

HOBBIES

weekly

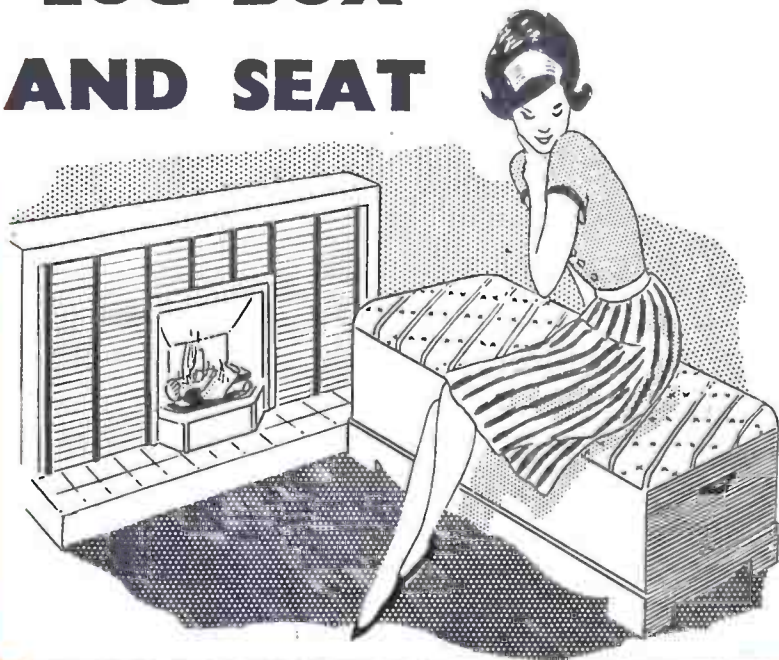
11th SEPTEMBER 1963

VOL. 136

NUMBER 3535

Another dual purpose project for handymen

LOG BOX AND SEAT



FOR CRAFTSMEN OF ALL AGES

6^p



Stamp Collector's Corner

QUITE a large number of people decide as soon as they start to collect stamps that they will not be bothered with watermarks. This is a very great pity, and shortly we will have an article in *Hobbies Weekly* giving some advice on this very question.

FIND THE DIFFERENCE

By L. P. V. Veale

Although many neglect watermarks, yet there are very few who allow small changes of design to escape them. There seems to be considerable fascination about finding small points of difference

in stamps. One of the many things that can be said in favour of stamp collecting, therefore, is that it helps to train to look for small differences.

Usually if one is examining stamps to see if there is any difference, then a magnifying glass is used. There are a great number of such glasses on the market today, and they are not all very suitable for the philatelist. The power of the glass is not the chief consideration — it is the clarity.

Most likely you have at some time or other looked through a magnifying glass, and although the object appeared much bigger, yet it also seemed to be edged with colour. That, of course, is a very bad fault, because it is often the colour of a stamp that is required in order to identify it.

Another fault of a very powerful glass is that only a very small part of the stamp can be seen at one time. So if you want to see the complete stamp a less powerful glass must be used.

Test your glass

Have you ever tried to use a watchmaker's glass? It takes a little practice to enable one to hold it in an eye for any

Illustrations of stamps described in text. Top left: France, peace and commerce, with 'N' under the 'B'. Right: Victoria, stamp duty. Centre: Norway, with Egyptian and Roman lettering. Bottom: Southern Rhodesia, 1932 and 1935.



length of time, but when the art has been acquired both hands are left free to change the angle of the stamp in relation to the light. Also, you can easily hold up the complete album, and so save the trouble of removing the stamp in order to look at it carefully. There are so many different kinds of glasses that it is well worth finding out just the type that suits you best and then sticking to it. It should last a lifetime, so buy the best you can possibly afford.

Now if you want an exercise in using your glass, look at any of the Canadian stamps since 1935, and find the date of issue (not, of course, the commemorative stamps, as they have the date clearly marked on them). On the others, however, the date is hidden away somewhere. Try the set of H.M. George VI in Naval, Army, and Air Force uniform. The dates are there, but they require some finding.

Here is another good test for a glass. The 'Peace and Commerce' series of the French Republic was designed by a man named J. A. Sage, and if you look carefully below the 'B' of République then you will see in the frame line the letter 'N' of inv. If you look at other stamps of the same design you may find the letter 'N' under the first 'U' of République. These stamps are not very valuable, but those with the 'N' under the 'B' are worth a bit more than the others. Look among your duplicates, and you will most probably find quite a few that you can add to your collection.

You should be able to see the difference in two stamps from Norway without having to use the glass. In 1877 this country issued a set of sixteen stamps with its name printed in Egyptian capitals (without serifs). Then in 1893 she issued many more, this time with Norway printed in Roman capitals (with serifs). Again, these are quite distinctly different stamps, and the two sets should be kept separate.

You can also find some differences in the shading of the post horns. If at any time you want to test the eyesight of a friend, and have one or two specimens of these stamps handy, then ask him to show you the difference. If he is a collector, then he may be able to do it, but if he has not seen these stamps before it would be very surprising if he could spot the differences.

Subject for competition

It really would make an excellent competition to collect together a large number of pairs of stamps (like the two Norwegians), and ask people to describe the differences. It would be a good test for a stamp club.

When we discussed the question of errors a few weeks ago we mentioned a stamp from Fiji with nobody on board

the boat to sail it. In the next issue the crew was shown. Also there are the Jamaican stamp with the two Union Jacks, and the Canadian express letter stamp, one with a grave accent, and the other with a circumflex. These would almost certainly defeat anyone who was not a keen collector.

In 1932 Southern Rhodesia issued a 2d. and 3d. stamp showing a view of the Victoria Falls. Three years later they issued a very similar stamp with the same design, but introducing the words Post-

age and Revenue. One of the Australian States, Victoria, had all her stamps inscribed 'Stamp Duty' up to the year 1900, but after that date, although the designs were otherwise the same the wording was changed to 'Postage'.

Two of these placed side by side are not easy to distinguish. Nor are the two French stamps bearing a portrait of Rene Descartes. They were issued to celebrate the 300th anniversary of the publication of his 'Discours'. The first showed the portrait of Descartes, and by

the side his book with the words 'Discours sur la methode'. But this was a blunder, and had to be corrected to 'Discours de la methode'. In all other respects the stamps are the same.

Well, there you have quite a large number of stamps which have only slight differences. Try to obtain both specimens of those mentioned. They make a point of interest when someone remarks 'What is the use of collecting stamps'?

CANADA

FROM the earliest days Canada has been a trading nation. Since a large part of the national income and major portions of the revenues of many important industries are derived from foreign trade, developments in principal world markets are of direct interest to Canada's economy. In recognition of the importance of trade this subject was chosen as the theme for the new \$1.00 stamp.



Canada's new stamp taken from a first-day cover

GERMAN EVANGELICAL CONGRESS

On the occasion of the 11th German Evangelical Congress, which took place from 24th to 28th July in Dortmund, West Germany issued a special 20 Pf stamp. The motif is a crown of thorns, made of barbed wire, encircling the emblem of the Congress; this emblem consists of five crosses. The inscription



in Roman capital letters reads on the left-hand and top edge '11. Deutscher Evangelischer Kirchentag 1963' and on the bottom edge 'Deutsche Bundespost'. The indication of value, '20', is printed in the bottom left-hand corner. Colours are red and black.

The sale by the post offices will end at the close of 31st January, 1964. The

stamps will remain valid for prepayment of mail up to and including 31st December, 1965. They may be exchanged free of charge for valid postage stamps during the first quarter of 1966.

ISSUES FROM CUBA

Cuba issued a set of three stamps marking the anniversary of the attack on the Presidential Palace on 13th March 1957. Values are 9c (red and black), 13c (blue and dark brown), and 30c (orange and green).



The two Labour Day (1st May) issues from this country were 3c (red, blue, and green), and 13c (red, blue, and yellow). Stamp Day (24th April) was commemorated on two new issues (3c and 10c).

Advertisers' Announcements

G.B. HIGH VALUES FREE

To all stamp collectors who send for a selection of stamps on approval. Please enclose 6d. for postage and state special interests, if any.

Send Free G.B. High Values and Approvals

Name
Address

AYON STAMPS (HWIH)
North Walsham, Norfolk

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

DECORATIVE CEMENT

MANY people think of cement as harsh, bare and ugly; yet thoughtfully used it can be decorative, and has a variety of uses in the garden. When the original lightness tones down, cement fits in with natural surroundings. Large surfaces which tend to be bare and harsh can be broken up in various ways. This gives a pleasant and more artistic look to the eye.

The advantages of using cement are its comparative cheapness; it allows for individual ideas; and the work can be spread over any length of time. It can be done at leisure during most periods of the year.

Frost and icy weather need watching when laying down cement. Frost at

night can be counteracted by covering up any newly laid area. Cement can be used for paths, low walls, terraces, drives, steps, and courtyards. For certain uses cement 'blocks' and 'tiles' can be made.

By C. Dyson

The surface of cement can be varied considerably by the tool used for 'ironing out' the smooth top. The consistency of the cement will also affect the smoothness of the surface. The wetter

the cement, the smoother the surface normally obtained. A wooden ironer tends to give a rougher surface than a metal one. So the type of surface can be controlled, a useful asset when a cement drive is made on a slope; the rougher surface naturally being better for icy conditions.

Making blocks

The harshness of large expanses of cement can be counteracted in two ways. The expanse may be built up by separate blocks of cement; or the complete area can be laid, the surface being marked out with indentations as the work proceeds.

The former method could be done by making a number of regular blocks in a

wooden mould, and then the blocks can be placed in position. It can also be achieved by surrounding the complete area with wooden edges to keep the level correct, then splitting up the area between with wooden strips.

Wooden strips without protection are apt to stick when cement is poured on either side of them. Newspaper wrapped round them will enable them to be drawn out easily when the cement has hardened. In the case of terraces, courtyards and other areas, it is well to have a slight slope away from the house. This will ensure that rainwater will drain away freely.

If it is decided to cover the complete area with cement, the surface must be

broken up. This is done when the cement is firm, but not too solid to take an indentation. This marking out is done with a straight edge and blunt end of a pencil or stick. The stick will be chosen according to the width required for the indentations.

The drawing of a stick across the cement will set up a ridge of loose cement on either side of the line. This will brush off later when the cement has hardened. With large surfaces this dividing up will have to be done as the work proceeds. This will avoid any difficulty of marking out the centre of the wet cement, or of any portion getting out of reach.

Attractive paths

As with courtyards and terraces, so with paths. A divided or marked path will be far more attractive than a long bare strip. Moreover, paths need not be straight, nor of uniform width. Variations in these things will add to the interest. The length of path may also be broken by a decorative area under a rose-arch, or perhaps a circular area like a mill-stone.

Cement drives should have a base of rubble and hardcore, and a thickness of 4 in. is advisable. Paths and terraces may be half this thickness. When making steps and other deep areas of cement, brick pieces and large stones may be sunk into the depth of the material.



Fig. 1—Cement path marked out with straight edge. Variety is given by a circular slab and different angles



Fig. 2—Cement steps, the inner core of which is composed of broken bricks and stones mixed in with the cement



Fig. 3—Terrace formed of separate blocks made by using strips of wood, removed when cement has set



Fig. 4—Showing low retaining walls marked out in various ways. Curved walls are made with the help of strips of linoleum.

Sculpture with Plaster Blocks

SCULPTURE is a fascinating form of art, but working with stone is expensive and laborious. Plaster blocks, however, provide a material which is both cheap and easy to work. Plaster of Paris or ordinary household patching plaster can be used.

First, the plaster is cast in blocks. A bowl is part-filled with water, the plaster poured in until it breaks the surface of the water, then thoroughly mixed. Card-board cartons, such as chocolate boxes, or even sugar bags, are quickly filled with the mixture. Drumming with the fingers on the containers will help to get

rid of the air bubbles and make the plaster settle.

After an hour, the containers can be stripped away from the plaster, and the

By A. Liston

blocks left to harden off. While the white plaster is attractive in itself, it can be tinted by adding colouring to the water before the plaster powder is added

Poster colours, emulsion paint or even ink can be used for this, coloured inks producing particularly vivid and unusual finishes.

The outline of the shape to be carved is then drawn on each side of the plaster block A. It is then carved away in one plane at a time B, until it begins to assume the shape visualised C. At this stage, the smaller details can be picked out.

The tools used can be almost anything that comes to hand — a hacksaw blade, penknife, screwdriver and an old file or rasp being among the most useful. The one pitfall which must be avoided in this type of sculpture is attempting to form slender, fragile shapes such as long thin arms and legs. The limitations of the material should always be borne in mind, and the subject chosen and treated accordingly. Some suitable subjects which lend themselves to this treatment are heads, both human and animal, whole animals, preferably with a solid, chunky shape, buildings and castles.

The finished plaster sculpture can be painted and varnished. The application of two or three coats of varnish alone gives an old-looking yellow glaze, and a mixture of matt black paint and aluminium lacquer gives an antique lead finish.

Another suitable material for sculpting is soap. Both toilet and household bar soap can be used and the method is the same as for working in plaster. The cut-away parings and chippings of the soap should be collected on a newspaper and melted with some water in an old pan or tin. The mixture should be poured into jars, and when cool, forms a jelly which is useful for many household purposes.

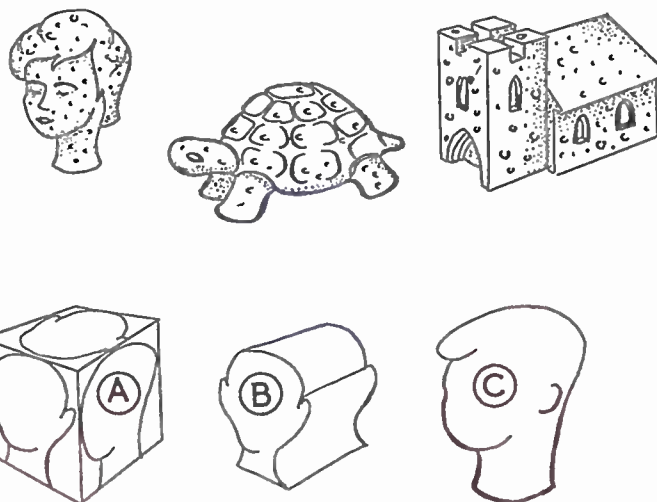


Photo Exposure Calculator

THIS automatic calculator is intended for use out of doors, with HP3 or similar fast panchromatic film. It covers most ordinary lighting conditions and subjects, and shows exposures from 1/800 second to 4 seconds, at lens apertures from $f/2.8$ to $f/32$.

The calculator consists of two members, pivoted together at the centre. The smaller member has lighting conditions, from Dull, Shaded, to Bright Sun, and also speeds. The larger member bears the subject types, and lens apertures. Sharp scissors are used to cut along the line dividing the two members, and each is then glued on thin card. This gives two discs, which are pivoted at the centre with a paper-fastener or other means. It is most easy to glue the two members of the calculator on card slightly larger, then cut to shape when the glue has dried.

Subjects

The wording on the calculator indicates the type of subject. Open Scenes include landscape photos and wide, clear views where there is little impor-

tant shadow, such as beach scenes, photos of the sea, and in the open generally. Buildings, Distant Groups indicate many general shots of subjects at some distance, such as views of towns, buildings, and open parks and streets, and groups of several people in such settings. Very many intermediate distance shots are of this kind. Portraits, Close Groups are individual

By 'Photographer'

shots of pets or one or two persons, quite near the camera, and in somewhat enclosed situations near buildings or trees, etc. The Slightly Shaded section is used when the subject is actually in some shade, as under thin, high trees, and generally where the light, though good, does not reach the subject strongly.

The small disc carries the light or

weather conditions. Bright Sun indicates strong, direct sunshine that casts shadows of the subjects. Hazy Sun is for use when thin cloud or haze covers the sun, or the sun is low in haze. In these conditions, the sun can be seen, and may cast very hazy shadows, but is not sufficiently clear or strong to cast strong, clear shadows. Dull indicates clear days with no sunshine, when the position of the sun cannot be seen. Very Dull is heavy, overcast weather with dull sky. The Dull, Shaded section is for use when the weather is overcast, and the subject is also so placed that such light as comes from the heavy sky does not reach the areas to be photographed.

Lens and Shutter

To use the calculator, it is only necessary to turn the discs so that the subject to be photographed is level with the lighting conditions. If buildings are to be taken in hazy sunshine, the calculator is as shown, so the exposure could be anything from 1/800 second at $f/4$, to 1/10 second at $f/32$.

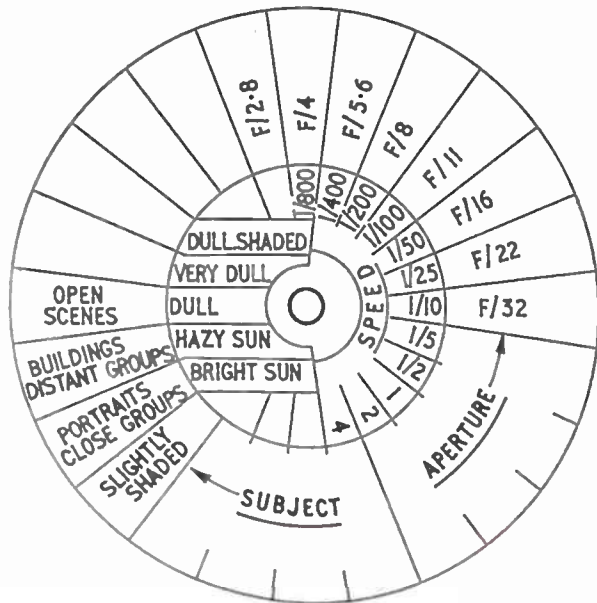
The shutter speed or lens aperture actually selected is chosen in the usual way, or depends on the camera. The 1/10 sec. exposure would really need the camera on a tripod. Many cameras do not have a speed as high as 1/800 sec., or a lens as large as $f/4$. So 1/100 at $f/11$, or 1/50 at $f/16$, would generally be used.

Large lens apertures, such as $f/2.8$ and $f/4$, yield little depth of focus. Small apertures, such as $f/16$ and $f/22$, give considerable depth of focus. So a small aperture is better when parts of the scene or subject are at varying distances from the camera.

As another example, portraits in dull weather give exposures of 1/100 at $f/5.6$, or 1/50 at $f/8$, or 1/25 at $f/11$.

When using 1/25 second, particular care is needed to avoid shaking the camera. The longer exposures (1/10 to 4 seconds) require the use of a tripod, or the camera must be on a rigid support.

With very dull subjects, a lens of large aperture ($f/2.8$ or $f/4$) is needed, or a slow shutter speed. Some cameras have slow speeds of 1/5 second to 1 second. Simple cameras, however, will not have such speeds, and the lens may not be larger than $f/11$. In this case it is better to stop the lens down to $f/22$ or so, to obtain a brief time exposure which can be timed with reasonable accuracy, as exposures of 1/10, 1/5, or $\frac{1}{2}$ second cannot be timed.



Illustrated on front page

LOG BOX AND SEAT

TWO extremely useful assets are combined in this project. The attractively padded seat is really a box or chest for storing, small logs for the winter fires. The capacity is large enough to avoid repeated trips outside for fuel during the dark evenings.

Its use need not be limited to wood, for it could well be useful as a blanket chest in the bedroom. It could still serve as a seat, and the covering could match the curtains or bedspread.

The back, front, ends and ornamental plinth are cut from $\frac{3}{4}$ in. oak, whilst the top or lid and the bottom are of $\frac{1}{2}$ in. plywood. Details of construction, together with useful measurements are indicated in the side and end views of Fig. 1. The overall length is 37 $\frac{1}{2}$ in. the height 19 $\frac{1}{2}$ in. and the depth 21 $\frac{1}{2}$ in. The parts are lettered in conjunction with the diagrams to make construction clear.

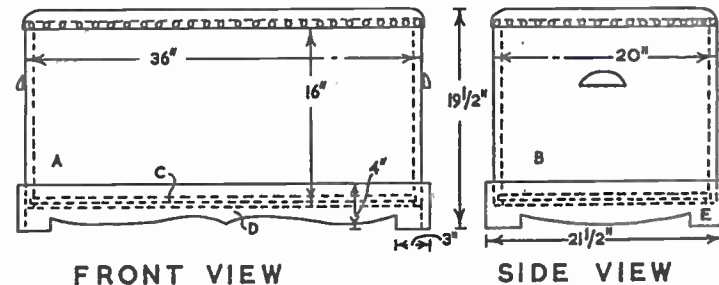
First assemble the main parts A, B and C as seen in Fig. 2. Note that the floor is let into a groove cut into the front, back and ends. Make this groove with a grooving plane and groove to a depth of about $\frac{1}{4}$ in.

Join the front, back and ends (A and B) with a plain mitre joint or a rebated mitre as shown. If you are an expert you may wish to try a tongued mitre or a rebated and dowelled mitre.

The shaped plinth sections D and E shown in Fig. 3 are cut from $\frac{3}{4}$ in. wood and are also mitred at the corners. They are screwed in place and the screws are countersunk and the heads filled with plastic wood.

The top or lid is padded with kapok, cotton wool or foam rubber and covered with hardwearing material as seen in Fig. 4. The material is stretched tight and pinned round the edges with upholstery nails. Gimp could be added but this is not really essential.

Hinge the lid in place with 2 in. heavy brass butts and recess the hinges as in Fig. 3. Lifting handles can be screwed on



FRONT VIEW

SIDE VIEW

Fig. 1

Fig. 2

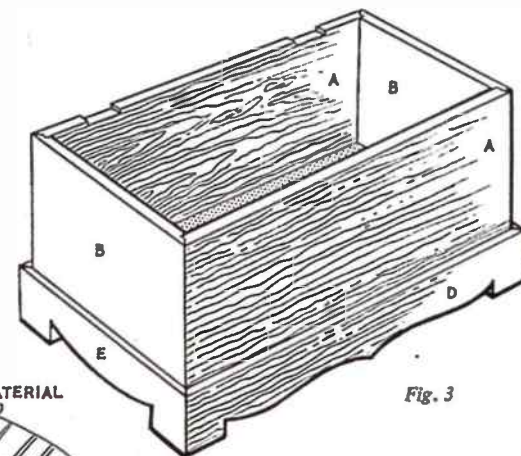
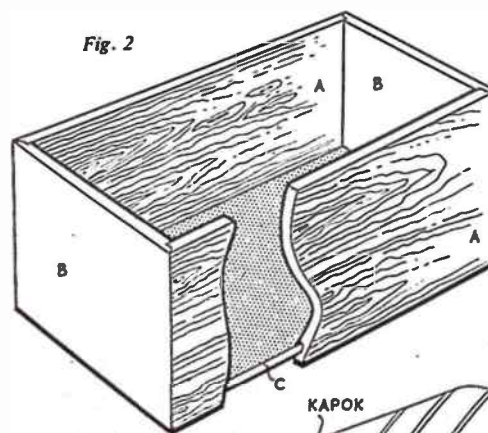


Fig. 3

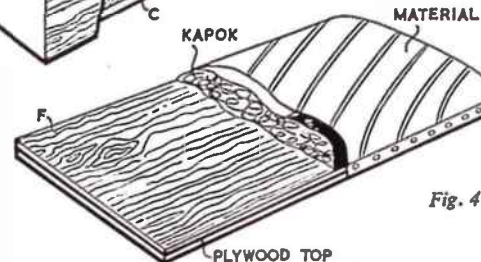


Fig. 4

each end and a catch provided if required.

Finish off by staining and polishing or varnishing. If the seat is to be used in a bedroom the woodwork could be painted to match existing paintwork.

(M.h.)

HINTS ON FRUIT BOTTLING

FRUIT should always be bottled at the height of the season when it is just ripe. Over-ripe specimens should be rejected and only good, fresh fruit used.

Blackcurrants have to be removed from the stalks and the quickest way of doing this is with the aid of a fork. Insert the stalk between the prongs, run the fork down and the currants will fall off.

find that the skin rubs away quite easily. Drain off the hot water, replacing with cold while preparing the fruit. These two fruits may be easily halved by cutting round the fruit to the stone. Use a sharp knife, then twist the two halves in opposite directions.

Tomatoes are bottled in brine and may be either left whole or cut into halves.

You may of course make mixtures of fruit, thus having a fruit salad ready for immediate use after opening.

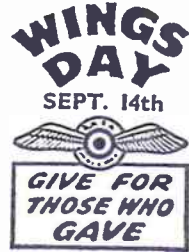
Jars should be sterilised by holding the opening of each jar over the spout of a kettle of boiling water. Allow the steam to circulate within the jar for half a minute.

The oven method of preserving is widely used after packing the fruit into jars without liquid. Cover each jar with a patty tin or one large baking tin over a set of jars. Stand on a baking sheet and have a slow oven (250°F. or at $\frac{1}{4}$ mark for gas). Allow about 45 minutes, when the juice will begin to flow. Remove the jars one at a time, fill with boiling water or syrup, put on the tops and seal at once.

Never pack the jars too close together when using the oven method for the hot air must be allowed to circulate all round. Remember to test that the jars are sealed by lifting them up gently by the lids after bottling has been completed.

A syrup is made from $\frac{1}{2}$ lb. sugar to a pint of water. Place in a saucepan, heat slowly with occasional stirring until the sugar has all dissolved, then bring quickly to the boil and boil for two minutes.

After pouring the syrup into the jars it is advisable to slip a knife down the sides to burst any air bubbles. Your pre-



By S. H. Longbottom

Gooseberries should be quite hard to the touch and green for perfect bottling.

Pears are best halved and the cores scooped out with a teaspoon. Cooking pears should be cooked before bottling.

Plums, greengages, etc. must be graded for size so that comparative sizes go into each jar.

Fruit may be packed into jars with the handle of a wooden spoon as this will avoid bruising. Remember that they should be packed to within half an inch of the top and if the jars are first rinsed in cold water the fruit will slide in easily. If the fruit is packed firmly under the shoulder of the jars this will prevent it from rising during the sterilisation.

Apricots and peaches should be placed in a bowl of boiling water for a few minutes before bottling. You will then

served fruit will be both better flavoured and coloured if bottled in syrup rather than water.

Bottled fruit is best stored in a cool, dry cupboard away from the light.

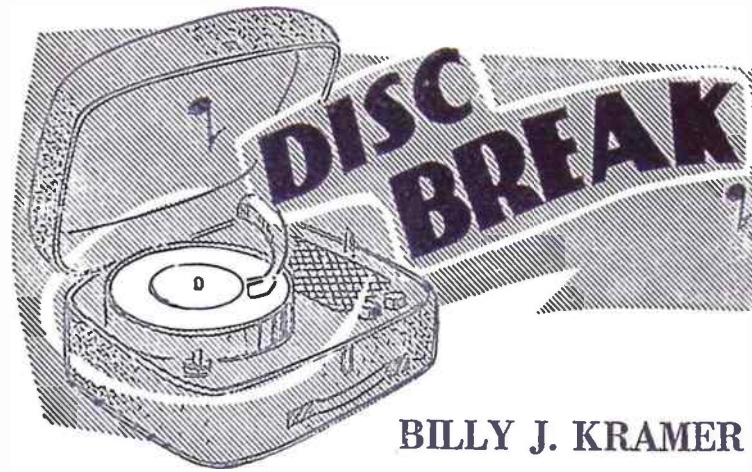
The water bath method of preserving demands a zinc bath. The fruit is packed as described and the jars filled with syrup (four to eight ounces of sugar in a pint of water). Fix the rubber rings on the jar and the caps on top. Screw the metal bands securely on to the tops then loosen half a turn. Stand the jars on a wooden rack, or pad of old newspapers, with cloths or paper between them to avoid touching and cover with water. The water must then be heated to 180°F. and kept at this temperature for 15 minutes.

A stock of bottled fruit is useful during the winter months when fresh supplies are not available. Moreover, at the height of the season fruit is usually at its cheapest and this is the time to start bottling.

NEW WALL CHARTS

A WALL chart of particular value to students and others interested in wood structure has been produced by Educational Productions Ltd, 17 Denbigh St, London S.W.1, and is priced at 5s. Identification of some 20 hardwoods is shown by photographs emphasising their particular grain features and end grain characteristics are shown greatly enlarged.

Other new wall charts are 'Care and use of Saws' and 'Plough Planes', illustrating the correct application and use of each variety. These last two charts are 1s. 6d. each.



BILLY J. KRAMER



IF someone hadn't pinched young William Ashton's guitar while he and his group were playing at a Liverpool club, he might never have become one of Merseyside's most popular singers, or made a record under the name of Billy J. Kramer.

Explains Billy: 'When I was about 17 some friends' and I got together and formed a group which consisted of lead guitar, rhythm guitar, drums, and a vocalist. I was the rhythm guitarist. Then the vocalist left and someone suggested I should take over. I wasn't too keen, but then someone pinched my guitar after a date and as I couldn't afford another I became the group's singer.'

Born William Ashton in Bootle, Liverpool on 19 August, 1943, Billy is the son of a docker and the youngest of seven children. Until he was 15 he attended the St. George of England secondary school then became an apprentice fitter with a local engineering firm. He stayed with them until January of this year.

Just for fun

'When my friends and I first started our group it was more for fun than anything else and we used to spend evenings just practising', said Billy. 'I couldn't play the guitar very well, but I got a lot of enjoyment out of it. Then we started to

get dates and called ourselves *The Coasters*.'

That was fourteen months ago. The group soon became one of Merseyside's most popular attractions and last year were voted third in the annual popularity polls — the number one place being taken by *The Beatles*.

With the Dakotas

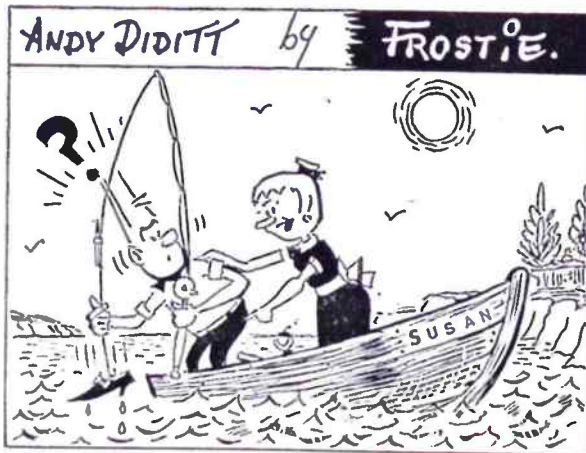
But by the end of last year, Billy realised that he just couldn't continue with his job and sing as well — so he gave up his job.

'We were doing so much work all over the place in the evenings that I nearly killed myself and was always feeling tired. Then in January this year Brian Epstein (who manages *The Beatles* and *Gerry and the Pacemakers*) offered to sign me up, so I decided to turn professional.'

Since then — with his new backing group, *The Dakotas* — he has worked for a month at the Star Club, Hamburg, done a seven week tour of the provinces and made a record which hit the high spots in the charts for several weeks.

And *The Dakotas*? Consisting of Tony Mansfield (drums), Robin MacDonald (rhythm guitarist), Ray Jones (bass guitarist) and Mike Maxfield (lead guitarist), they have broadcast four times and made three television appearances since their formation 18 months ago. They joined Billy in January this year.

Billy's hit record was, of course, *Do You Want To Know A Secret?* backed by *I'll Be On My Way* — both numbers being composed specially for Billy by Paul McCartney and John Lennon of *The Beatles*. They were released on Parlophone R 5023.



"PLEASE ANDY YOU MUST TRY AND FIND THE OTHER SHOE THEY'LL GO WITH MY NEW DRESS."

BRITFIX 66 One of the first and still the best



Modellers! Strong permanent joints for your models at a squeeze of the tube with Britfix 66. Waterproof and transparent, it dries quickly and it's really clean to work with. It's packed in handy sized tubes complete with extra fine nozzle for detail work. Available from your local model shop and all branches of Hobbies Ltd. Tubes from 7d.

Also ask for Humbrol Enamel, Britfix 77 Polystyrene Cement, Britfix 44 Tissue Paste, Humbrol One Pack Fuel Proofer and the fabulous Humbrol Jet Pak Spray Gun.

Legend of the Pinhole Camera

IN Ancient Egyptian times, a poor peasant was thrown into prison for offending the king. The prisoner languished in a small box-like cell, which had smooth walls cemented with a sand-lime mixture. Light and air could enter only through a small hole in one wall. But in these barbaric circumstances our legendary captive made a startling discovery.

Upon his cell wall, opposite the hole, he saw a bright upside down picture of the 'living' outside world. Later, the prisoner was able to build a similar, though more comfortably appointed 'magic room' for the king's pleasure, and he gained his freedom and the monarch's friendship as his reward.

You will be able to study the principle of the magic room for yourself. This was an early form of camera obscura, or simple pinhole camera — an ancestor of cameras used for photographic purposes.

Begin constructing your own pinhole camera by making a cardboard sleeve to fit snugly over a 1 ft. length sawn off a wide-bore cardboard mailing tube. Any similar piece of tubing will do. Form the sleeve by rolling a strip of thin cardboard around the mailing tube, and gluing opposite edges together.

Let us assume that the diameter of the sleeve is 4 in. Cut out a 4½ in. diameter cardboard disc, and cut a penny-size hole in the middle. Glue this 'disc-with-a-hole' over the end of the sleeve. Balsa cement will be a suitable adhesive. When the glue is dry, trim away the overlapping edge of the disc with scissors, to produce a neat cylinder. Cut a penny-size hole in the bottom of a pill-box, and

glue the pill box over the outside of the sleeve 'disc'. Both penny-size holes must be matched.

Paint both the mailing tube and the cylinder jet black, inside and out. When the paint is dry, glue a circular grease-proof paper 'screen' to one end of the mailing tube. The paper screen may later be 'oiled' with a drop of lubricating oil rubbed in with your fingertip. The oiled translucent screen will let some light pass through it, like tracing paper. Prick a ring of holes around the edge of the screen, to prevent damage to the paper resulting from high air pressure when the sleeve is slipped over the mailing tube. Fit the mailing tube into the sleeve, screen end first.

Now you will almost be ready to commence a series of interesting and instructive optical experiments. You will, however, still require four pill box lids to fit the end of your apparatus. Also you will need a plastic magnifying glass with a focal length of about 3 in., which you can buy for a few pence on the stamp counter at Woolworth's. A similar glass lens, with a diameter of 2 in., would serve even better.

Prick the middle of a pill box lid with a pin, and fit the lid over the end of your instrument. Point this 'objective' end at a brightly illuminated window, and peer into the dark tube. You will see a dim upside-down image of the window upon the screen. Slide the sleeve to and fro (here you will appreciate the existence of the little holes around the screen). You will notice that the brightness and clarity of the image depends upon the distance between the pinhole and the screen.

A burning candle will serve excellently as an object to train your camera upon. Can you understand why the candle's image will always be inverted? This is not difficult if you remember that light rays generally travel in straight lines . . . In order to pass through the pinhole and reach the screen, straight rays reflected and emitted by the candle, and its flame must 'cross over'. Therefore, the top of the flame will appear at the bottom of the screen. Prick a larger hole in another pill box lid. Replace the first lid with this new one, upon the forward end of your camera. When you repeat the experiments described, you will find that, since more light can enter the device, an image upon the screen will be brighter, although with larger holes still, the image will become very blurred.

Blurring will be caused when many 'sets' of rays enter the hole to form multiple superimposed images. If you let light enter your camera through the whole area of the uncovered penny-size hole, only a bright patch of light will illuminate your screen. You can regard this bright patch of light as consisting of countless overlapping images of the scene towards which your apparatus is pointed.

The convex lens from the magnifying glass can be used to organize the multiple images into a single well-defined picture. Remove the handle from the lens. Cut a very large circular hole in another pill box lid, then fix the lens over the hole with strips of Sellotape. Attach this to your camera, and direct the tube at any scene you please. Slide the tube in and out to focus the light rays on to the paper screen. You will see a clear bright image when the screen is at the correct focal distance from the lens. The image will still be inverted.

Your fourth box lid, when perforated by four haphazardly-placed tiny pinholes, will provide you with an objective capable of forming four widely-separated and overlapping images upon the paper screen. The effect is surprisingly like a 'modern' Cubist painting.

By now you will have realized how the magic room worked. You will also find it rewarding to investigate the history of the camera obscura at your local library. If you live near Bristol, you can go and visit a full scale camera obscura at the Observatory on the Downs above Clifton Suspension Bridge. Another interesting project would be to compare your pinhole camera with drawings illustrating how your eyes work.

(A.E.W.)

A BUILDING

SET FOR YOUNGSTERS

A SIMPLE but attractive building set which can be put together in many different ways makes an appealing and educational toy. On a pegboard base, a whole scene can be built up on different levels, using layers of pegboard to form hills, cliffs, river banks and islands. The wooden building sections can then be assembled on these pegboard units in a great number of imaginative ways.

The base is a 12 in. by 24 in. piece of pegboard, which is pinned and glued over a simple frame of 1 in. square stripwood. Fig. 1. A 12 in. square of pegboard is then cut as shown in Fig. 2 to form two raised sections for placing on the board, and two kidney-shaped sections, also shown in Fig. 2, are cut from a 12 in. by 6 in. piece of pegboard.

The base is painted blue, and the other sections are painted green on one side, and brown or white on the other, so that the scene can be varied by turning over one side or the other uppermost.

Various sets of wooden building pieces can be made to use with the base. Medieval castles and riverside villages are only two of the many possibilities. Fig. 3 shows the simple pieces from which various castles may be built. Since they are easy to make, a generous number of each type of piece is an advantage. The battlemented wall sections, eight of which can be made, are 2 in. lengths of ½ in. square stripwood (A), with ¼ in. square grooves cut across the top. They are drilled and fitted with two ¼ in. diameter dowel pegs, which are spaced ½ in. apart on the underside of the block to fit in the holes in the pegboard. All the pegs on the fittings should project ½ in. downward, so that they pin the hard board sections in place when the scene is assembled.

Towers (B), also of ½ in. stripwood, are 1½ in. high, and are fitted with holes above and pegs below. The tower tops (C) are ½ in. thick discs of ¾ in. diameter dowelling with ¼ in. deep

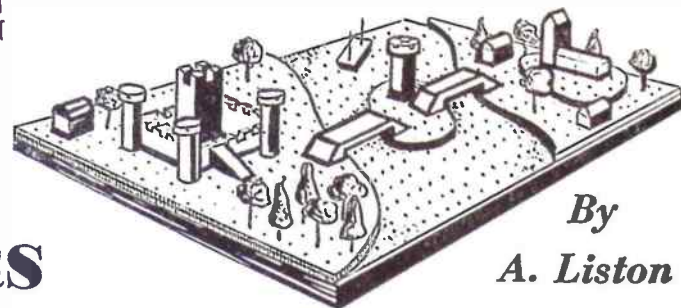
grooves cut in their upper surfaces in a cross pattern. Round towers (D), are 1½ in. lengths of ½ in. diameter dowel rod, fitted with pegs and holes, as before.

Larger towers, or keeps, (E), are 2 in. high pieces of 1 in. square stripwood, grooved on top like the other towers. Other useful fittings are 2 in. long ramps of ½ in. square stripwood (F) and a 3 in. long bridge of the same wood (G), sloped at each end, and with a 2 in. long and ¼ in. deep cut-out section on the underside. It is fitted with two pegs.

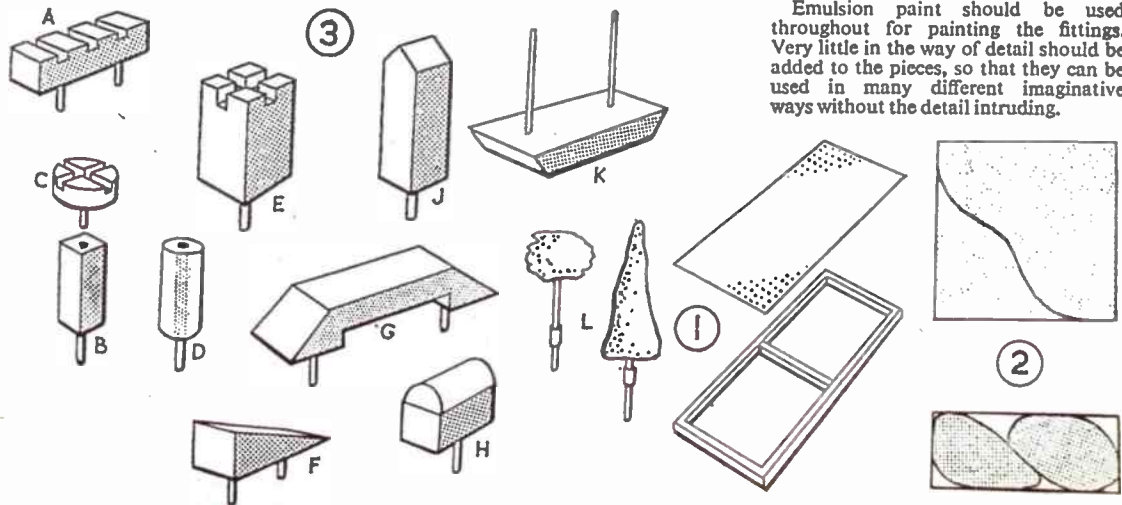
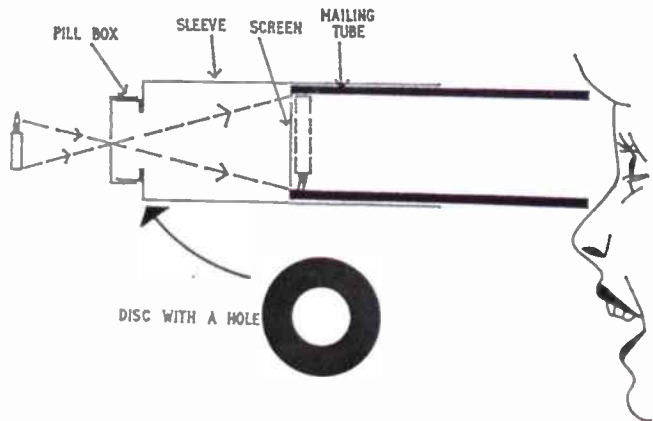
Cottages (H) are 1 in. lengths of stripwood, with roofs of ½ in. diameter dowel rod, split lengthwise. A taller building (J) is a 1½ in. high piece of stripwood, pointed at the top. The ramp sections (K) are 2 in. long, ½ in. wide and ¼ in. thick, and it can be turned over to serve as a simple boat, its dowel pegs, ¼ in. apart, being the masts.

Trees of various kinds, (L), are simply 1½ in. long pieces of dowel rod topped with green foam plastic glued in place. A band of adhesive tape round the 'trunk' prevents the rod from going too far into the pegboard.

Emulsion paint should be used throughout for painting the fittings. Very little in the way of detail should be added to the pieces, so that they can be used in many different imaginative ways without the detail intruding.



By
A. Liston



Tricky Business with Water

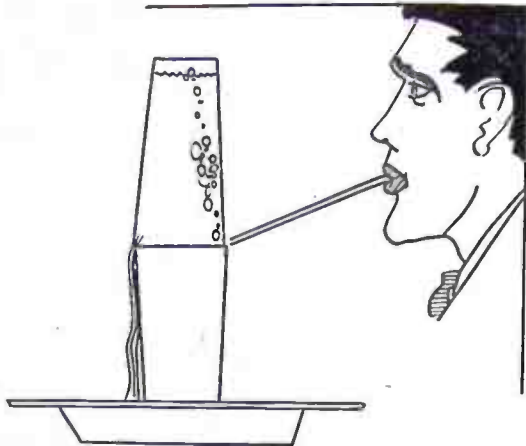
FILL a drinking glass with water until surface tension lets the water bulge above the edge. Slide a piece of cardboard across the rim of the tumbler, and carefully turn the apparatus over.

When you remove your hand the water will not escape, because adhesion between cardboard, water and glass, and surface tension, aided by atmospheric pressure will combine to resist the sheer weight of water.

Stand another tumbler filled with water in a soup plate, then repeat the experiment described above with the original glass, but this time rest the paper upon the second tumbler so that the two glass rims match.

Gently pull away the paper, and observe that the water in the upper glass will not pour out.

Slightly displace the top tumbler and let surface tension make the water bulge minutely through the gap. Do this casually before inviting somebody to remove the water from the top tumbler without actually touching the apparatus.



The secret is a drinking straw. Hold its far end near the gap between the glasses, and blow through it. Your breath will gurgle upwards and push the water downwards. Blow softly at the finish, to prevent the top tumbler falling. The 'mess' of water will be captured in the plate. (A.E.W.)

A useful tool—the Finger Spanner

FIXING nuts in awkward places is often a problem, but with the aid of this handy little 'finger spanner' the job is made quite easy. Its

primary task is to hold the nut in place while the screw is tightened up, and therefore it can be made of a comparatively soft sheet metal such as brass,

copper or even tinplate.

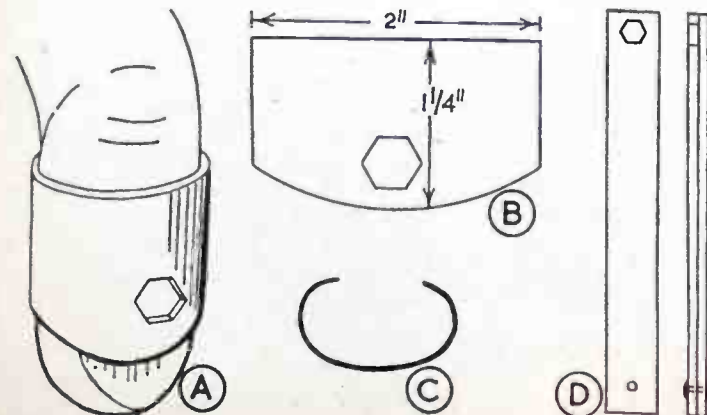
To use it place the semi-circular plate on the finger as shown at A, then put the nut in the hexagonal hole, guide it into its place and screw up to tighten. A different plate will be needed for each size and shape of nut.

By using a fairly thin sheet of metal the plate can be easily bent to spring on the finger C and yet be strong enough to enable the nut to be reasonably tightened.

For an average sized finger cut a piece of sheet metal to the shape shown at B about 2 in. long and 1½ in. wide. With a fine metal fretsaw cut the hexagonal nut hole and file to an easy fit.

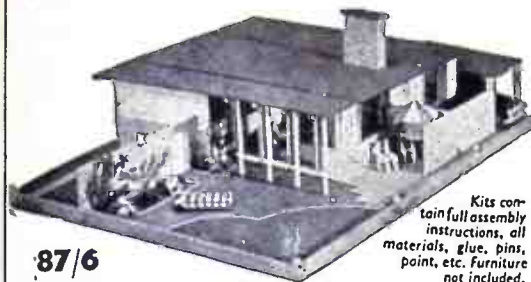
For a more confined space the type of spanner shown at D is quite handy. Two strips of metal are used, one with the nut hole cut in the end and the other plain. The two are riveted together at the end opposite to the nut hole so that they spring together, thus holding the nut in the recess.

Either of these types made in different sizes make useful additions to the tool kit. (A.F.T.)



364

YOU CAN DEPEND ON THESE



87/6

Kits contain full assembly instructions, all materials, glue, pins, paint, etc. Furniture not included.

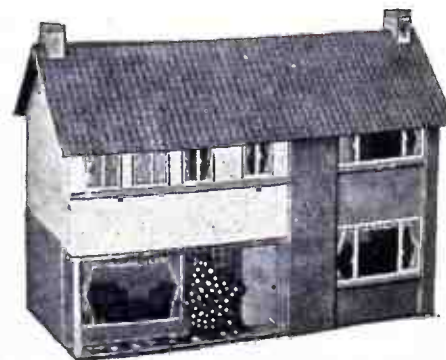
THE 'CELEBRITY'—RTA 7

Size 36 in. x 24 in. Five main rooms including lounge with dining recess. Gardens, car port, service area, sun trap, etc. Flat roof lifts off for easy access to each room.

ALL PARTS PRE-CUT

ALL READY TO PUT TOGETHER

For the 'Royal' and 'Celebrity' Dolls' Houses, Hobbies have prepared kits with all parts cut to size and shape, ready for you to put together and finish. These are ideal for the man who wants to make a really excellent Doll's House — in a hurry!



THE 'ROYAL'—RTA 6

Size 26 in. x 12 in. x 19 in. high. Double door opening at back. Modern lounge, hall entrance, kitchen/dining room, 2 bedrooms, bathroom and landing. 107/6

TO HOBBIES LTD (DEPT. 993), DEREHAM, NORFOLK

PLEASE SEND KIT No. RTA.....

NAME

ADDRESS.....

.....

.....

P.O. or cheque for.....enclosed



A NEW RANGE OF JOHNSON DO-IT-YOURSELF OUTFITS

Here's excitement! The new Johnson range of "Do-it-yourself" outfits makes it so easy to develop and print your films at home.

These outfits contain everything you need. They range from sets for the beginner, to outfits for the more advanced enthusiast. And full instructions go with every outfit. Prices from £1-17-6 to £5-12-6.

JOHNSONS
OF GREAT BRITAIN

FOR CONFIDENCE
IN PHOTOGRAPHY



MODEL LIGHTING KIT

ONLY

3/3d.

Post 4½d.

Empire
made

This low-priced kit for lighting your model contains pea bulbs, (red, green, amber and plain) with holders, plastic covered wire and clips. Works off 4½-volt battery. Full instructions enclosed.

HOBBIES LTD. (Dept. 99) DEREHAM, NORFOLK

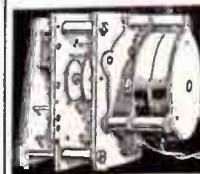
SYNCHRONOUS MOTORS

OUR PRICE 10/-

1000 TO CLEAR!!

A REAL BARGAIN

Perfect self starting Synchronous motors. 200/250 volt, 50 cycle with valuable gear train. Ideal for clock or model making. Catalogue price of 30/- slashed to 10/- each, post free to clear.



JAMES S. GRAHAM & CO. LTD. (Dept. S.M.2)

73 ACRE ROAD, KINGSTON-ON-THAMES, SURREY

Collers welcome

Open all day Saturday

Phone KINGston 0075

PICTURES MADE FROM TINFOIL

CHARMING pictures which cost very little to make are easy to create from such simple materials as a piece of glass, black paint, and the foil wrappings from chocolate biscuits, bars of chocolate and other wrapped goods.

By A. Liston

The pieces of foil to be used should be of both the plain, silvery variety, and coloured, patterned kinds. They should be slightly larger than the areas of clear glass which they are to cover. Any creases and crinkles in the foil are removed by pressing or rubbing.

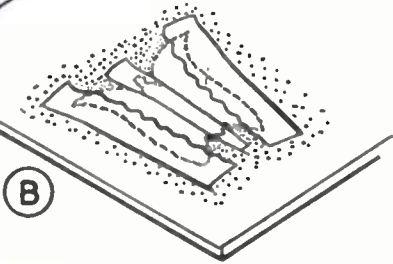
The method of construction is as follows. When the subject of the picture has been decided upon, the various objects in the scene are drawn and cut out from scrap pieces of adhesive sheeting. Those who find the drawing too difficult can use illustrations from magazines, traced on to the sheeting and then cut out. The most effective composition is achieved by using one large shape and two or three small ones. The butterfly design shown is an example of this.

The cut-out shapes are then stuck to the back of the piece of glass to be used for the picture, and a coat of black paint is applied, making sure that the whole of the back of the glass is covered. Two or three coats may be necessary to achieve the desired opacity. The cut-out shapes are then pulled away to reveal the areas of clear glass underneath (Fig. A). This is best done by laying the glass flat and holding it down with a finger on one of the paper shapes while using the point of a pair of scissors to lift one edge of each paper to start it off. The glass should then be left until the paint is thoroughly dry.

The pieces are laid in place as shown in Fig. B, preferably beginning with the smaller sections, and the gaps between them can be overlaid with larger pieces until all of the glass areas are completely covered. Tiny spots of adhesive can be used to hold each piece in place, making sure that they do not show on the glass. The various patterns and colours should of course, be arranged for maximum contrast.

When the glue is dry, a backing sheet of cardboard, the same size as the glass, is added, and bound to the glass with passe partout tape or plastic adhesive tape. A simple cardboard tag glued to the back enables the picture to stand or hang.

Bearing in mind the limitations of this kind of picture-making, some of the most suitable subjects include a fancy



dress or historical figure, birds such as peacocks, fish and butterflies, or, for young children, a fairy tale castle.

Miscellaneous Advertisements

UNDER 21? Penfriends anywhere — details free. Teenage Club, Falcon House, Burnley.

PENFRIENDS home and abroad, all ages. S.a.e. for details. European Friendship Society, Olney, Bucks.

FREE — Interested in Marquetry? A special leaflet 'Making Pictures in Wood' by the fret-saw method is free for the asking. Send to HOBBIES LTD, DEREHAM, NORFOLK.

HOME BILLIARDS FOR FAMILY FUN

Tables in 3 sizes, 4 ft., 5 ft., and 6 ft. from £8. 17s. 6d. to £17. 5s. 0d.; including snooker and billiard balls, cues, marker, and rules. Available at all branches. Send for full details from HOBBIES LTD, DEREHAM, NORFOLK.

LARGE QUANTITY small horsepower motors suitable animated Display-Turntables, etc., £1 each to clear. — Phone Mr Renn, BISHOPSGATE 1575.

BUYING OR SELLING?

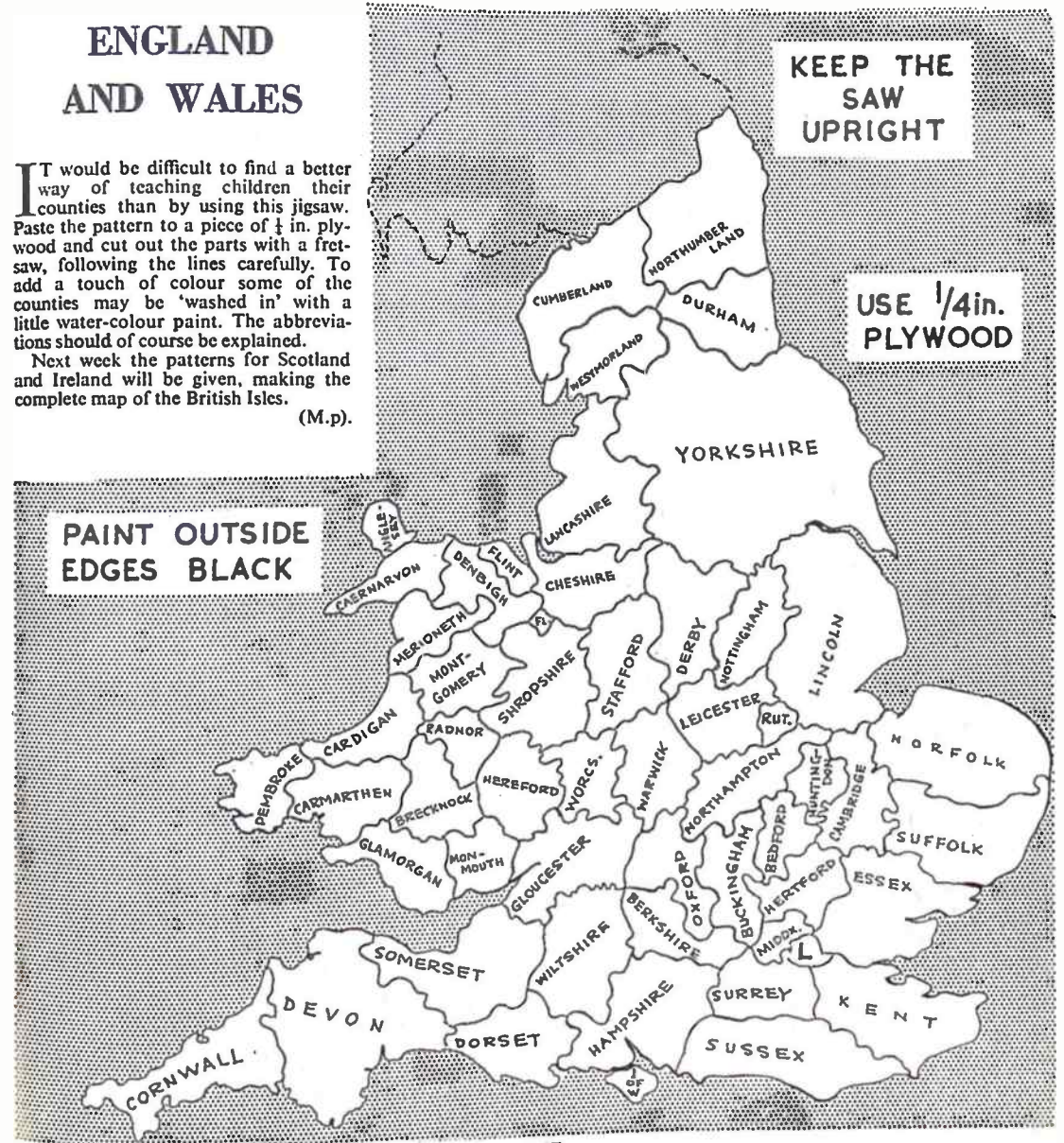
Classified advertisements on this page are accepted at a cost of 6d. per word prepaid. Use of a Box No. is 1/- extra. Send P.O. with advertisement to Hobbies Weekly, Advert. Dept., Dereham, Norfolk. Rates for display advertising on application.

Jigsaw maps — an easy way to learn Geography

ENGLAND AND WALES

IT would be difficult to find a better way of teaching children their counties than by using this jigsaw. Paste the pattern to a piece of 1/4 in. plywood and cut out the parts with a fret-saw, following the lines carefully. To add a touch of colour some of the counties may be 'washed in' with a little water-colour paint. The abbreviations should of course be explained.

Next week the patterns for Scotland and Ireland will be given, making the complete map of the British Isles. (M.p.)



Printed by BALDING + MANSSELL, LTD., London and Wisbech, and Published for the Proprietors, HOBBIES LTD., by HORACE MARSHALL & SON, LTD., Temple House, Tallis Street, E.C.4. Sole Agents for Australia and New Zealand: Gordon & Gotch (A'asia.) Ltd. For South Africa: Central News Agency Ltd. Registered for transmission by Canadian Magazine Post.

READER'S REPLY
HW SEPT 1963



... with a tin of
Evo-Stik on your shelf.

There isn't a fixing job around the house or workshop that a tin of Evo-Stik won't tackle: and it usually costs much less than a 'hob-a-job'.

Table tops, wall panels . . . small jobs and large . . . different materials, difficult angles: Evo-Stik fixes them all. Faster, cheaper and a whole sight stronger than the contents of an average size tool chest. And its strength actually increases after use.

No need to scout around either. It's in every Ironmongers and most large stores.
TINS 7/- and 4/3. TUBES 3/9 and 1/9.

a small deposit secures any article

'IMPACT'
EVO-STIK
REGD. TRADE MARK
ADHESIVE

MANUFACTURED BY THE INDUSTRIAL ADHESIVES DIVISION OF EVODE LIMITED, COMMON ROAD, STAFFORD, STAFFORD 2241 (8 LINES) LONDON OFFICE: 450/2 EDGWARE ROAD, W.2. ADHESIVE 2425 (5 LINES)