Switching

It is quite easy to move the two clips, to change from one waveband to another. But if this is not required, a small rotary switch can be mounted on the panel to the left of the tuning dial. A 2-pole switch is necessary, one pole switching lead (A) to the various coils, and the other pole being employed for (B). If three bands are required, for Long, Medium, and Short waves, the switch will be wired up as in Fig. 3.

If the L.W. band is not required, a 2-way switch is sufficient. However, rotary switches with any desired number of 'ways' are easily obtainable. For three bands, a 3-way switch is used. Fig. 3 illustrates the switch so positioned that

● Continued on page 165

# FIRST AID FOR BOOKS

**B**OOKS are good friends, well worth some care if you wish to preserve them in good condition. And any book that is almost constantly in demand may be regarded as the most valuable, so it is wisest to provide against increased wear and tear. Untidy or shabby looking books can easily be renovated by the provision of neat paper backs, using different colours for different subjects, which not only makes reference easy but also gives an attractive appearance to the bookshelves.

You will require some cartridge paper, obtainable in many colours, indian ink, gumstrip, scissors, and if you wish, some

on the front and spine. It is customary to also add the author's name.

After cutting out the paper cover the design is prepared, and the title added in neat lettering in the two places mentioned, and it is far easier to do all this before attaching to the book. A panel may be prepared for the title as shown, or you may use a plain gummed label.

With the design completed we are ready for attaching to the book itself, so you should follow these directions carefully. Lay the paper cover on the table with the book on top, held so that one back only is flat on the paper and the pages vertical. Now fold in the flaps,

bound pages, rolling over until the flap is in position. In some cases it is often useful to employ a darning needle for this purpose. If you crease the paper at the top it will then stay in position without any further attention. It should be mentioned that it is not advisable to gum the paper cover to the book and gumstrip will be found neat and serviceable. Moreover, there is no fear of damage to the book when the paper has to be removed for renewal.

New books complete with the original paper jacket may be bound similarly with transparent plastic material, available at most of the large stores when

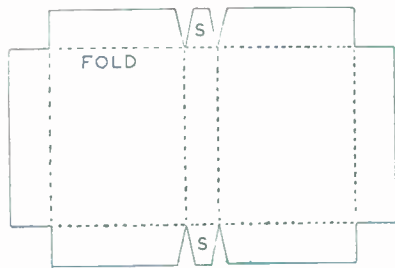


FIG 1

water-colour paints for decoration.

The first requirement is the measurement of the book when you may cut out a cover to the shape shown in Fig. 1. This is easily achieved by laying the opened book on the paper so that allowance is made for the width and depth of the covers, the width of the spine, plus an extra two inches at each side, and top and bottom for folding inside the existing backs. It will be seen that the paper cover is folded on the dotted lines but provision is also made for protecting the spine by the tapered flaps (S) in the centre. These flaps are tucked down inside after cutting out and fitting the cover to the book.

From the other diagrams it will be seen that we can greatly enhance the appearance of our cover by the addition of simple, geometric designs, using either indian ink or water colours. Some suggestions are given in Fig. 2, but you may make your own designs, and it should be remembered that where a number of books are involved it is wisest to decide on a simple design. Alternatively, you may paste a picture on the cover cut from the original paper jacket if this has been retained, writing in the title on the spine. Fig. 3 shows a specimen cover after completion of the design on the front, and the title added

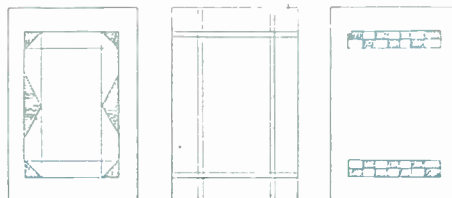


FIG 2

first at the top, then at the bottom, and finally the one at the side. A neat job is made by mitring the latter, trimming away the surplus and fastening the two flaps together, after creasing, by gumstrip or Sellotape. The book is closed and the entire method repeated for covering the other back of the book. Make sure that the cover wraps quite tightly round the book before fastening the flaps.

We now have the two flaps remaining for tucking down the spine. Take hold of the tip of the flap (S), guiding into the hollow space between the spine and the

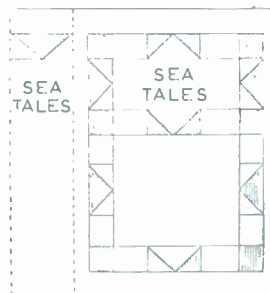


FIG 3

designing is unnecessary. This material is cut out as described and fixed by means of Sellotape.

Designs may vary according to the size of the books but you will find it quite easy to devise geometric patterns as shown. Whatever material is used, paper covers will add considerable strength to your books. Keep them clean and extend their life, whether they be old or new.

(S.H.L.)

• Continued from page 164

## ALL-WAVE CRYSTAL SET

the S.W. coil is in circuit. The next position provides M.W. reception, and the final position gives L.W. tuning. The (A) side of the switch is used for aerial-coupling primaries or tapings, exactly as clip (A). The (B) portion of the switch selects the various tuned windings, exactly as explained for clip (B).

### Aerial and Earth

A good aerial should be as high as possible, well away from walls, trees, roofs, and all other earthed objects, and suspended upon proper aerial insulators. The down-lead should be at least 2ft. from the house wall, if possible.

Circumstances usually govern the

length of aerial which can be erected. These is little point in using more than about 60ft. in all, for horizontal portion and down-lead. Good results can be obtained in some localities with a very much shorter aerial. Indoor aerials, if fairly long, can also give reasonable reception, though they cannot be used in metal buildings, or give volume equal to that from an outdoor aerial.

The earth lead should be taken to a metal spike or object buried in damp soil. An earth can often be omitted from a valve set, with little deterioration in reception. However, with crystal sets it *must* be provided, or volume will be very poor.

# HARBOUR AND SEA SNAPS

SHIPS and the sea have a strong attraction for most of us, and the keen amateur photographer will find enough material to keep his camera busy — whether it be a holiday visit to a small fishing port or a large docks, a coastal or estuary trip in a pleasure-steamer or just a row around the harbour.

By E. G. Gaze

But waterfront photography, and especially photography at sea itself, presents different conditions from those inland — and the 'inlander' accustomed to his normal snapping technique inshore may be disappointed with his first results. These earlier disappointments may be avoided if some of the following points are kept in mind.

## Exposure

Exposures will generally need to be much shorter than even for an open scene inland — here water and sky will comprise much of the scene, and water has great reflective properties even on an overcast day.

A check with any exposure table will confirm this, as will use of a light meter — but even so it is wise to use both tables and meter readings with discretion, keeping in mind that modern films have a wide latitude before the point of under-exposure is reached.

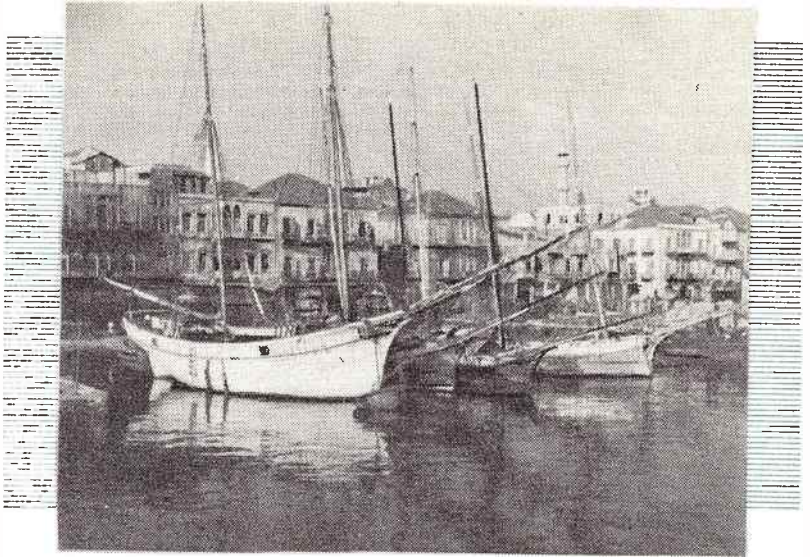
It is fatally easy to over-expose, especially in bright conditions, and so obtain a dense negative difficult to print without losing tonal values. Whether you are guided by tables or a meter reading it is often wise to stop down the lens one extra stop, rather than to curtail development, if first attempts tend to err on the side of the too generous exposure.

And always use a lens hood: with so much reflective light to strike the lens at all angles it will help to prevent light-scatter in the negative and thus degradation of the image, and consequent flattening of the print's brightness.

## Shutter Speeds

These will generally need to be faster than the usual snapshot speed used for inland snapping — and this for a different reason than above.

The sea is not stagnant; and even harbour water is seldom really still, although it may appear deceptively so.



Reflections are worth seeking, as shown in this picture of the inner harbour, Beirut, the Lebanon.

Watch how an under-swell or a tide surge will cause a lap at the jetties. Ships, alongside jetties or at buoys, are affected by this. When photographing from solid land — from a jetty — very slight water-borne movement may not affect the sharpness of the ship's image, but it is often a slight movement in different planes and it does, so easily, cause noticeable unsharpness of the negative image especially if the ship is close to the camera lens.

When actually snapping from another boat in the harbour the possibility of unsharpness is accentuated — slight water-borne movement of the photographer is added to that of the subject, and it is amazing how much movement occurs in a small harbour row-boat even on calm water.

Photography in open water at sea raises this problem acutely.

To safeguard against this make use of higher shutter speeds if your camera allows — on a normally bright day in harbour a shutter speed of 1/200 sec. with a lens stop of  $f/8$  or  $f/11$  will normally safeguard against this, and against over-exposure due to water brightness. And even if lighting conditions call for a fuller exposure it is preferable to open up the lens one stop than to rely on a slower shutter speed.

## Special Conditions

When the subject is clearly moving to the water's swell or tidal surge, try to click your shutter at the momentary equilibrium reached at the peak of each swell or surge. This obviously applies all the more if you are snapping from a moving boat or ship — you need to click when your momentary equilibrium is reached. In anything but slight water movement the timing of both peaks — yours and the subject's — calls for patience if the sharpest possible image is to be obtained. In rough water at sea it may well be impossible, but here, perversely, the effect may be to enhance the 'roughness' by the very atmosphere of movement!

If you are moving around the harbour in a power driven launch it's a temptation to steady yourself against part of the superstructure — and it's fatal! Every vibration from the engine is transmitted to you — and to your camera: in such a case take a firm stance clear of superstructure, brace yourself — watch out for tugging wind gusts! — and try to click your shutter at the peak of your boat's movement.

## Reflections

Many lovely scenes are to found with ships mirrored in rippled or glassy har-

bour waters. Again, don't over-expose; a too dense negative will lose the delicate play of tones. As water will reflect much 'blue' light from the sky, a yellow filter will often help to accentuate light toned reflections just as it helps to bring out clouds by darkening the blue sky.

### Back-lighting

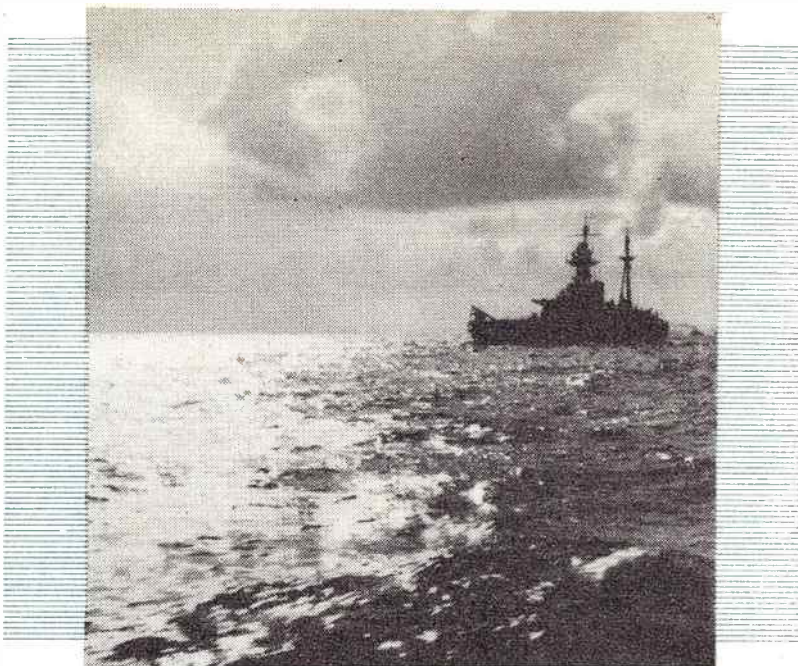
The general rule is to give an exposure based on the need to obtain sufficient shadow detail — but in open sea scenes the reflective and mirroring qualities of water give a contrast range much greater than any normally experienced inland. We've all seen the sea turn to brilliant gold, and to attempt to get shadow detail in a ship against such a light places a premium on any film's latitude, and on any photographer's technique — let alone his patience when he tries to obtain shadow detail in the print by shading the brilliant highlights all round it!

If an exposure based more on the highlight reading than on the need for shadow detail is used, then a very effective print results. In such contrasting conditions the sea is almost certainly over-exposed anyway, but basing exposure on a highlight reading generally allows some detail to be printed in the highlights, and it matters little if the ship is a mere silhouette.

When shooting into the light like this the brilliant conditions easily cause 'flare', and it is wise to point the camera downwards slightly to avoid including the actual sun's orb — or to use a passing cloud to shield it from shining directly into the lens. And, of course, a lens hood is essential in against-the-light shots to minimise scatter and 'flare' on the negative image.

The 'inlander' accustomed to a regular snapping technique needs to remember these points when snapping harbour or open sea scenes — over-exposed, dense negatives are fatal to good prints. So remember, water movement in several planes at once — even if slight — and water brilliance, both call for shorter exposures than normal open scenes inland. And it is preferable to make use of the higher speed range on your camera than to curtail exposures by stopping down the lens to compensate.

With these various points in mind your first harbour and open water snaps need not be disappointing.



*Open sea-snap against the light with the sea a path of gold, the sun brilliant and the ship a mere silhouette due to its under-exposure.*

## Hobbies' Crossword No. 17

*Note: Figures in parentheses denote the number of letters in the words required.*

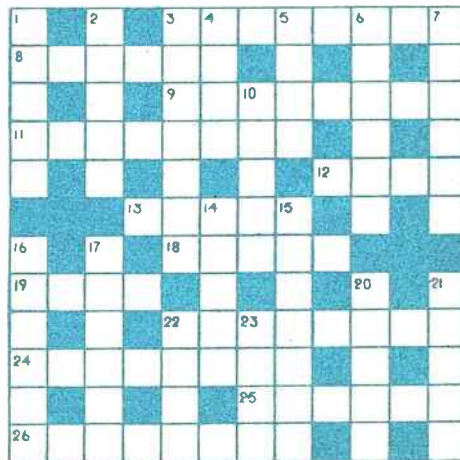
### ACROSS:

3. Industrious (8).
8. Intention (6).
9. First a strike, then a stroke, it's happy-go-lucky (8).
11. All the effort required for dances? (8).
12. A bit of impertinence (4).

13. The mother of a precious daughter (5).
18. Tally mark (5).
19. A kick but not necessarily from a horse (4).
22. Naturally it takes life slowly (8).
24. The English have a one sided view of it (5, 3).
25. Is able to make a girl (6).
26. A spasmodic complaint (8).

### DOWN:

1. System they have in India (5).
2. This female is poisonous when black (5).
3. If this utensil breaks it may make the housewife stand up (7).
4. Lying between Paris and Le Havre (4).
5. Little rascals! (4).
6. Coating that makes me lean (6).
7. One of the Society group in the Pacific (6).
10. Independently it might be a trap (5).
14. Goes with Keeling and forms part of the Crown Colony of Singapore (5).
15. Yes cats show a feeling of rapture (7).
16. The gambler's opportunity (6).
17. A continental form of duty (6).
20. Place of the forgotten (5).
21. A shaky form of nourishment (5).
22. Archaic form of address (4).
23. Obsolete Portuguese money (4).



★ ★ ★ ★ ★ ★ ★ ★  
 ★ SOLUTION WILL BE ★  
 ★ GIVEN NEXT WEEK ★  
 ★ ★ ★ ★ ★ ★ ★ ★

Next week we shall give details for making a simple but efficient microscope; also fretwork plans and other projects together with regular popular features. Make sure of your copy.

# MAKING A MOTH CAGE

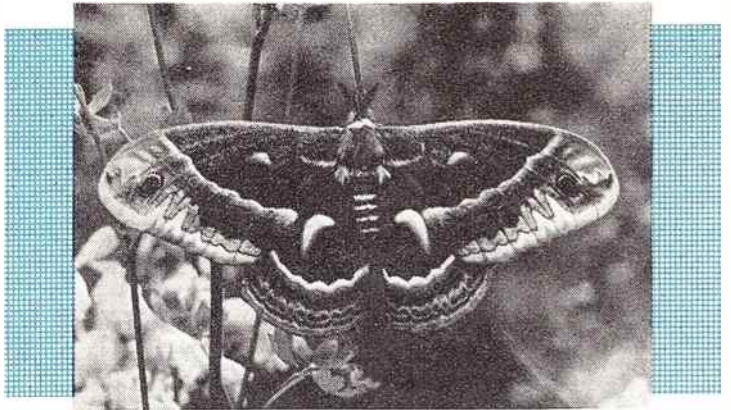
THE first requirement for the hobby of breeding exotic moths is a suitable cage in which to keep the caterpillars. The same cage can also be used for pairing the adult moths and for keeping cocoons in over the winter.

The cage described here is both easy to make and is so designed that it is easy to clean out and permits the caterpillars to be easily seen.

The size of the cage must be left to the aims and ambitions of the individual and

~~~~~  
*By B. Gardiner*  
 ~~~~~

the sizes recommended are either 12ins. by 12ins. by 18ins., suitable for about 50 caterpillars of medium size such as the Eri Silkmoth, or 18ins. by 18ins. by 24ins., suitable for up to 200 medium



*Canadian Robin Moth—A fine newly emerged female with a 5½in. wing span.*

These are of 1in. by 1in. stripwood and are rebated to hold the glass (as shown in Fig. 2.) They should now be nailed on to the two pieces of ply.

The four uprights which are also of 1in. by 1in. stripwood should be cut next. Cut these 17ins. long, so that, including the two ½in. rebates on the top

careful shavings should be taken with the plane along the top and bottom to ensure that it is going to be a good fit. The two retaining lugs at the bottom and the two turn buttons at the top are now fitted. These are both made out of odd pieces of ply and the lugs are 1½ins. by ½in. and the turn-buttons 1½ins. by ½in. The latter are fixed with round-headed screws.

The best material for covering the cage is Egyptian cotton net; failing this a good quality butter muslin should be used. The best glue for the purpose is 'Casco' casein glue. This has the advantage that it is not affected by the moist conditions to which your cage may sometimes be subjected and yet, should it prove necessary at any time to replace the muslin, it can be stripped off by a good soaking.

When putting the muslin on you should start at one side and work round, holding it in position with two or three drawing pins as you go. The muslin is next glued to the top and finally it is fastened to the bottom boards by means of three pieces of ½in. 'quarter round'. This gives a better and neater finish to your cage than using a square strip of wood.

Finally an odd piece of plywood should be cut that fits inside the two front uprights. This should not be fastened as its use is to act as a temporary front when the cage is in use for soil pupating caterpillars and is to keep the soil away from the glass front.

Your cage should not be painted as this would be harmful to the caterpillars. There is no objection, however, to varnishing the outside, to maintain good appearance.

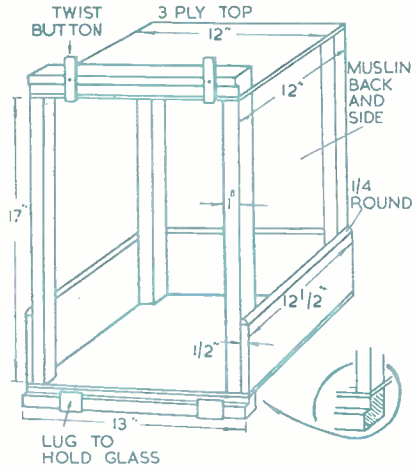


Fig. 1

caterpillars, or 50 large ones such as the Atlas moth. The handyman will doubtless find that odd pieces of wood can be utilised for the job.

Cut two pieces of ½in. plywood, one 12ins. by 12ins., the other 13ins. by 12½ins. For the larger cage add 6ins. to these dimensions and use ½in. ply. The two side pieces and the back are now nailed on to the larger piece making the internal dimensions exactly 12ins. by 12ins. For the sides and back use pieces of wood ½in. by 4ins. You should now trim up the ply on the outside with a plane. Do not at this stage nail the back piece to the sides.

The top and bottom pieces which are to hold the glass should now be cut.

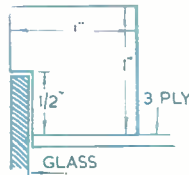


Fig. 2

and bottom bars, when fixed the completed cage will take a standard size 18in. sheet of horticultural glass. The uprights are nailed on with 2in. nails at the front and 1in. at the back. Before putting in the front nails a small pilot hole should be drilled first as this not only ensures that the wood does not split, but also that the nail goes in straight.

## Squaring up

The cage should now be squared up and the side pieces and back screwed on to the uprights. This makes the whole thing rigid. When squaring up it is most important to ensure that the front is absolutely level. The best method is to lay the cage on its back and insert the glass front while the sides are being screwed.

With the glass still in position a few



# SKILL RING

**T**EST hand, eye and nerves with this electric gadget, and challenge your friends in an interesting, absorbing game of skill.

Players attempt in turn to guide the 'magic eye' rod from start to finish of the 'live' ring without actually touching the ring with the rod. When the rod contacts the ring, the signal light (or buzzer) indicates player to stop, and he obtains his score from the adjoining number on the panel. Needless to say, a steady hand and keen eye is called for!

The assembly is quite straightforward. Round off the corners of the panel and glue and screw on the four corner feet. Glue and pin the control block to the lower end of the panel. Bore the hole (X) in the centre of the panel above the control block and the hole (Y) through the centre of the lower end of the control block and panel. Both holes should be large enough to take two strands of flex wire.

Now bend the 20in. length of wire to form a ring, taking the 7in. length of wire rod, bend round one end of this to form an eye ring. The 'eye' should be large enough to allow the rod to pass round the ring without touching. Thread the rod on to the ring and fix the ends of the latter firmly to the control block with two or three wire staples (see Fig. 1).

Screw a lamp bulb holder to the panel in the centre of the ring. The hole (X) should be just below. Fix a switch to the control block above the hole (Y).

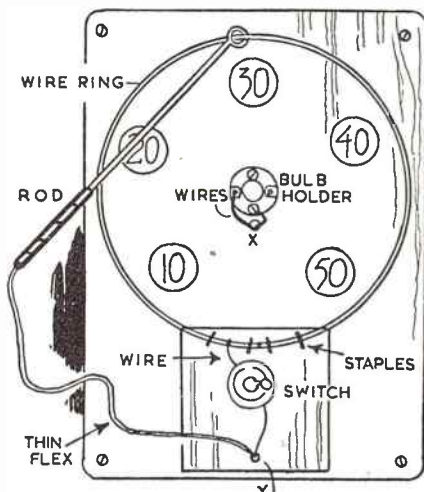


Fig. 1—Layout of components and wiring on the front of the panel.

## A GAME TO TEST REACTIONS

Take the battery support strip and, with two screws, clamp a 4½ volt battery to the back of the panel, as shown in Fig. 2.

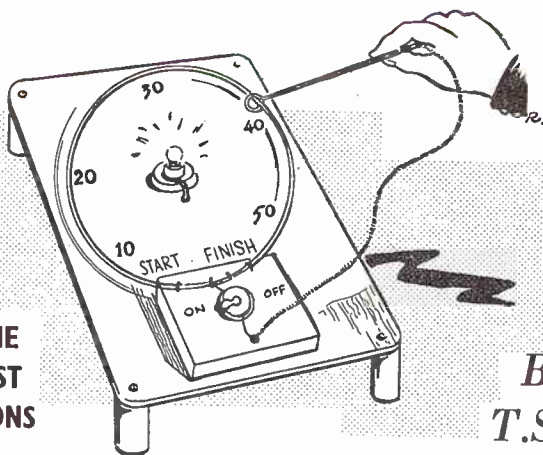
The wiring connections are quite simple. Connect the bared end of a single length of flex to the handle end of the rod. (Solder this connection if you wish to make a really good job of it.) Bind over the connection with several turns of insulating tape, to make an insulated handle. The flex leading from the handle should be long enough to allow the player to manipulate the rod from varied angles. Pass the flex through the hole (Y), returning it to the front of the panel through hole (X) and connect it to one side of the bulb holder. Connect the other side of the bulb holder to one side of the battery, passing the lead through hole (X). Connect the other side of the battery to one side of the switch, passing the lead through the panel at hole (Y). Finally, connect the other side of the switch to the wire ring.

### MATERIALS REQUIRED

Panel: Size 9½in. by 7in. by ⅜in. thick plywood. Feet: Cut four, 1½in. length, ½in. diameter round rod. Control Block: 3in. square by ½in. thickness. Battery support strip: 3½in. by ½in. by ⅜in. thick.

### ELECTRICAL COMPONENTS

'Live King': Approximately 20in. length, ½in. thick wire or rod, 'Magic Eye' Rod: 7in. long rod or wire as used for ring. On-Off Switch (Two-way or press-button). Small pocket lamp bulb and holder. Single thin flex for wiring to contacts. A buzzer or old house bell can be used in place of the flashlight bulb.



By  
T.S.R.

If it is desired to use an old house bell or buzzer instead of the light bulb, unscrew and remove the light bulb and connect up the bell or buzzer as shown by the dotted lines in Fig. 2. One lead goes to battery and the other to the rod. It is advisable to replace the 4½ volt pocket lamp battery by a more efficient special bell battery. A screw placed near the bell striker will provide a buzzer instead of a bell, if preferred.

To indicate the scoring, according to the distance travelled round the ring before the contact light flashes (or the bell rings) glue paper discs round the inside of the ring, as shown. Score to the lower number at each attempt.

Before marking out scoring divisions or gluing on the paper discs, paint the panel in bright enamel, giving the control block and the four feet bright contrasting colours.

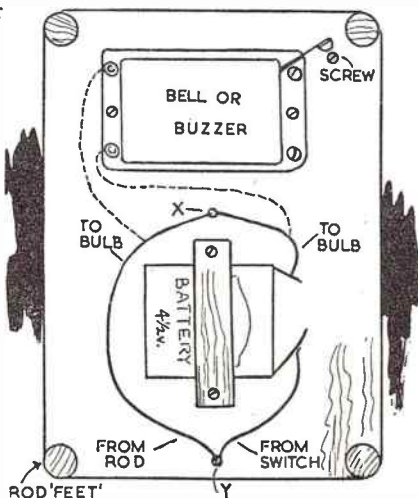


Fig. 2—Underside view showing positions of feet, battery, buzzer and wiring.

# PAINTING IN OILS



**T**HE pleasure of painting in oils is one of the most satisfying experiences to be found in the realm of art work. However, it is true to say that many boys and girls interested in art never tackle oil painting as they are too easily put off by imagined difficulties that never really exist.

Few have the opportunity of taking oil painting lessons, and little of this type of work is taken in school due to the expense of materials when a whole class is concerned. As this is so the only way one can get started is by trial and error methods that are never really successful, or by reference to books on oil painting which often confuse the reader by over elaboration of the technique that is necessary for the beginner.

In this short article I hope to show how anyone interested in painting can set himself up with the minimum materials, and set about painting a picture in oils.

## Materials

The initial outlay for oil painting materials can be quite expensive if one is content with nothing but the very best. There are many attractive sets on the market, but these are not necessary for the beginner and will be much more appreciated if they are purchased when one has had some experience of working in this medium.

Oil colours are supplied in tubes, and these are available in a great variety of colours. For the beginner, however, few are necessary, and the following list will be quite sufficient for a start: Chrome yellow, yellow ochre, cobalt blue, burnt sienna, rose madder, ivory black, and flake white.

Student quality paint will be found to

be quite suitable, and indeed cheaper than the 'artists' standard. The size of the tubes bought will depend on the money available, but it must always be remembered that white is used much more than any other colour and therefore a large tube is required.

Colour mixing is carried out on the well known artist's palette which can be one of a variety of shapes.

Previous to a painting session, a little of each of the various colours can be set out in neat piles round the perimeter of the palette. The artist usually decides on an order of colours and as a habit arranges them so that they range from the lightest to the darkest.

The purified linseed oil medium supplied in bottles is used in small quantities contained in a tin dipper that is clipped on the side of the palette.

Both palette and dipper can be improvised however by using an old plate and a small paste jar.

Most long handled oil painting brushes are made of hog-hair, and can be purchased in a variety of shapes and length of bristle. Experience will tell which is best suited to one's own individual style, but as a beginning a No. 6 flat brush, a No. 5 filbert, and a No. 3 sable hair which is used for fine work, are those suggested.

The usual painting surface used for oils is prepared canvas stretched tightly over a wooden frame. However these are rather too expensive for trial efforts, and a cheaper surface is available in the form of prepared paper or board.

Another excellent surface is the well-known hardboard which can be treated with a coat of white undercoat as a primer previous to painting. An unprimed surface will absorb the oil medi-

um and take all the nature out of the paint.

## Technique

When commencing an oil painting from life or imagination, the surface to be painted must be supported almost upright on an easel or some other sloping surface. This is necessary so that the artist can stand well back from the work when painting and viewing its progress.

The art of painting in oils is subject to a variety of techniques but the best approach for the beginner is to use the bold brush stroke method. An example of this is illustrated in the case of a still life group where the first task is to paint in the approximate areas of colour throughout. Greater character is then introduced by more detailed overpainting, thus enabling the artist to build up the picture to his satisfaction.

Colours are mixed as required in the centre of the palette with a brush moistened with linseed oil. Those tubes of colour suggested will give ample scope for experiment in colour mixing, and it will be found that few of these are used in the pure state as presented from the tube.

When a painting session is over, the brushes must be cleaned by dipping them in turps, wiping them on a rag, and washing out thoroughly in soap and water. The palette can be scraped clean with a palette knife or an old kitchen knife, and then cleaned with a cloth dipped in turps.

The painting itself will take some time to dry, but when it is considered a satisfactory piece of work it can be framed with some suitable picture moulding. No mount or glass is required with an oil painting but some six months after completion it can be further protected by a coat of picture varnish.

Such is the simple correct approach to oil painting which can be tackled quite easily by any boy or girl interested in painting. As an art master I have introduced many pupils to this work, and few have regretted taking the first tentative steps here outlined. Indeed many still continue to find pleasure in this most interesting hobby, though school days are left far behind. (D.H.H.)

# NOW! SCULPTORCRAFT DOG MINIATURES



This exciting new set by SCULPTORCRAFT consists of six flexible rubber moulds. From the first set (there will be three sets in all), you can make miniatures of a Poodle, Collie, Boxer, Pekinese, Griffon and Pomeranian.

Only 6/6

For the name of your nearest stockist and a copy of the latest Sculptorcraft catalogue send 1/6d. Postal Order to:

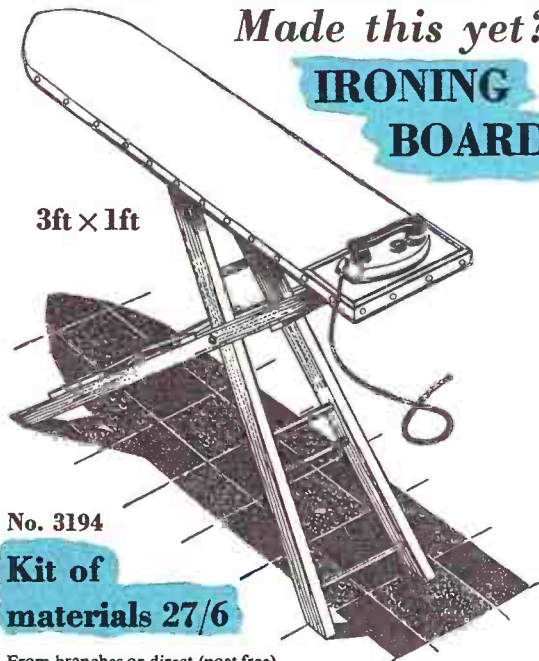
**SEAMER PRODUCTS (SCULPTORCRAFT) LTD**  
23-27 EASTBOURNE STREET, HULL

*Sculptorcraft*

Made this yet?

## IRONING BOARD

3ft x 1ft



No. 3194

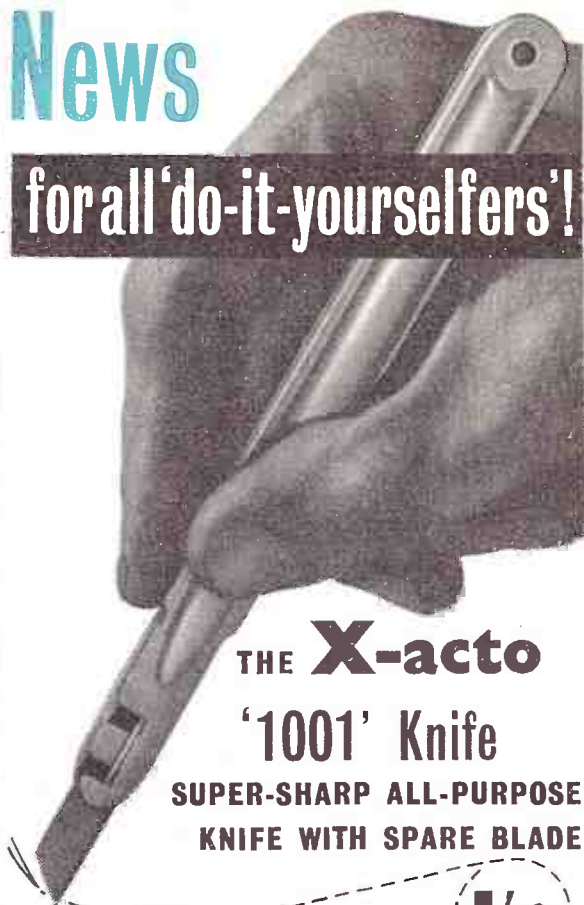
Kit of  
materials 27/6

From branches or direct (post free)

**HOBBIES LTD** (Dept. 99) **DEREHAM NORFOLK**

# News

## for all 'do-it-yourselfers'!



### THE X-acto '1001' Knife

**SUPER-SHARP ALL-PURPOSE  
KNIFE WITH SPARE BLADE**

FOR ONLY

**1/6**

Whether you're laying lino or model-building, pruning the roses or simply sharpening the office pencils, you'll do it better with the '1001' Knife.

Each X-acto '1001' has a carefully balanced steel handle—easy to grasp—and reversible blade, with another 'spare' in the handle—all for only 1/6. Spare blades are 3 for 1/-. Get an X-acto '1001' knife—from all good model shops and ironmongers.

**Other X-acto  
precision tools**

For greater accuracy there's a whole range of X-acto interchangeable blade knives—three weights of handle with a blade for every cutting job. Also plane, sander and modellers' tool sets. All precision-built for precision work, and so reasonable in price.

**More skill at your fingertips with  
TRIX**

**X-acto  
HANDYMAN KNIVES AND TOOLS**

**TRIX LTD. 5 CONDUIT ST. LONDON W.1.**

**M**Y space album is divided into sections. (A) is composed of all stamps and labels depicting scientists, observatories, meteorological stations, astronomical instruments, sundials, lightning conductors, rockets, etc. (B) contains all issues depicting the moon. And (C) all items depicting the stars and planets.

Many photographs of the moon have been taken by means of telescopes and maps of her surface have been drawn, on which the mountains and plains are named just as on maps on earth.

The moon appears on a Chile air stamp of 1955.

Some mountains in the moon are in long ranges. Others rise like cones to a great height from level plains. Many of these mountains look higher than any on earth. There are also many high round ridges with level places inside them, from the middle of each of which a cone-shaped mountain rises.

## SPACE ISSUES

— By R.L.C.

The moon revolves round the earth in one month and it takes the same amount of time to revolve on its axis. A day on the moon is therefore equal to 14 earth days — that is, the sun shines there for

14 of our days, and then it is dark for about the same length of time.

The planets (Monaco 1955. 30f. blue, 1/3 mint), revolve round the sun at different distances from it. The one nearest to the sun is Mercury and after it come, in order, Venus, the earth, Mars, Jupiter, Saturn, Uranus and Neptune. All these, excepting the earth, are named after the gods of ancient Rome. Mercury, Venus and Mars are smaller than the earth; all the others are larger.

Several of these planets have smaller bodies called satellites which turn round them.

Our moon is the satellite of the earth. Mercury and Venus have no satellites. Mars has two moons, Jupiter four moons, Saturn eight large moons and three great rings supposed to be made

up of many small satellites, Uranus four moons and Neptune one.

In addition to these great planets there are many smaller ones called asteroids which move round the sun between Mars and Jupiter.

Comets generally come from outside the solar system, pass round the sun and then go back again. They have bright heads and long fiery tails.

Meteors or falling stars have sometimes fallen to the earth, so that we have been able to see what they are made of. Some are like our metals and some are stony.

'Denmark 1949. 40 ore blue — Sun and Globe — 5d. used. Peru 1938. 80c. red — Stars and Comet — 8d. used.'

The illustrations show recent match labels depicting Space Phenomena. The Rising Sun and Planets brands are from Belgium — 3d. mint; Moon, from India — 2d. mint; Girl and Moon, and Comet, from Sweden — 6d. mint.



## QUERIES ON COLLECTING

**M**R. R. L. CANTWELL has, unfortunately, had to give up some of the duties appertaining to the League of Hobbyists. In particular the work involved in evaluating items for readers has become too great, and this service is reluctantly discontinued.

Mr. Cantwell will, however, continue to give advice and guidance on other questions dealing with stamps, labels, cards, and all items of collecting, and articles on these subjects will continue to appear regularly in these columns.

All queries must be accompanied by a stamped addressed envelope and should be addressed to the Editor, *Hobbies Weekly*, Dereham, Norfolk.

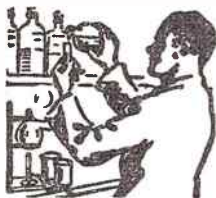
## APPARATUS & CHEMICALS

For your experiments. Let us help you equip a HOME LABORATORY

Beakers, Crucibles, Flasks, Funnels,  
Gas Jars, Test Tubes, etc.

Booklets:  
(including postage)

'Experiments' 1/2  
'Formulas' 1/2  
'Home Chemistry' 2/10  
New edition



Send 3d. Stamp for latest PRICE LIST

**A. N. BECK & SONS (Dept. H.W.)**  
60 Stoke Newington High Street, London, N.16

## HEAR ALL CONTINENTS With H.A.C. Short-Wave Receivers

Suppliers for over 18 years of Radio S-W Receivers of quality.

One-Valve Kit, Price 25/- Two-Valve Kit, Price 50/-

Improved designs with Denco coils. All kits complete with all components, accessories and full instructions. Before ordering, call and inspect a demonstration receiver, or send stamped addressed envelope for descriptive catalogue.

'H.A.C.' Short-Wave Products (Dept. 22), 11 Old Bond Street, London, W.1

## BE TALLER

in 12 days or money back. New gland and spinal discovery increases height 2 to 5 inches. 'I have gained 4½ inches in height. My weight increased from 9-stone 4-lb. to 10-stone 3½-lb.'—P.D. 'Increased 3 inches.'—H.G. Guaranteed harmless. Full course 10/6 (or \$1.50). Air mail 16/3. Details 2d. Sent under plain cover. J. H. MORLEY, 28 (H/181) Dean Rd., London, N.W.2. Practical Courses, all subjects. List free.

## BRASS, COPPER, DURAL, ALUMINIUM, BRONZE

ROD, BAR, SHEET, TUBE, STRIP, WIRE  
3,000 STANDARD STOCK SIZES

No quantity too small List on Application

**H. ROLLET & Co. Ltd.**

6 CHESHAM PLACE, LONDON, S.W.1

Also at

Liverpool, Manchester, Leeds, Birmingham

**KUKLOS ANNUAL.** Indispensable cyclists' handbook. Tours, resthouses, money-saving hints, 3/- post free. — Burrow, Publishers, 2 Imperial House, Cheltenham.

**WHEELS** (Hardwood and Rubber Tyred Metal), Cot, Pram and Doll's House Fittings and Papers, Beads, Transfers, Prints and other accessories. Stamp for new lists. (Trade supplied.) New address — JOYDEN CO., 91 Peplins Way, Brookmans Park, Herts.

**'PAINTSPRAYING' HANDBOOK.** Covers Car, Industrial & Flock Spraying. 3/6 post 4d. Catalogue of our Cellulose and Paints and all Allied Sundries 3d. — Leonard Brooks Ltd., 81 Oak Road, Harold Wood, Essex.

**MODELS.** You can make lasting stone-hard models with Sankey's Pyrama Plastic Cement. Supplied in tins by Ironmongers, Hardwaremen and Builders' Merchants. Ask for instruction leaflet.

**MAKE A MUSICAL BOX** for as little as £21/6. New kits and tunes available. Movements 14/9 post free. Please send 3d. stamp for free illustrated catalogue. — The Swisssec Co., Dept. B., 202 Tulse Hill, London, S.W.2.

**100 DIFFERENT stamps free!** Request 4d. upwards discount approvals. — Bush, 53 Newlyn Way, Parkstone, Dorset.

**STAMPS FREE** — Empire Packet including Spictorials and Victorians with approvals. — Robert J. Peck, 7A Kemp Road, Bournemouth.

## The best tools you can lay hands on!

### STANLEY BENCH PLANES 41/-

For the hardest and toughest work. Adjustable for coarse or fine work, and thickness and evenness of shaving. 9" long. 2" cutter.



No. 4 Plane.



### THE STANLEY TRIMMING KNIFE

Cuts lino, hardboard, veneer, roofing felt etc. 1001 uses in the home and garden. Spare double ended razor sharp blades carried in handle. Available in 3 colours.

6/- complete with 5 blades and blade guard.



### "YANKEE" HANDYMAN PUSH DRILL

A simple push action automatically turns drill point into wood, plastic, plaster or wallboard for screws, brads, nails etc. No splintering. Magazine handle holds four drill points—room for four more.

21/- complete with 4 drill points.

## STANLEY

STANLEY WORKS (G.B.) LIMITED, RUTLAND ROAD, SHEFFIELD, 3

## \* GREAT CAMPING OFFER \* RIDGE TENT BEST FOR 4/-



BRAND NEW de luxe 'Safety' Tent. All colours. Complete. Ideal cyclists, campers. Length 7' 3" sleeping base x 4' 6" wide x 3' 6" high x 12" walls, all approx. Weight 3½ lb. Cash 55/-, or 4/- deposit and 9 monthly payments 6/-, 1 of 2/6. WITH FLYSHEET 83/6, or 9/3 deposit and 8 monthly payments of 9/9, 1 of 4/9. Both carriage 2/6. LISTS, TENTS, TERMS.

## \* GREAT FURNITURE SALE! THREE-IN-ONE ★ WRITING BUREAU ★ BOOKCASE ★ RECORD CABINET



Magnificent ultra-modern space saving item of furniture designed for 3 essential purposes. Holds 200/300 Records (upright in perfect condition). Incorporates a spacious Bookcase. Drop-front desk closes when not in use. Numerous compartments provided to contain papers, etc. Superbly made, beautifully sand-polished 100% hard wood. Doors Compo reed. 42" x 24". Don't miss. Flat top takes Radio or Gram.

Headquarter & General Supplies Ltd.  
(HOBW/16) 196-200 Coldharbour Lane  
Loughboro Junc., London, S.E.5 Open Sat

ONLY £319-6

carpet etc. 10/-

A certain young fellow named Moore...



tried dancing, but fell on the floor!

So—a man of resource—



he took ESCORT'S Quick Course



—And now he's got partners galore!

Can't afford private lessons? Learn ballroom dancing at home! Send for exciting FREE booklet "Dance Escort" which explains the miraculous SURE STEP system. Cut out this advt., enclose 3d. stamp, name and address and post to:  
**ESCORT DANCE INSTRUCTORS**  
Studio H8 Harrogate  
or Rock'n'Roll course—send 4/6 P.O.

**DO IT YOURSELF WITH DEXION** — the bright angle for every job. Brackets, shelves, racks, ladders, tables, trolleys, scaffolding, etc. Send for details — Pithers, 36 Mortimer Street, London, W.1.

**ROY'S STAMP SERVICE** — Beginners and Juniors specially catered for. Send 3d. stamp requesting details and trial. — 23 Adria Rd., Birmingham 11.

**HUNGARY 1952 OLYMPIC GAMES.** This exceptionally fine large beautifully coloured set FREE to approval applicants enclosing postage. — Yulwontor Stamps (Dept. H7), 29 Layton Avenue, Mansfield, Notts.

**BECOME CHIROPODIST MASSEUR.** Postal B Schools (Dept. 27), 48a Abbey Street, Accrington.

**MATCHBOX** crystal receiver parts and instructions. Reception guaranteed, 3/6. — Write BCM/ALEXTONE, London, W.C.1.

In inexpensive hobby

# MODELS FROM SCRAP METAL

**M**AKING model ships from old tin cans may sound a crude idea, but realistic models can, in fact, be made easily in this way. It is also very inexpensive, for the only tools you need are a soldering iron, solder, soldering fluid; an old pair of scissors, a small pair of pliers and a file.

Here, step by step, is how to make a model about 12ins. long. First you need a suitable tin. An empty fruit tin, for example, about 6ins. high and 5ins. in diameter, will make the hull. Cut off the top and bottom of the tin, including the rims, and cut off the seam down the side of the tin where the join is. This is best done with an old pair of scissors.

There will be some overlap at the stern, since the sides are longer than the base. Hold these overlapping parts together tightly with the pliers and solder them together.

The five deck sections are now cut and soldered into place. Start with the raised centre section by cutting a rectangle of tinfoil 2ins. long and  $2\frac{1}{2}$ ins. wide. This is  $\frac{1}{4}$ in. wider than the base, so the sides must be pulled out gently to the required width. This widening takes away any slab-sidedness and follows real ship-building practice.

The next deck sections to be fitted are those of fo'c'sle and poop. The exact shape of each is obtained by holding the

A first model should be kept fairly simple, for too much detail will make a model look clumsy unless it is skillfully done. Here, then, are the instructions for the fittings which we are keeping as simple as possible.

The next part to be made is the boat deck. It is a 2in. square of tinfoil, to the underside of which is soldered a strip of metal,  $\frac{1}{4}$ in. wide and 6ins. long. This is shaped with pliers into a rectangle 2ins. by 1in. before it is soldered to the deck it supports. When this is done, the deck is soldered to the midships section in the position shown. The other fittings are now added. These consist of a funnel made from a  $1\frac{1}{2}$ in.

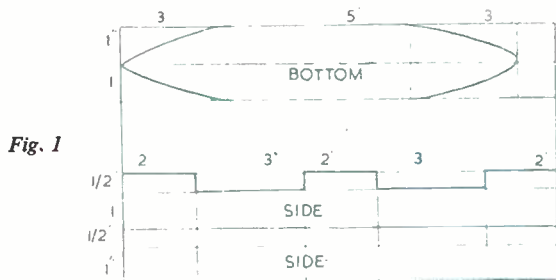


Fig. 1

You now have a sheet of tinplate which you can flatten out and smooth by placing it on an old carpet or doormat, and rubbing over it with a milk bottle, rolling-pin fashion.

The easiest model to begin with is one where the deck is made in several pieces, for it is difficult for a beginner to fit the deck in one piece without the hull warping. The following instructions, therefore, are for a cargo vessel of the 'three island' type; that is, having a raised centre section, fo'c'sle and poop.

The hull is made in three parts, a bottom and two sides. Fig. 1 shows the measurements for these. Draw them with ruler and pencil on the tinplate. Notice that on the bottom, after the guide lines are drawn across, the shape of the bow and stern are drawn free-hand. When you are sure that these lines are not lop-sided, cut out the shape of the bottom and the two sides.

The next step is to solder the three parts together. If you have not done any soldering before, the full instructions are given on the tin of soldering fluid. Starting at the bows, solder the left side of the hull to the base plate, bending the side to the shape of the base as you go. Do the same with the right side, then solder the sides together at the bows.

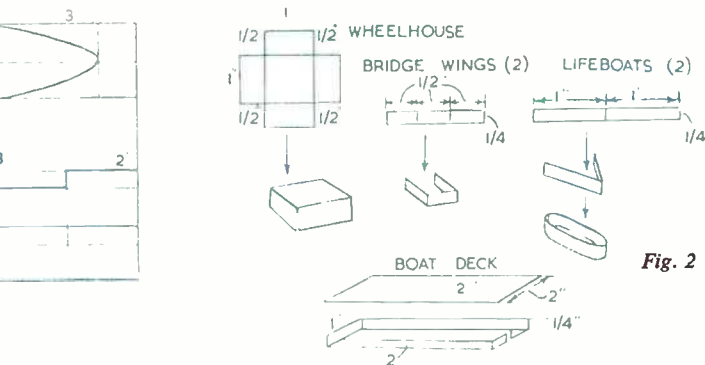


Fig. 2

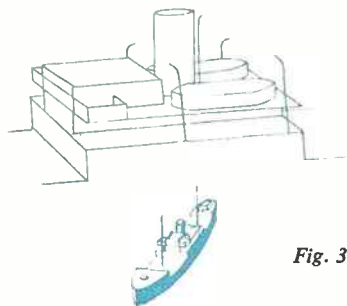


Fig. 3

hull face down on a sheet of tinplate, and drawing carefully round these two parts, which are then cut out and soldered into place. The shape of the two lower decks or well decks, is obtained by laying a 3in. square of tinplate on each well deck and with a pencil, drawing along each under side where it projects beyond the side of the ship.

The differences in deck levels are filled in with  $\frac{1}{4}$ in. strips of tinplate, cut to suitable lengths. When this is done, any rough joints or projections should be filed smooth.

square of tinplate rolled round a thick pencil or poker — anything of  $\frac{1}{4}$ in. diameter or less will do, a wheel-house, two wings of the bridge, two life-boats, and four davits and a steam pipe all made from bent pins and soldered in the positions shown.

On the fo'c'sle, a  $\frac{1}{4}$ in. strip rolled round a pin serves as a windlass, and on the poop, a small deck-house, similar in size to the wheel-house, is soldered in place. The masts, soldered in the centre of the well decks, are 4in. lengths of stiff wire.

Other details, if desired, can be painted in later.

As you gain experience, you will be able to make more detailed models, and plan them yourself from a photograph or drawing. Tinfoil models also lend themselves to electric, clockwork or steam propulsion. But no matter how simple or complex your model is, set about it in the way described.

(A.L.)

# 'BRITANNIA' MONEY BOX

THE 'Britannia' overlay is particularly suitable for use on a money box, but of course it may be used on other articles to good effect.

Cut the overlay from  $\frac{1}{4}$ in. plywood, and clean up with glass paper. The

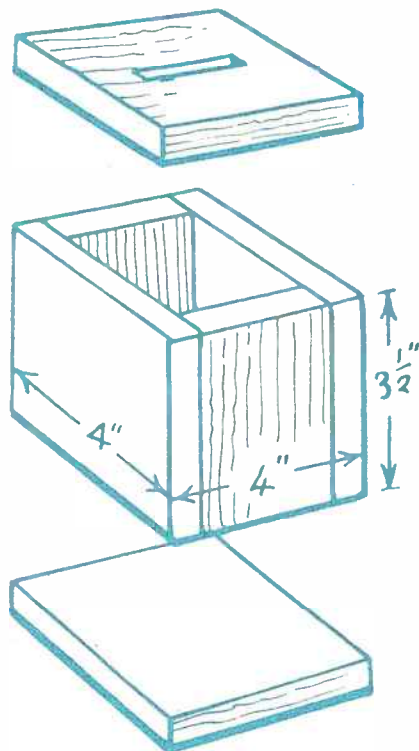
markings may be cut with a fretsaw, carved with a modelling knife or painted on.

The box should be made up from  $\frac{1}{4}$ in. wood as shown in the detail. The overall size is about 4ins. square. A slot is cut

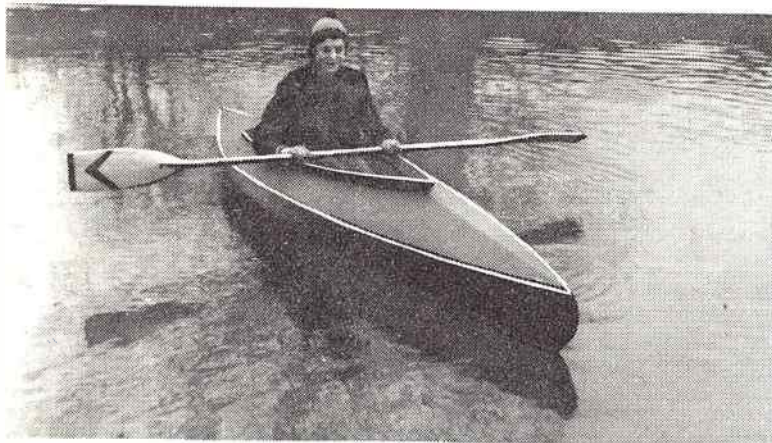
in the top for the money and the bottom is screwed on so that it can be removed to empty the box. The sides and top are glued together and strengthened with fretpins.

Glue the overlay to the front of the box and then give both box and overlay a coat of enamel. Allow to dry and rub down well with fine grade glass paper. Give two more coats of enamel for a good finish.

Pay particular attention to the edges of the plywood. These may require more paint if the first coats sink in. (M.p.)



# Paddle Your Own Canoe



... and make  
it with the  
aid of  
full-size  
plans from



## BUILDING COSTS FROM ABOUT £7

These plans contain all the information needed to build the canoe and its accessories. The main frames and other shaped parts are drawn full size for tracing direct on to the wood. There are plenty of constructional diagrams, with step-by-step instructions, and a detailed material list. Accessory instructions include the making of paddle, spray cover, trolley, rudder, sailing gear, etc.

All of these canoes are of the decked kayak type and are primarily paddling craft, but sail is useful as an auxiliary and can add to the fun of canoeing. If sailing capabilities are particularly required, PBK 20 is the best selection.

A canvas canoe can be built by the novice with limited equipment, and the average handyman can complete the job in about 40 hours. The structure consists of widely-spaced laths on cross frames, covered with a fabric skin. There are no difficult joints or awkward work. Plywood skinned canoes need more skill and a larger tool kit.

Building costs range from about £7 (for the PBK 10). We do not supply materials for building, but addresses of firms who do so are included with the plans.

### DETAILS OF PLANS AVAILABLE

#### RIGID CANVAS-COVERED

**PBK 10.** Single seat, 11 ft. long, 28 in. beam, normal max. load 300 lb. The shortest satisfactory canoe. Economical in size and building costs. Room for lightweight kit. Price 11/-

**PBK 14.** A roomy single for the big man, or a two-seater for an adult and child, or two young people. 14 ft. long, 29 in. beam, normal max. load 500 lb. Popular tourer. Price 12/6

**PBK 15.** Single seat, 14 ft. 6 in. long, 26 in. beam, normal max. load 400 lb. The enthusiast's fast touring craft. Safe and stable. Suitable for any waters. Price 12/6

**PBK 20.** Two-seat, 15 ft. long, 32 in. beam, normal max. load 600 lb. Stable and seaworthy. Easily paddled and a good performer under sail. Popular with scouts and youth clubs.

Price 12/6

#### RIGID PLYWOOD-SKINNED

**PBK 16.** Two-seater. 16 ft. long, 32 in. beam, normal max. load 700 lb. Flat-bottomed. Safe and robust. Popular for local hire on sea and river. May be left afloat. Price 12/6

#### FOLDING

**PBK 24.** Single seat, 11 ft. long, 28 in. beam, normal max. load 300 lb. Similar lines to PBK 10 but longer cockpit. Only canoe which packs into one bag small enough to go on bus.

Price 12/6

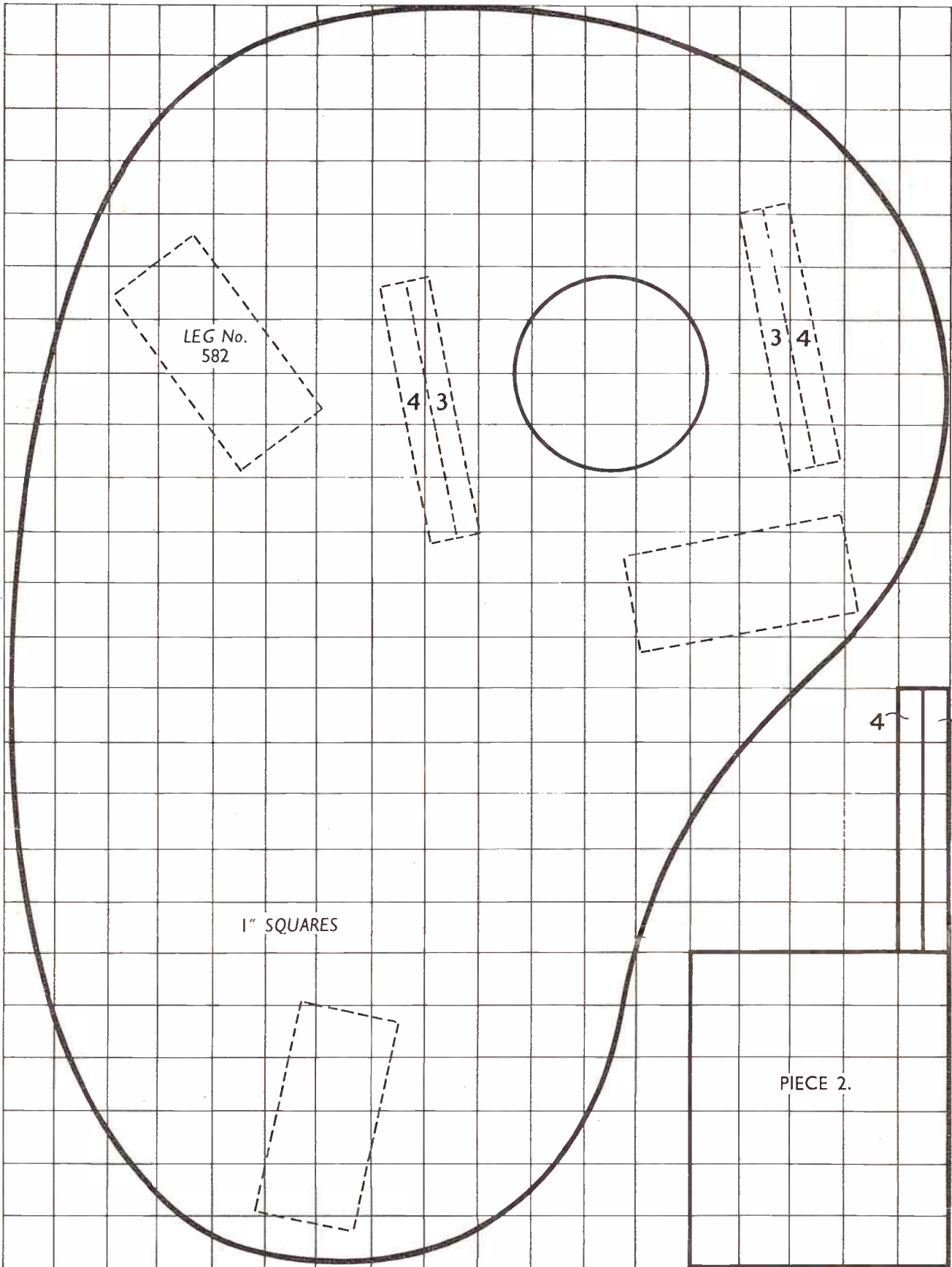
*From branches or direct (post free)*

**HOBBIES LTD**

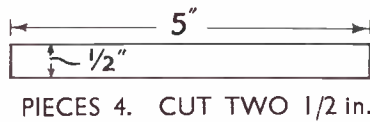
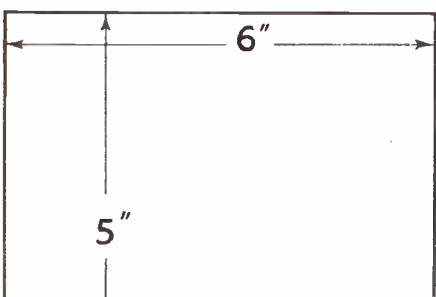
(Dept 99) Dereham, Norfolk



SIZE—  
24 ins. LONG  
20 ins. HIGH



PIECE 1. CUT ONE 1/2 in. PLYWOOD.

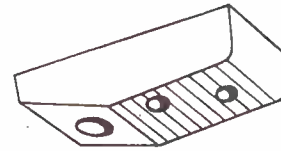
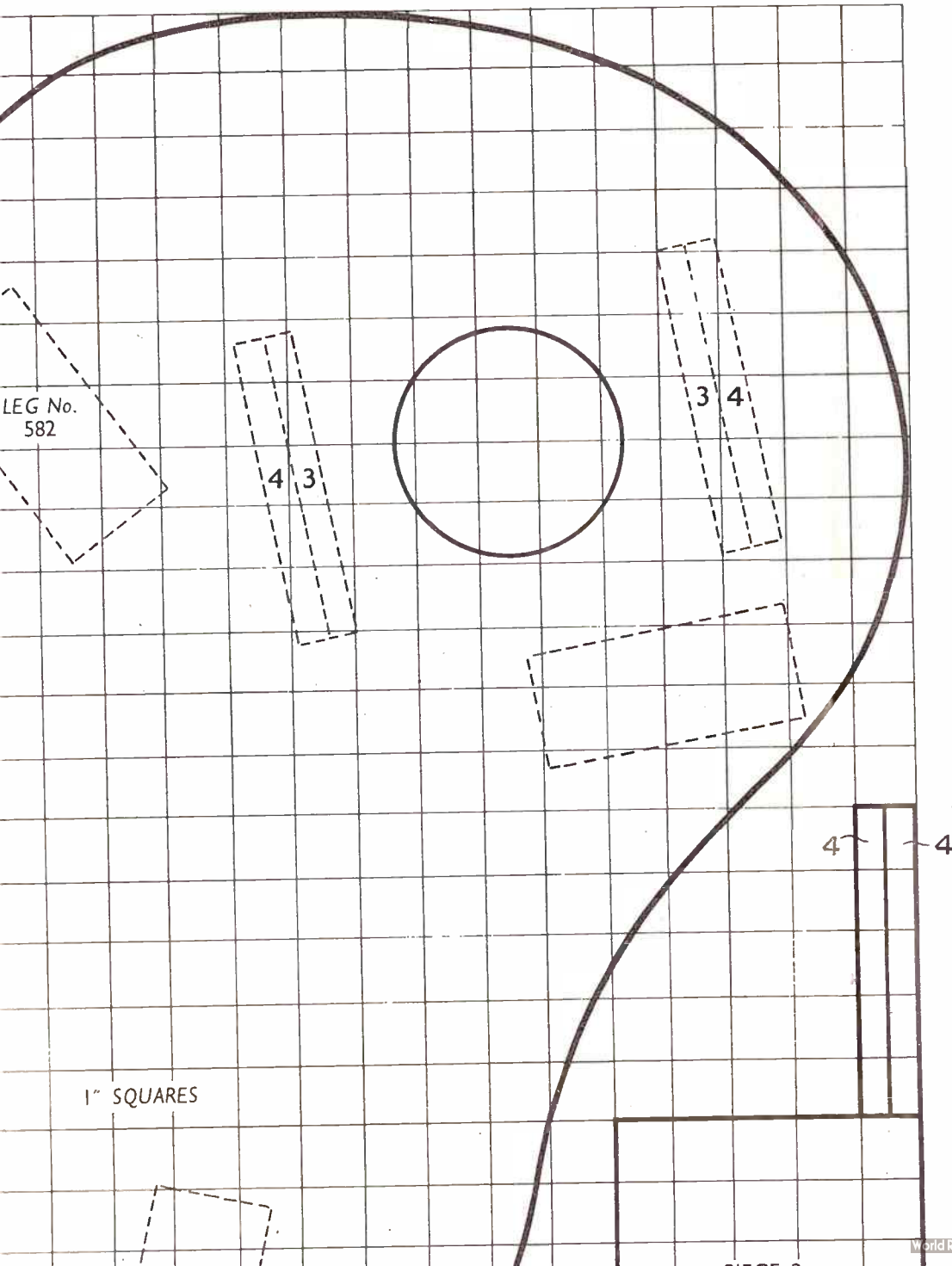


THE ARROWS INDICATE  
DIRECTION OF GRAIN  
OF WOOD.

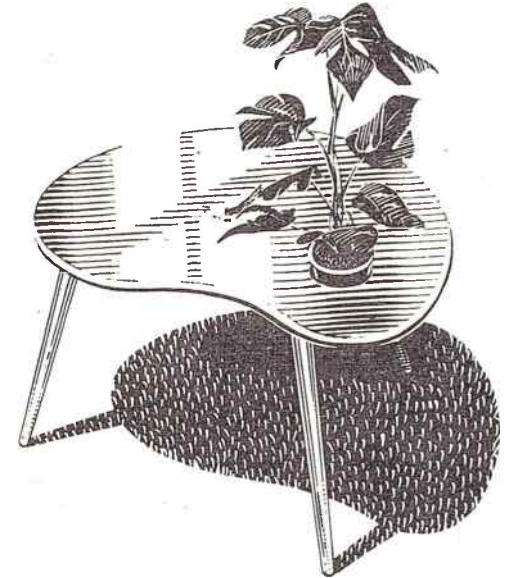
PIECES 4. CUT TWO 1/2 in.

# CONTEMPORARY TABLE WITH PLANT HOLDER

SIZE—  
24 ins. LONG  
20 ins. HIGH



HOBBIES  
No. 582  
CONTEMPORARY  
LEG  
(THREE REQUIRED).



A KIT OF MATERIALS FOR MAKING THIS DESIGN IS SUPPLIED BY HOBBIES LIMITED, DEREHAM, NORFOLK. PRICE ON APPLICATION.

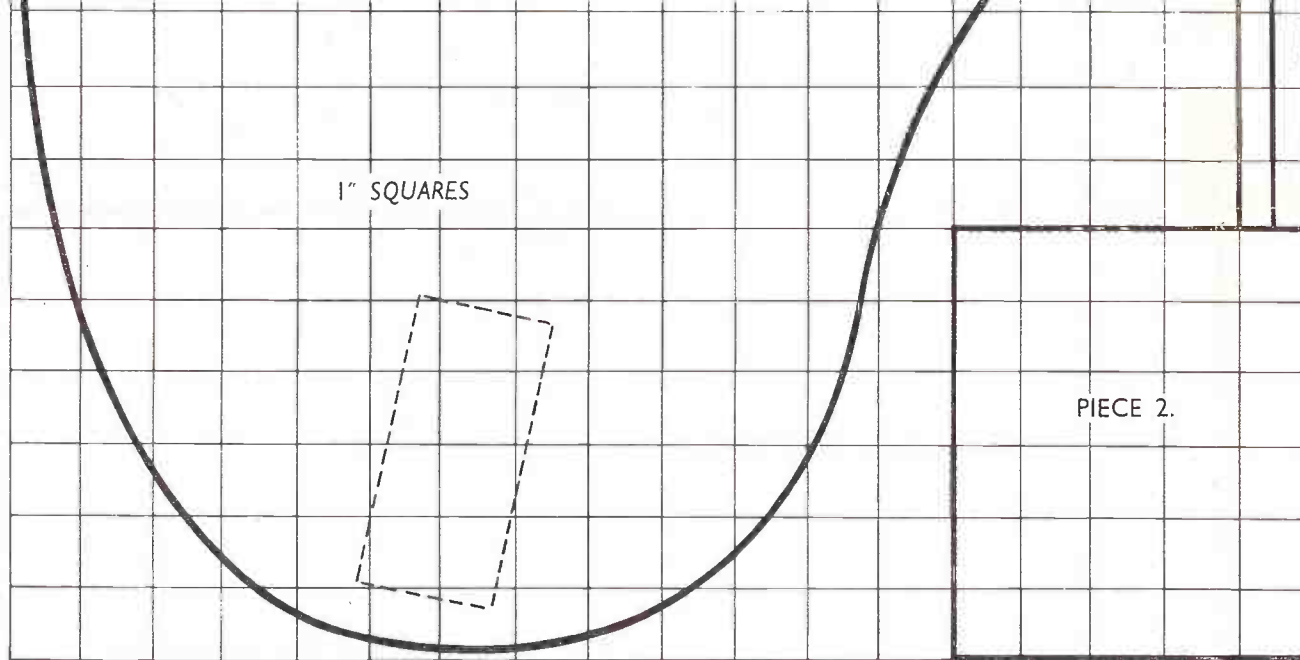
## Did You Know . . . .

. . . That details of hundreds of designs and kits, chosen from among the best of those produced during the past few years, are given in . . .

## HOBBIES Annual

In addition, there is an extensive editorial section full of "how-to-make" articles, a large FREE Design, and a comprehensive catalogue of tools and materials.

The Annual is published each year, and is obtainable from newsagents or Hobbies stockists and Branches.



1" SQUARES

PIECE 2.

PIECE 1. CUT ONE 1/2 in. PLYWOOD.

HOBBIES  
No. 582  
CONTEMPORARY  
LEG  
(THREE REQUIRED).

*Did You Know . . .*

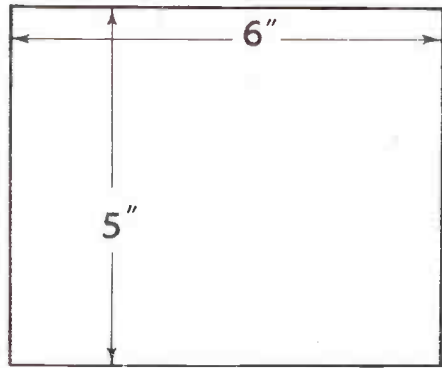
. . . That details of hundreds of designs among the best of those produced during the war are given in . . .

**HOBBIES**

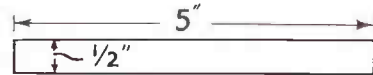
In addition, there is an extensive editorial "do-it-yourself" section, a large FREE "Designs to-make" articles, a large FREE Design catalogue of tools and materials.

The Annual is published each year from newsagents or Hobbies stockists or by post from Hobbies Ltd., Dept. . . .

**A Simple Job  
for the  
Handyman**

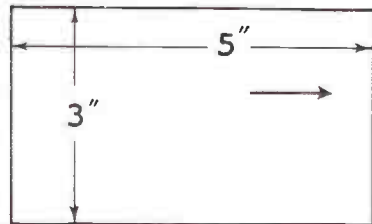


PIECE 2. CUT ONE 1/2 in. PLYWOOD.

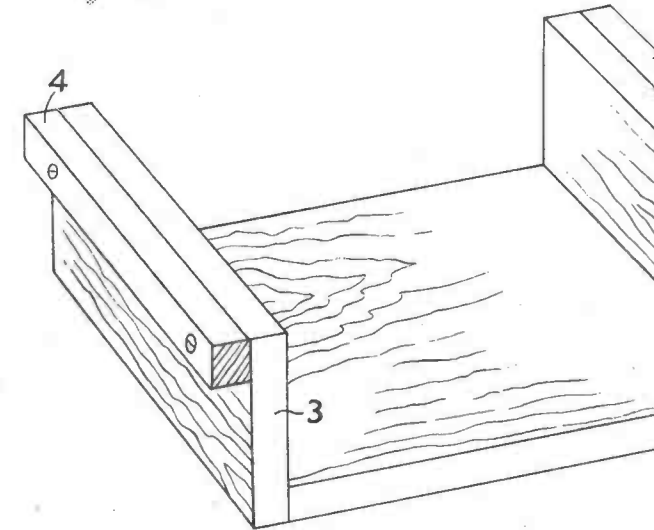
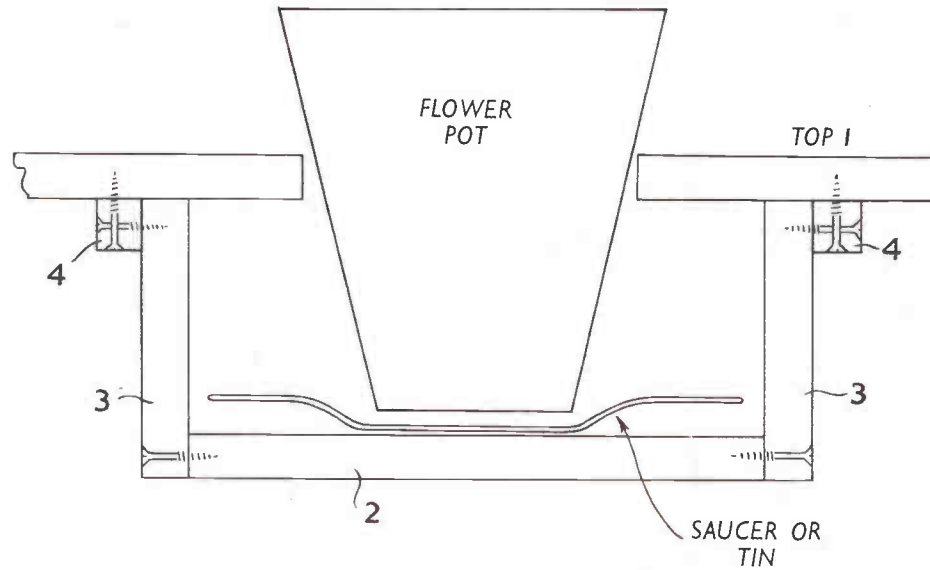


PIECES 4. CUT TWO 1/2 in.

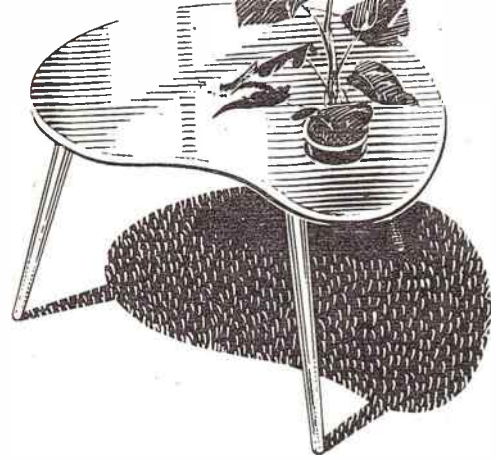
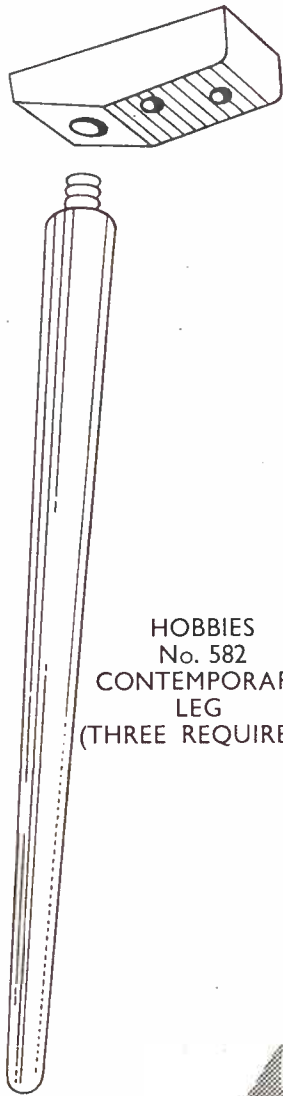
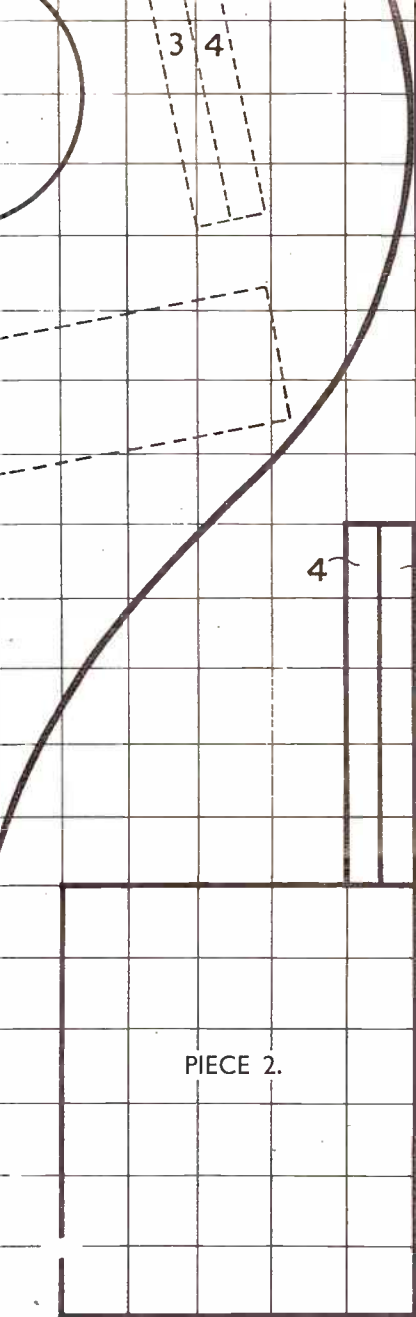
THE ARROWS INDICATE DIRECTION OF GRAIN OF WOOD.



PIECES 3. CUT TWO 1/2 in.



PRINTED IN ENGLAND.



A KIT OF MATERIALS FOR MAKING THIS DESIGN IS SUPPLIED BY HOBBIES LIMITED, DEREHAM, NORFOLK. PRICE ON APPLICATION.

**Did You Know . . . .**  
 . . . That details of hundreds of designs and kits, chosen from among the best of those produced during the past few years, are given in . . .

**HOBBIES Annual**

*In addition, there is an extensive editorial section full of "how-to-make" articles, a large FREE Design, and a comprehensive catalogue of tools and materials.*

The Annual is published each year, and is obtainable from newsagents or Hobbies stockists and Branches, or by post from Hobbies Ltd., Dereham, Norfolk.

THE ARROWS INDICATE DIRECTION OF GRAIN OF WOOD.

