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IN THIS ISSUE

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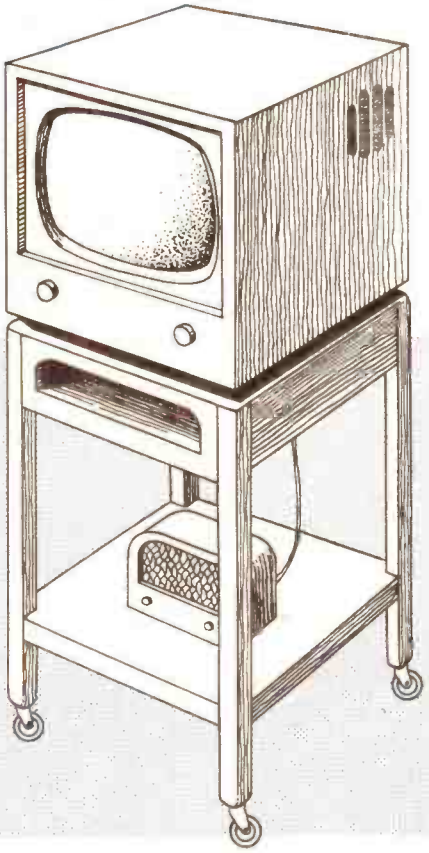


THOSE of us who cannot afford a new TV set can either build our own, or else buy a second-hand one which has a cabinet whose style and condition leave much to be desired. In either case, the design illustrated should just fit the bill. With the cabinet goes the trolley, which is almost indispensable.

A CABINET AND TROLLEY FOR THE TV

The cabinet and trolley described here have two advantages. First, they are inexpensive, costing only a fraction of the bought products. Secondly, the construction of them has been kept as simple as possible. Fancy jointing has been avoided and even the below average handyman with the minimum of tools can confidently undertake the task of construction. Moreover, the completed items, for modern and stylish appearance, will give complete satisfaction.

BUILDING YOUR TV CABINET

The trolley serves two other purposes, besides being a stand for the TV set. It provides a convenient resting place for the *Radio Times* and similar publications just beneath the cabinet, as will be seen from the illustration heading this article. In addition, the lower shelf of the trolley will be found to be just the place for the ordinary radio set. It will be shown at the end of the article how the one aerial can be made to feed both TV and radio, thus obviating the need for two aerials. Details of switching to avoid two sets of plug-in arrangements will also be given.

By A. Fraser

The TV cabinet can be made first, as this will be more urgent, perhaps. The dimensions given are for a 17 in. TV set. This may or may not suit your set (depending on the chassis) but it would be an easy matter to alter these dimensions to fit your particular case. The constructional principles are the same, whatever size or shape is needed, and so any type of set can be successfully accommodated.

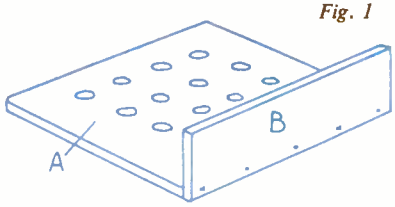
Where the set has an elliptical speaker fixed in the front of the cabinet below the screen, then the bottom board across the front (in the present design) would have to be made a little deeper, to allow for the height of the speaker.

For the cabinet sides and top ½in. thick ordinary plywood is used. The quality of this is not important, because it is to be covered later. It should, however, be perfectly flat and free from warp. The bottom of the cabinet is of ½in. thick plywood. For the 17in. set which was housed by the writer, the dimensions of this base were 17⅞ins. from back to front, and 18⅜ins. from side to side.

Holes are bored through the base (after it had been drawn and sawn out truly rectangular) for ventilation purposes. These are essential, to allow cool air to pass up into the set. The holes can be ½in. or ¾in. in diameter, and there should be at least half a dozen of them.

A piece of board ½in. thick by 3¾ins. by 18⅜ins. (exactly the same width as the base) is next sawn out and attached to the front edge of the base, using glue and nails or screws (countersunk). This

Fig. 1



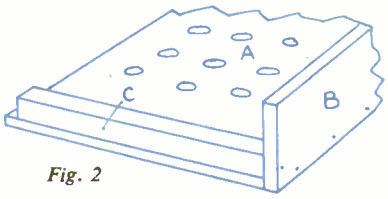


Fig. 2

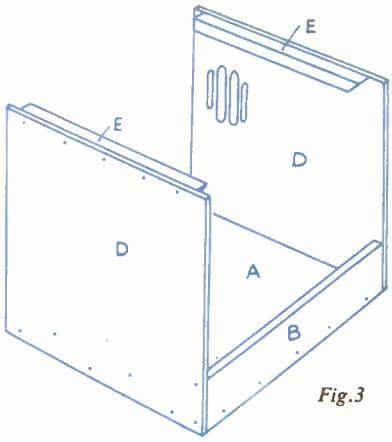


Fig.3

is shown as (B) (the base is (A)) in Fig. 1.

Next saw off some spar (¾in. or 1in. square section) and exactly the same depth as the base (17⅞ins.). This (C) should be glued and nailed (or screwed) to the base. Keep the spar flush with the edge of the base. See Fig. 2. Do the same for the other side of the base.

Now saw out the sides. These are ¼in. plywood, 18⅜ins. by 18¼ins. high. Use a T-square, and use care to make a true rectangle. Both sides should be identical and should be placed face to face to check.

On the top inside edge of each side glue and nail more sparring (¾in. or 1in.). This is (E) in Fig. 3 and 3(a). This spar

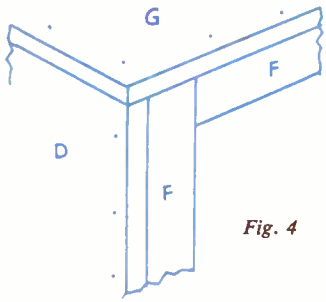


Fig. 4

should be ¾in. short of the front edge of (D) and ¼in. short of the back edge. The front end should be chamfered down over, as seen in Fig. 3(a). This is to allow insertion of the plate glass (see later).

After these spars (E) have been fixed, the sides can be attached to the base. Use glue and nails (or screws, countersunk) to fix the base (A) and front (B).

The top can next be fixed. This should be 18⅜ins. by 18⅞ins. by ½in. thick.

Some ½in. by ½in. strip is now needed. This should be fixed by glue and panel

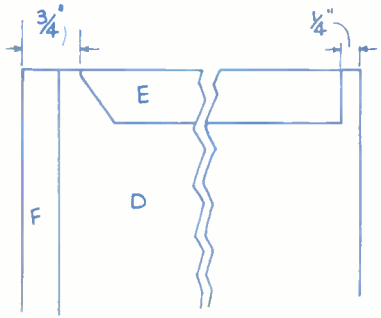


Fig. 3a

pins to the sides (D) and top (G). See Fig. 4. The strip should be flush with the edges of the sides and top.

Strip of the same section is used to strengthen the back edges of the sides and top (Fig. 5). It will be seen this is to the level of the edges of the 1in. sparring (C), leaving a recess of ½in. depth for the back of the cabinet to rest in.

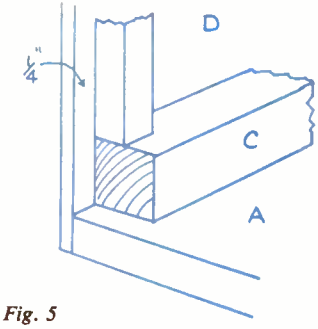


Fig. 5

The mask for the TV tube is of plastic. Masks of various sizes, either cream or grey, are obtainable from Duke and Co., 621 Romford Road, Manor Park, London, E.12, or from

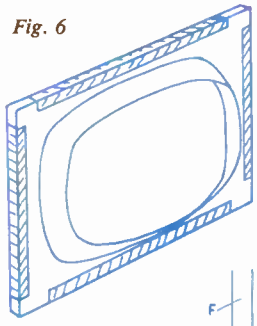
Electronic Precision Co., 66 Grove Rd., Eastbourne. A piece of ¼in. plate glass (Triplex) should be bought, the same size as the outside dimensions of the mask. The mask is then fixed to the glass by means of Sellotape (see Fig. 6). The tape should not overlap the front of the glass by more than ½in., or it will show below the level of the stripwood (F) (Fig. 4).

The glass (with mask attached) is inserted into the cabinet, with its top edge lying in the cleft between (F) and (E) (Fig. 3(a)). The bottom edge rests on a batten fixed to the back of (B) (Fig. 7) and kept in place by means of two wooden slip catches (P). The batten can be ⅜in. thick by 1in. deep. The catches can easily be made from ¼in. plywood and held by a screw. The catches are turned down until the glass (with mask) is inserted, then turned up to hold the glass in place.

The back of the cabinet is shown in Fig. 8. It can be of $\frac{5}{32}$in. plywood or hardboard. The cut-outs are done with a fretsaw and the actual positions of those for the back controls will be determined from the actual set. Screws hold the back in place at each corner.

Go over the cabinet now and drive in any nail heads that are projecting, and fill in any holes with plastic wood. Glasspaper off any rough edges and then start to veneer the cabinet. For this use 'Aga' veneer. This is paper-thin veneer, available in various woods, and is as

Fig. 6



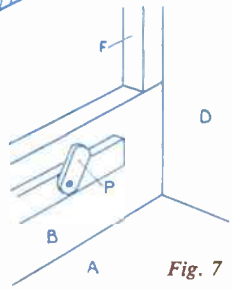


Fig. 7

easily applied as wallpaper — a very great advance in the art of veneering. It can be fixed with paste, glue or impact adhesive.

Do the front first, mitring the top and side strips. Let the grain run horizontally along the lower front part (B). Next, do the sides, then the top.

The 'Aga' veneer can be had in 'matt'

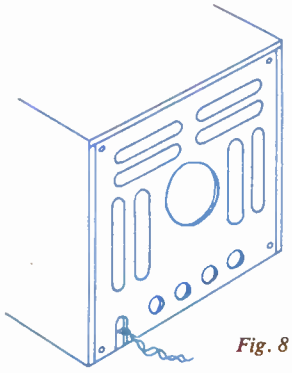


Fig. 8

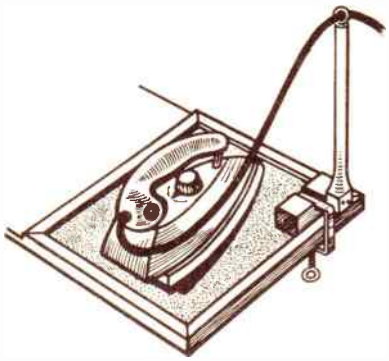
or ready-polished finishes, so it is up to the reader whether he wishes to have it ready polished or to apply his own polish.

The cabinet is finished by the addition of four rubber feet. These should be large ones, to sustain the weight.

It may be noted that we have placed the loudspeaker in the top right-hand corner of the right side of the cabinet, using a simple cut-out (executed with a fretsaw). Loudspeaker fabric is glued on the inside of this. The position of this speaker cut-out can be altered to suit your particular set.

Next week A. Fraser will describe the construction of the trolley.

Make a Flex Support for the Electric Iron



THIS effective support serves as a guide for the flex of the electric iron, preventing it from trailing around and getting in the way.

The illustration shows how it is fixed to the corner of the ironing table with a Hobbies all-steel light cramp. The 2½in. size, which is ideal for the purpose, costs 1/7d. plus 7½d. post and packing from Hobbies Ltd, Dereham, Norfolk.

The construction of individual ironing tables will vary a little and it may be necessary to modify the measurements, but in most cases it will be found that the arrangement shown in Fig. 1 will be suitable.

Only two pieces of wood are required, a block measuring 2½ins. by 1½ins. by 1½ins. and a long piece 8½ins. by 1in. by ¾in. Both pieces are prepared as indicated in Fig. 1.

Cut a groove in the block, ⅜in. deep and ½in. wide. This can be done with chisel and tenon saw. The remaining piece must be rounded and tapered to the approximate dimensions indicated. Drill to take two 1½in. round-head screws and add glue before assembling. A large screw-eye at the top completes the support. Clean up with glasspaper and give two or three coats of enamel paint.

The screw eye is opened out to take the flex and is then nipped together again. Alternatively the plug may be disconnected and the flex passed through the screw-eye. Be careful, however, to see that the plug is re-connected in the proper way.

When the iron is not in use the flex should be wound round the holder, which of course is stored with the iron. (M.h.)

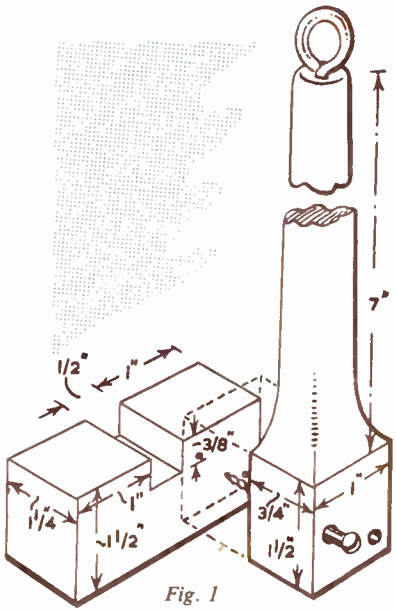


Fig. 1

Pleasant reading for a winter's day

PICTURES IN THE GARDEN

By E. G. Gaze

WHEN one snaps a garden of massed flowers or shrubs in bloom one soon finds that, in a monochrome print, the beauty that attracted seems lost in the compact mass of detail on the comparatively small area of the print. As a result many amateur snappers forget their garden photographically, unless as a general, pleasant background to a family group; but in doing so they miss many worthwhile and attractive shots for the album.

For these garden shots remember the photographer's maxim, 'that a part may well be better than the whole' — a few well chosen shots of individual blooms or sprays of flowering shrubs or trees may be much more attractive, photographically, than the whole flower bed, or the whole shrub or tree. A fine spray of a flowering tree, set against a dark blue sky, will show its beauty more easily than a print of the whole tree with blossom detail merged and lost in the general form of the tree and foliage and branches.

Most cameras with variable focusing will focus down to some 3–3½ feet to give a sharply focused image of a subject at that camera-subject distance. Cameras with double extension, or the use of extension tubes (possible with an interchangeable lens) and supplementary lenses (which may also be used in conjunction with extension tubes) are all outside the scope of this present article — this deals with blossom shots in the garden with the normal camera and without the aid of additional accessories.

Focusing

As mentioned above, 3–3½ feet will normally be the nearest camera-subject distance allowing the subject to be retained in sharp focus. An average *area* of field covered by the lens of a 2¼in. square negative format sized camera, at this distance is about 20 inches square — so that a small blossom will still be relatively small on the negative area, even at this quite close distance from the camera; but this is of little consequence when snapping fairly large blooms or a massed cluster of smaller ones — it is fairly easy to fill the negative space with the main subject unless it is a small individual blossom.

Focusing at this close range, however, means that the *depth* of field (the area of sharp focus) is much smaller than at greater camera-subject distances — as a glance at any depth of focus table will confirm. For instance, the 2¼in. square or popular 12 on 120-size film camera with a normal lens of some 3–3½ins. focal length, gives a depth of field or sharp focus of little less than a foot when the lens is set to a focusing distance of 3½ feet. Beyond this narrow band of sharp focus sharpness falls off rapidly, and even with the lens stopped down to *f* 11, or *f* 16, at this camera-subject distance the depth of field will only be in the order of some 1½–2 feet.

It will be seen, therefore, that at these close snapping positions the camera-subject distance must be carefully measured — by rangefinder if one is used, by careful focusing on the ground glass screen if a reflex type camera is used, or by a measuring rule if there are no other means available. It is no use setting the camera lens to the 3½ feet or nearest focusing setting — and guessing the subject distance. You must be accurate to obtain sharp focus on your subject. If you wish to ascertain the actual depth of field for any lens setting, and aperture stop, tables are often supplied with the camera instructions, or built into the camera — or can be found in a photographic manual, or in one of the many publications dealing with the best use of individual makes of cameras.

When snapping clusters of larger blooms, or sprays of blossom on flowering trees or shrubs, one does not need to get so close in to fill the negative area — and this greater camera-subject distance gives a greater depth of field, particularly if the lens is stopped down. But, even here, to get the sharp beauty of the blossoms focusing needs to be accurate (Fig. 1).

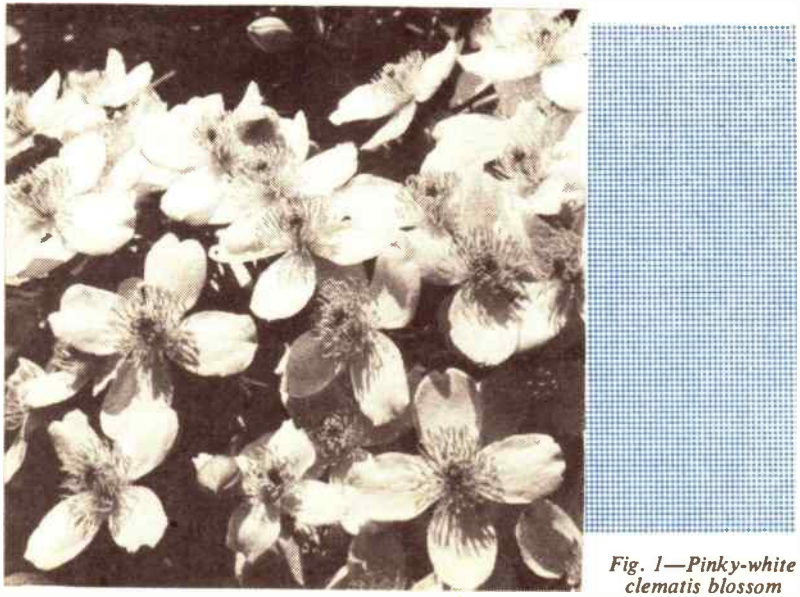


Fig. 1—Pinky-white clematis blossom

Backgrounds

This becomes very important with blossom snaps at close distances. Owing to the shallow depth of field the background will most probably be right out of focus — but watch the lighting effect upon it. Leaves reflect a lot of light, especially if they are glossy, and a dazzling, eye-catching background results if they are highlighted behind the main subject. In a garden bed it may be difficult to select a viewpoint, with good lighting on the subject, that does not also give the wrong lighting conditions on the background — here sometimes the shade of an overhanging tree or shrub can be used to throw the background into shade and so subdue it.

A useful tip in a flower bed is to prop up, or get someone to hold in position, a neutral tinted piece of cardboard behind the subject — far enough away to be out of focus so that its texture

doesn't clash with the blossom subject — so that the selected bloom 'stands out' without any confusing garden background at all.

In the same way a friend can be invaluable in holding a hanging spray of shrub or flowering tree blossom out of its natural position to provide a good background — against the blue sky, or against a patch of shade.

With most light coloured blooms a neutral to dark background helps them to 'stand out' in the print, although, if a background board is used as suggested above, it may be better to avoid a black surfaced one — the contrast between it (though out of focus and void of texture detail) and the delicate blossom may well be too compelling.

In the case of climbing plants on walls and houses (clematis and wistaria, etc), much can be done to subdue an agressive brick pattern by watching the effect of different lighting conditions — it is usually possible to find a time of day when the main subject is well lighted but the background of bricks and windows is in deeper shade, and so not tending to withold interest from the blossoms in the final print (see Fig. 2).

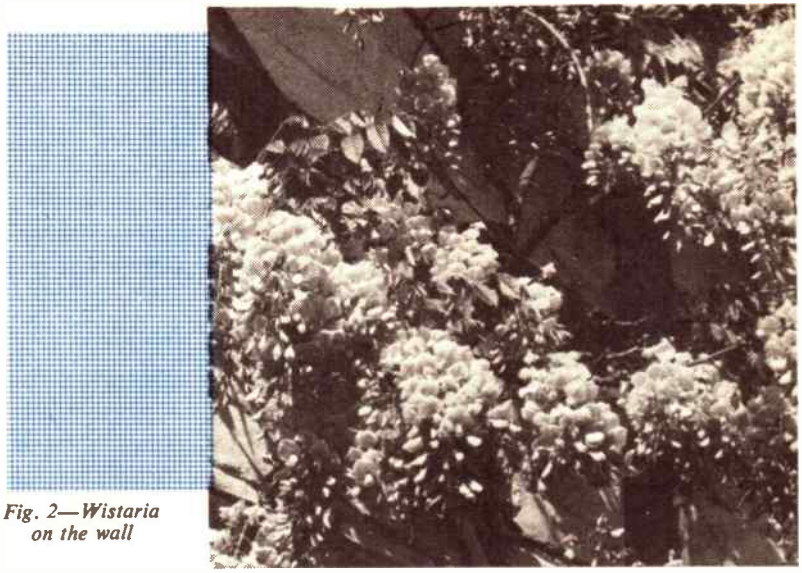


Fig. 2—Wistaria on the wall

Filters

A good rule to remember about filters is that they lighten the tone of objects of their own colour while darkening tones of their complementary colours: these are, roundly: red/green — yellow/violet — orange/blue — without going into intermediate shades.

Thus if a red blossom is snapped through a red filter the red bloom is rendered lighter in tone, and the green leaves darker in tone, than if no filter were used. When blue sky is used as a background to a white, yellow, cream, or pinky blossom, the sky can be rendered darker — and so let the blossom stand out against it — by using a yellow filter, or even an orange for a deeper effect — or a red filter for a very dark, almost black sky, and to lighten a pink or red blossom.

It is interesting to try the effect of filters on blooms, to vary the contrast effect obtainable by their use.

On the whole, light coloured blooms — the yellows and whites, creams and white-blues, etc — do not need a filter to make them stand out well against green leaves. No filters were used in either of the illustrations: in Fig. 1 the clematis blossoms were pinky-white, leaves darkish green, in Fig. 2 the wistaria was white-violet-blue, the few leaves light green.

Exposures

Unless it is a very still day, blossoms, especially the daintier ones, will shiver and move in the slightest breeze. At close focusing distances with the interest concentrated on one main subject you don't want camera-shake which can so easily destroy the rendering of fine stamens, etc — and which will be more noticeable still in an enlargement of the negative. So make use of the faster shutter speeds which your camera has, according to the lighting conditions for a satisfactory exposure. As you have such a shallow depth of field or depth of sharp focus at these close camera-subject distances, even with the lens aperture stopped down, it pays to use the lens at a wider aperture than for normal snaps—and this, in normal outdoor sun lighting, will also enable you to make use safely of the faster shutter speeds without risking under-exposure of the main subject.

If the background is in shade, or is a neutral tinted card, the use of a fast shutter speed may well under-expose it in relation to the well lit blossom — but this means the background will print out darker in the final print and so help to make the blossom 'stand out'.

Development

If you do your own negative development aim for a fairly thin negative with plenty of detail in both blossom highlights and shadows — calling for no over-exposure of the blossom, and no over-development of the negative.

In printing, a contrast grade of paper may add sparkle if the shadows on the blooms, if any, are not too deep. It is a matter of individual taste but many prefer a white-base printing paper to one of ivory or cream tinted base. And a glossy or lustre surface picks out the sparkle of detail rather better than a roughened surface or textured one. But that is a matter of personal preference — the thing is, to go out into the garden and snap!

Aids to Scientists

AT the German Federal Institute for Hydro-Constructional Research at Karlsruhe, scientists are using photography to show the way rivers flow.

First, a large model of a section of the stretch of water under survey is constructed. Then, with the room in darkness, model boats are floated 'downstream' each carrying a lighted candle. The shutter of the camera placed above the model is next opened, and each lighted candle traces out a line on the film under exposure. The film, when developed, shows how the current carried the boats. The speed of the water at any given point can also be worked out. (E.D.)

Photography Manual

A NEW edition of the old-established *Ilford Manual of Photography* — recognized as the standard work of reference for all photographers — has now been published.

The book has over 700 pages and is profusely illustrated: it sells at 30/-. A 29-page index makes the wealth of latest information readily available and enables the fullest use to be made of it by professional and amateur alike.

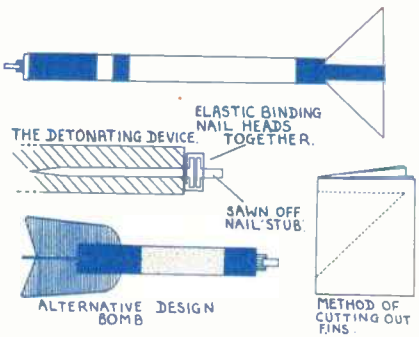
The Manual covers the syllabus of both preliminary and intermediate examinations of the Institute of British Photographers, and also the intermediate examination of the City and Guilds of London Institute. (E.D.)

A TOY ROCKET BOMB

TOYS which make a noise are much in demand by children, in spite of being generally deplored by their parents. However, the rocket bomb described here should not cause a lot of irritation to father and mother, and will certainly be appreciated by the younger members of the family. The design is an up-to-date version of a penny toy which was popular before the war.

The body of the rocket bomb is a 7in. length of ½in. diameter dowel rod. In one end of the rod, two slots 1in. deep are cut at right angles to each other, using a tenon saw. The fins of the rocket are cut from two pieces of light, coloured cardboard, which have been folded over double and will later be fitted into the saw-cut slots.

Two 1½in. nails with flat heads at least ¼in. in diameter will be needed to make the detonating device, together with a piece of ¼in. elastic about ¾in. long. The end of one of the nails is cut off with a hacksaw, leaving a ¼in. stub attached to the head. A hole 1½ins. deep is bored into the 'front' end of the rocket



body so that the other nail can be driven into the dowel without splitting the wood.

To make the detonator, pierce three holes in the short length of elastic and use the elastic to bind the nail heads tightly together. This will be easy if a little thought and care are taken. Then, striking the nail stub with a hammer, drive the intact nail into the hole in the 'nose' of the rocket body.

It should now be possible to slightly separate the nail heads by pulling on the nail stub in order to insert a percussion cap firmly in place. If the uncompleted rocket body is now dropped, detonator downwards on to a stone, the cap will explode with a loud report. Boxes of percussion caps can be bought at most toyshops.

All that remains to be done is to complete the rocket bomb by inserting the fins and decorating the body with bands of gummed coloured paper or paint. As a final touch, combinations of numbers or letters cut from advertisement letters may be stuck on to the body, using strips of Sellotape.

When the rocket bomb is thrown high into the air above a hard road or concrete surface, it will fall smoothly, heavy nose-end first, and explode on contact with the ground. If it is desired to make the rocket spin as it descends, a slight right-hand twist can be given to the tips of the fins. (A.E.W.)

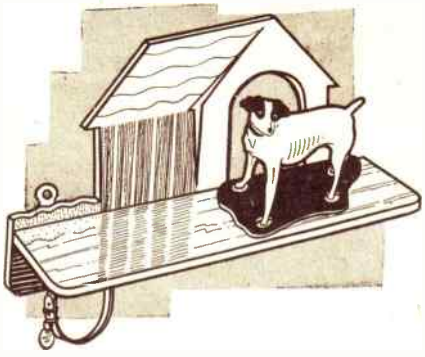
Sugar Quantities for Wines

IN a letter received by the Editor from Mr. C. J. J. Berry, who incidentally publishes 'The Amateur Winemaker', a magazine catering for the country wine enthusiast, he states that the ideal volume in which to make wine is, perhaps, three to five gallons; one gallon is the absolute minimum. Mr. Berry explains that not only does the yeast not work well in a small volume — comparing it to putting a plant in too small a pot — but in working to small quantities there is little left when wastage in siphoning and bottling has been allowed for.

Another tip from Mr. Berry, which I am pleased to pass on to my readers, is that 4 lbs. of sugar is nowadays thought too much for any wine; 3½ lbs. is the maximum for a sweet wine. If more than this is put in it results in a 'horribly syrupy wine' and the quantity is probably a hang-over from the old days when a lb. was added 'to be on the safe side'.

A useful rule of thumb for quantities is 2½ lbs. for a dry wine, 3 lbs. for a medium-sweet wine, and 3½ lbs. for a sweet wine. If the fruit is extra acid, like rhubarb or gooseberry, it is better to remove the acid with precipitated chalk rather than try to disguise it with too much sugar.

MAKE A 'DOGGIE' RACK



IF you are a dog owner and a tidy person, you will welcome this design of a useful rack for your pet's accoutrements. There is a shelf for brush and combs, and condition pills, etc., whilst under the shelf there are hooks for hanging leads, spare collar, chains, etc.

It is not difficult to make if you possess a fretsaw. You will see from the patterns on page 232 that it consists of three parts (A), (B) and (C). The main piece (A) is the kennel and piece (B) is the shelf. Note that the tenons on piece (B) fit into the mortises in piece (A).

The remaining piece (C) is cut from ⅛in. or ¼in. wood and is glued to the shelf (B). The holes in piece (C) are to accommodate the feet of the attractive dog ornament. If you wish to fix the dog permanently in position a little plastic wood should be inserted in the holes to hold the feet in place.

All parts are shown full size and should be transferred to the given thicknesses of wood for cutting out.

Clean up all parts with glasspaper and paint in suitable colours. The kennel should be light brown with the roof a darker brown. The background could be green and the shelf black.

When the paint is dry, screw three cup hooks under the shelf and two wall-hangers to piece (A) as shown by the dotted lines. (M.h.)

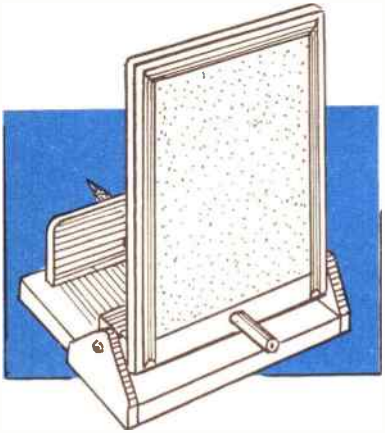
The dog illustrated is a perfect replica of a smooth terrier. It is cast in metal and hand-painted to give a faithful reproduction. Price 2/9 (postage and packing 7½d. extra).

Wallhangers No. 121 are 1½d. each (postage 3d. on one or four). Cup hooks are 3d. each (postage 3d. on one or four).

All the above fittings are obtainable from branches, or by post from Hobbies Ltd., Dereham, Norfolk.

Keep it handy

RADIO AND TV REMINDER



By W. J. Ellson

THIS is a handy little gadget to stand upon your radio and television sets when announcements are given out and addresses may be interesting enough for you to note down. The times of items on the programme may also be written on it as a reminder when to switch on. It is quite easy to make and the main parts can be cut from a single 4in. by 9in. panel of ¼in. thick fretwood (Hobbies Panel G4). The few parts the panel cannot provide will, most likely, be found amongst scrap bits of wood in the workshop.

Laying out the parts

Fig. 1 shows a plan view of the panel and how to mark it out with a minimum of waste. The lower part is for the base and only needs a mortise slot sawn out into which a back rest for the writing plate can fit in. The slot measures ¼in. by 1in. and is positioned ¼in. from the rear edge. After cutting out the slot, clean up the base part with glasspaper.

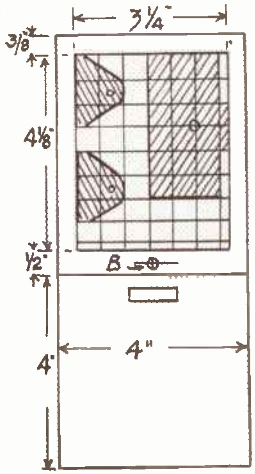
The upper part of the panel contains the writing plate (a piece of ground glass) and an opening for this is sawn out to the dimensions given. The piece sawn out is set aside as the back rest, and two side supports will be cut from it. These parts are shown shaded. At the bottom of the frame for the ground glass glue on the back a ½in. sq. strip of wood. Deal will serve here. Turn over and at the spot marked (B), exactly in the centre, bore a 5/16in. hole right through frame and wood strip behind. This should permit easy passage for an ordinary drawing pencil. It would be best to mark the position for this hole on both back and front, and to bore halfway through, then reverse the wood and finish the hole from the opposite side. This will ensure the hole running straight through the centre which is really essential if it is to be in correct alignment with a similar hole to be bored in the back rest on the base.

Rebate for glass

Now to make a rebate for the glass to fit in, glue strips of ¼in. half-round moulding down each side of the opening and along the top, mitring the corners. These strips should overlap the opening by 1/16in. full, as in detail (A), Fig. 2. If no moulding is at hand, strips of thin wood. ¼in. wide can be used.

A piece of ground glass, measuring 4⅛in. by 3¼in. should be obtained from a glaziers or ironmongers. Fit this in the opening. Cover with white paper and fill up the remaining space with one or more pieces of cardboard. Cover the whole with a piece of thin wood (plywood if you like) as shown in the rear view of the frame, Fig. 2. At each end of the ½in. wood strip, at the bottom, bore a small hole exactly in the centre.

Fig. 1



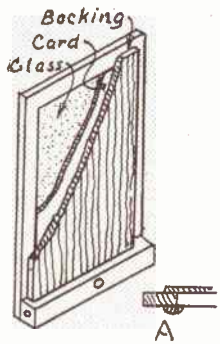


Fig. 2

Mark in ½in. squares

From the piece of wood set aside after cutting out the frame opening, saw out the back rest and supports. The respective dimensions of these can be obtained from Fig. 1 the wood being marked out in ½in. squares. Where shown on the back rest bore a 5/16in. hole for the pencil. This part can then be glued to the base. In the supports, at the spots indicated, bore holes to admit screws of the round-headed variety, ¾in. long. These supports are nailed and glued to the side edges of the base, as illustrated.

Fit the frame, etc, between the supports and drive the screws in to pivot the frame and allow of it being swung back to rest upon the rear support. In this position it will, naturally, be more convenient for writing upon. Swung back again to a vertical position, it is locked upright by pushing the pencil through the holes in frame and rear support. The pencil is thus always handy and the vertical position ensures the radio reminder catching the listener's or viewer's eye.

The completed article can be enamelled or polished as preferred. Pencilled notes on the plate can, of course, be easily removed by rubbing with a damp cloth, and it may help the constructor to add that ground glass can be made at home quite easily with two pieces of glass. Sprinkle one piece with flour emery and water, place the second piece upon it and rub together with a circular motion.

Full-size patterns for making a model crane will be given in next week's issue. Make sure of your copy.

THE DOG

DOG STANDS IN HOLES CUT IN PIECE C.

A

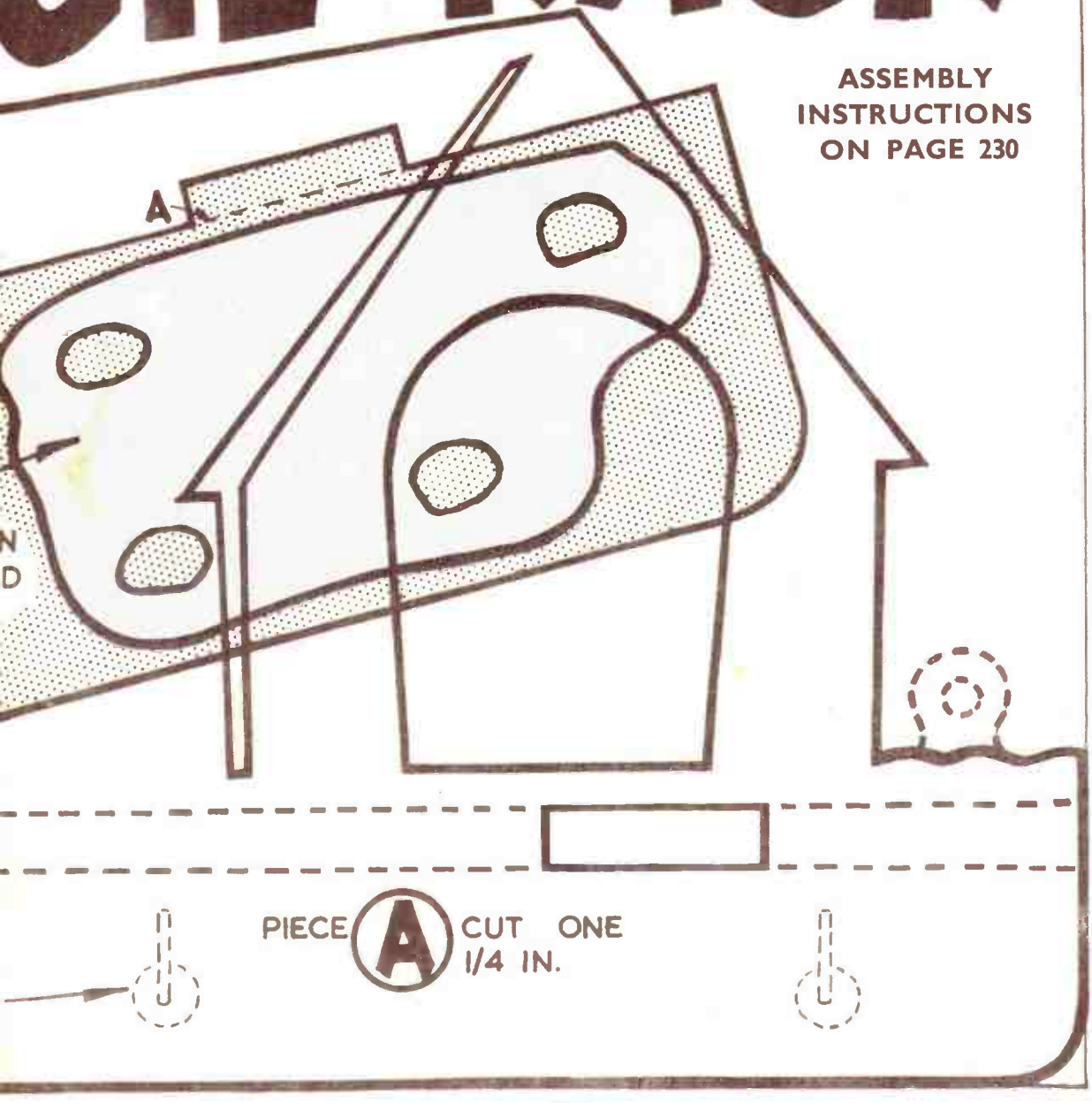
PIECE B CUT ONE 3/8 IN TO OUTLINE

C SHOW SHAD BLUE

CUP HOOKS FOR HANGING LEADS COLLARS ETC

GIE" RACK

ASSEMBLY
INSTRUCTIONS
ON PAGE 230



A Brush for Every Job

NOW that so many of us do our own painting it is quite a good idea to study the question of brushes to use for the job. These are quite expensive items and we should take every care of them, adding to them each season so that we have the correct brush for the specific job. The modern wallpaper and paint merchant has a full range of brushes but few of us possess those special ones which can make such a difference, and inspection of the brush stock is of the utmost importance.

Wide brushes

Our wide brush is often our most expensive and yet we often take little care of it. There is a special flat jamb dusting brush up to 4½ins. wide. If we realise the dirt, grit, and even grease, we get off these parts of the job, such a brush will save all our best ones. There are several types, all equally as useful.

Where large areas are to be covered we can use the Two-Knot distemper brush which has a length of 5½ins. and can be used on outbuildings.

We often make the mistake of using our best brushes for washing down a surface. There are specially made copper bound washdown brushes up to 5½ins. wide. These are special duty brushes which get some tough wear and need some extra care.

Distemper and all wide brushes should never be put away damp, but should be thoroughly cleansed and hung up in an airy place, otherwise mildew or fungus will develop in the centre of the brush, rotting the bristles and causing them to pull out or break off. We are inclined to complain of inferior workmanship but as a usual rule the fault is ours.

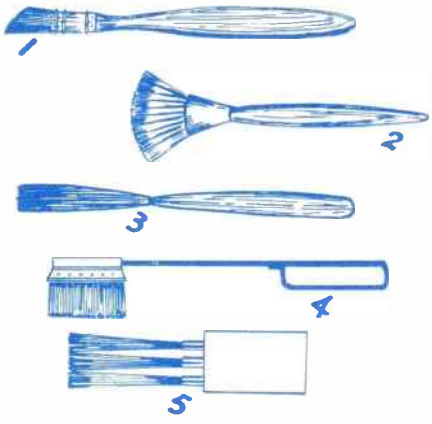
New brushes may contain a few bristles which are short of the setting composition, causing them to shed when the brush is first put into use. This shedding does not indicate a defective brush, as after a few strokes, it should adjust itself.

Flat distemper brushes can be had up to 7ins. and this is worth knowing where you have a wide area to cover. Nylon distemper brushes are now quite popular and are copper bound, rubber set and have polished handles. Flat wall brushes are also available up to 7ins. and carefully cleaned after use, retain their smooth shape and give a good job.

Tackling outside

A very tricky job is the application of the shaded and weather-proofing material on the outside of the property. We really must get the liquid, whatever it is, down and into the roughcast or the smooth plaster surface. Wherever we fail, however small the patch, water will seep in and a major peel-off will follow. The ideal brush to use is a good flat wall brush, copper bound, rubber set and with the length of about 4ins. to 4½ins. Roughcast is hard on brushes and one can quite easily wear one down on a full-sized job.

We can make that tar and creosote job



so much easier if we buy the most suitable brush. What is wanted for the fencing job is the flat metal-bound creosote brush in the width of 3ins. This is a good fibre mixture and well designed for outdoor use. In the tar job you have the use of the round brush with a diameter from 1½ins. up to 2½ins. and with the short handle for smaller jobs. Some shops stock the longer handle also. You can also get this same brush with a handle at an angle.

There are also special brushes designed to go under that awkward sweep of the gutter and behind the upright iron pipes which are so awkward against the wall.

Special jobs — special brushes

A far better job is done with the round aluminium ferruled sash brush. It is rubber set and can be obtained in sizes from $\frac{3}{16}$in. to 1½ins. Even getting behind the radiator can be simple with the special brush possessing a light wire handle.

We tend to use the normal brushes for varnish but it is far wiser to use one of the very special varnish brushes because these are finer, will not bring out the particles of paint if the brush has also been used for paint, and they are made with black pure china bristle.

It is important to remember that no rubber brushes should be soaked in water before use.

When using enamel we often need a brush with a fuller load on it so that the enamel spreads more. For this we can use the oval metal round brush which is in pure china bristle.

Until I saw it in the paint store I did not realise the value of the special sash cutting brush. Here you have a fine

By V. Sutton

chisel edge, a light and well shaped handle and a pure black china bristle in rubber setting. If you want to get confidence in getting a neat finish to those windows, then try this brush.

There are special stencil brushes, lining tools and fitches, lacquer brushes and soft blob-shaped domed mop brushes.

If you think of scumbling work, then make a point of seeing the special brushes and equipment because one is sure of success when handling such specialist pieces of work. There are floggers, grainers' brushes, badger softeners and straight graining brushes. Stipplers are also made with long handles or side handles so that one can use them both ways. Some of the fan-tail and pencil overgrainers are interesting and are designed for that job only.

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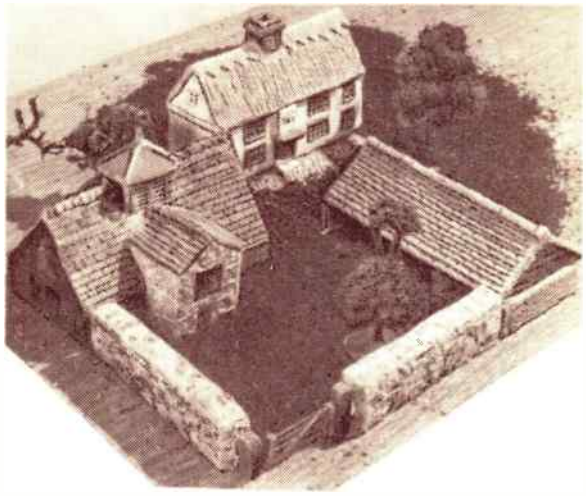

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IN starting a collection of playing cards, concentrate on the category or categories in which you intend to specialize. Look at friends' collections, ask questions about types, subjects and countries and study your subjects for thematic ideas. Stay within your medium. Concentrate on quality not quantity.

Playing Cards —by R.L.C.

Almost everyone loves dogs — it is a wide field from the mischievous puppies, adorable spaniels, rascally scotties, a wee pup in a cup to the mastifs.

Dog cards outnumber cat lovers. But a good collection of cats is around 900.

The medium of exchange, trading duplicates with pen friends, helps to build a collection.

Any collection merits good mounting — mounting in which subjects are carried out with eye appeal to hold interest, and the collector proud to display it for public approval. The following subjects are some of the most popular with collectors of single backs for making albums:

Art — paintings, museums, etc.
Animals — cats, dogs, horses.
Birds — exotic, fowl, ducks, geese swan, owl, etc.
Glamour Girls — ballet, pin-ups, dancers.
Nations — Indian, Mexican, Dutch.
Transportation — railways, ships, planes, wagons, carts, sleighs, etc.
War Issues — Army, Navy, Air Force, etc.
Royalty —all forms.
Souvenir — states, fairs, olympics, countries.

You can start with a few cards or many, but whatever the amount, keep it a hobby. I began my collection with an album of Christmas playing cards — a pleasant, easy task which brought back nostalgic memories.

Modern cards are varied in design — the traditional tree, candles, wreaths, deer, snowflakes, toys and even Santa's work shop.

The U.S. Playing Card Co., have a series of three cards depicting a young brunette woman in the styles of 1903.

A Japanese card depicts the Three Wise Men travelling by camel toward the Star of Bethlehem.

Wars have contributed to Christmas decks, designed and distributed to men in the services. 'Lest We Forget', a card of World War I, printed by the Worshipful Co., stands out with the date 1915, 'That We Not Forget',— a sombre drab card in simplicity with the printing above the W.C. Coat of Arms, reading: 'For the use of the Defenders of the Empire'. Beneath the Coat of Arms is the printing 'With the Best Wishes of the Worshipful Company of Masters of Playing Cards of the City of London. Xmas 1915'.

I have seen a card with the wording — 'Merry Christmas from collectors of Playing Cards'.

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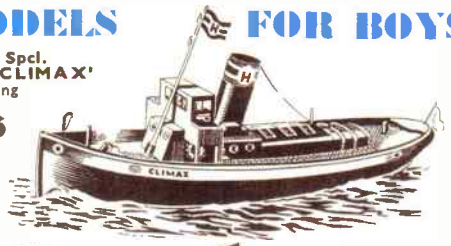

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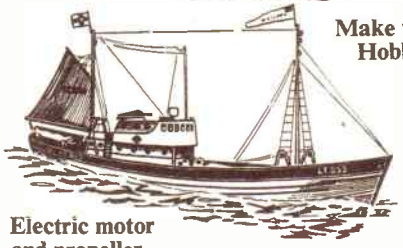

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MAKING A ROD—Part 2

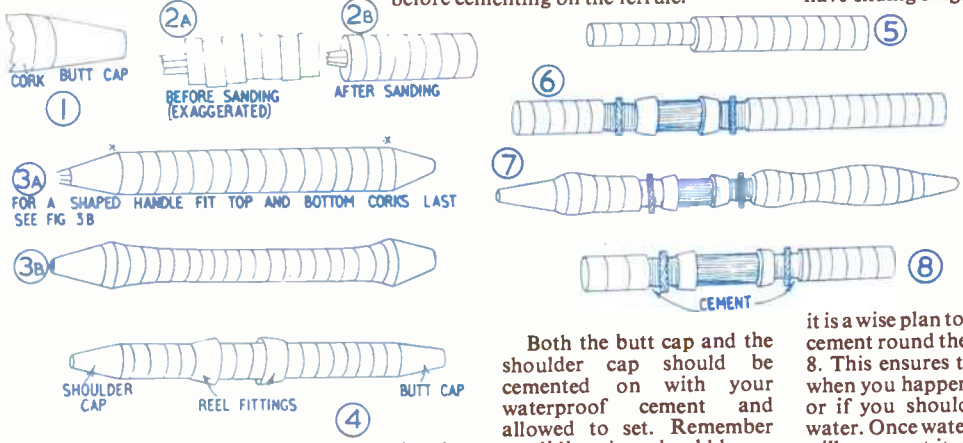
By 'Kingfisher'

IN the previous article we finished at the point where all ferrules and the corks for the handle had been fitted. By this time the cement will be thoroughly dried out and so we can proceed with the most difficult part of the job but do not let this deter you in any way; it is only difficult by comparison with the rest of the work.

Your file should be flat and have a medium cut. You will start at the bottom first and put on a taper of an angle suitable to the taper of the butt ferrule or cap. The length of the taper should be a little longer than the ferrule. See Fig. 1.

If you should be using the cheaper reel fittings then you should shape the handle as shown at Fig. 3, but if you intend to fit the screw reel fitting then you will have to follow a different procedure, of which more anon.

Having shaped your handle and reduced the cork to a diameter suitable to take your sliding rings for the reel, all that remains for you to do is to shape the top of the handle to take a shoulder cap and, incidentally, before putting on the ferrule on this length of your rod make sure that the shoulder cap will go over it. If not slip this on the section before cementing on the ferrule.



Now take some fairly coarse glasspaper and, using a glasspaper block, go along the handle lengthwise to level all the corks down. Do this carefully and keep the handle round. This is not too difficult providing you do not use a lot of pressure. Bear in mind that you cannot replace any cork you remove, so care is needed. Fig. 2a gives you an idea of how your cork looks before levelling and Fig. 2b shows you how it should look after levelling, with the joints between the corks hardly noticeable at all.

The levelling can of course be done in a lathe if you have one or if you have a friend who owns one. However, I shape all mine by hand and get perfect results, so much so that I have often been asked to do a little turning job by friends who think I have a lathe.

Both the butt cap and the shoulder cap should be cemented on with your waterproof cement and allowed to set. Remember also that your sliding rings should be on the handle before cementing the two caps on to the cork. At Fig. 4 you will see how your handle should look and at this stage you have completed the hardest part of your job.

We will now go back to fitting a screw-reel item and this means building in this piece of equipment as you put on the corks. Its position is entirely dependant on your own choice or fancy but let us assume that it is near the top of the handle, say about six corks away from the shoulder cap. You must allow for the length of the fitting too.

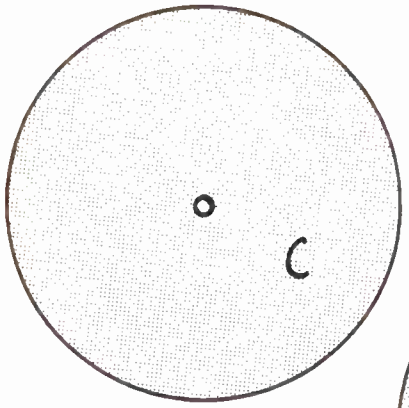
Put on your corks, starting at the bottom of the rod as explained in the first article until you have the number you require. Next you will file down six corks to the size of the inside diameter of the reel fitting. File these *after* you have got them on the rod, if you do it before they will split when forcing them along the cane. You will see by the diagram at Fig. 5 how the corks look before you cement on the reel fitting. Keep the corks round or your fitting will not be central on the handle. Now coat these few corks with a thin smearing of cement and put your reel fitting on them; it should be a tight fit.

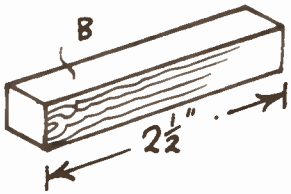
The next step is to put on the few remaining corks at the top. You will then have a handle looking like Fig. 6. With this type of fitting you can shape your corks to any pattern, within reason of course, which pleases you as you do not have sliding rings to take into consideration. Fig. 7 shows a shape which I always use. Very little filing will be required except where you wish to taper the corks and then follow this shape round with the glasspaper block, finishing off with a smooth paper. Your reel fitting is now sealed in between your corks and is a tight fit up against them but I think it is a wise plan to apply a little waterproof cement round the points indicated in Fig. 8. This ensures that no water will get in when you happen to be fishing in the rain or if you should drop your rod in the water. Once water gets in at this point you will never get it out.

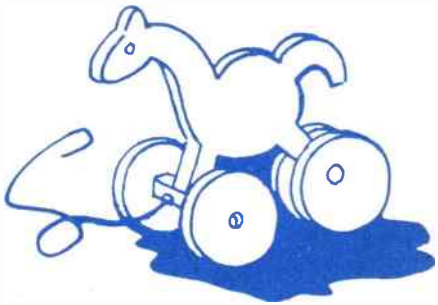
Your butt section is now finished except for the whipping and the rod rings. All you have to do now is to apply a coat of varnish to all the rod sections. This is done before applying any whippings or rings so that the timber is protected beneath the silk. When the water gets in here it takes a long time to dry out which doesn't do the cane any good. The varnish protects the timber at these spots.

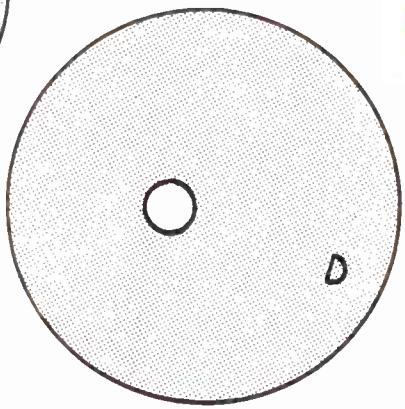
Do not apply the varnish with a brush. So little is required that you can either apply it with the tip of a finger, rubbing it well out to make a thin coat, or apply it with a clean piece of rag. When the varnish is dry you will be ready to start putting on the whippings and the rod rings and this task I shall explain in a further article.

THE 'GALLOPING MOKE'





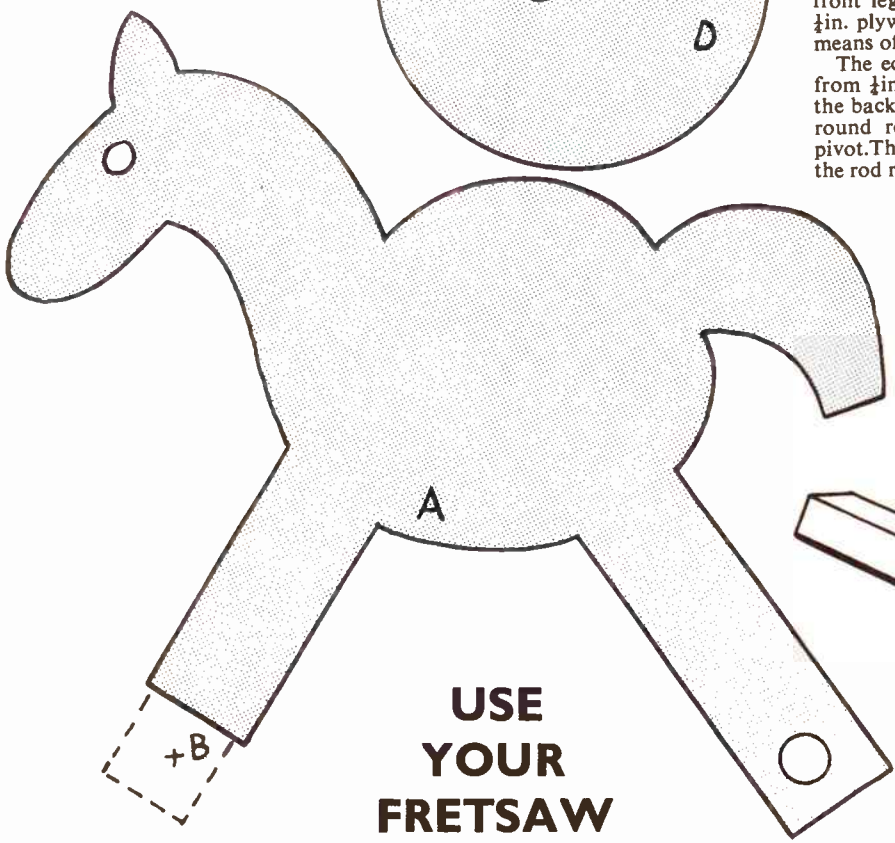


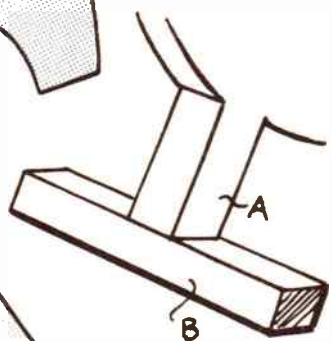


PIECE (A) is cut from ½in. wood and the back leg is drilled to take a piece of ¼in. dowel which should resolve freely.

The axle (B), which is cut from ½in. strip wood, is glued and screwed to the front leg. The wheels (C) are cut from ¼in. plywood and pivoted to the axle by means of ¾in. round head screws.

The eccentric wheels (D) are also cut from ¼in. plywood and are attached to the back leg by means of a piece of ¼in. round rod 1¼ins. long which forms a pivot. The wheels are glued to the rod and the rod revolves freely in the leg. (M.p)





USE YOUR FRETSAW

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Paddle Your Own Canoe

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

Hobbies

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 9d. extra)

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