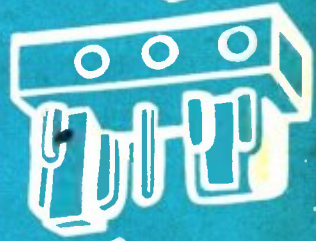
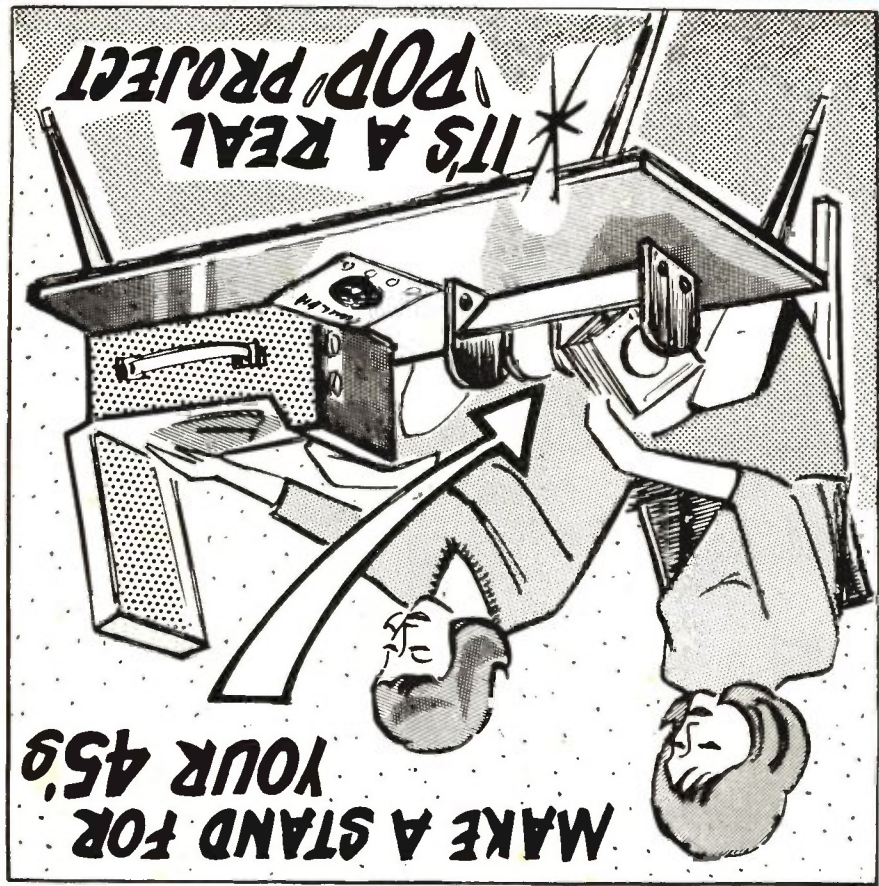




FOR CRAFTSMEN OF ALL AGES

6p



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'TAKING' WAYS AT THE POOL

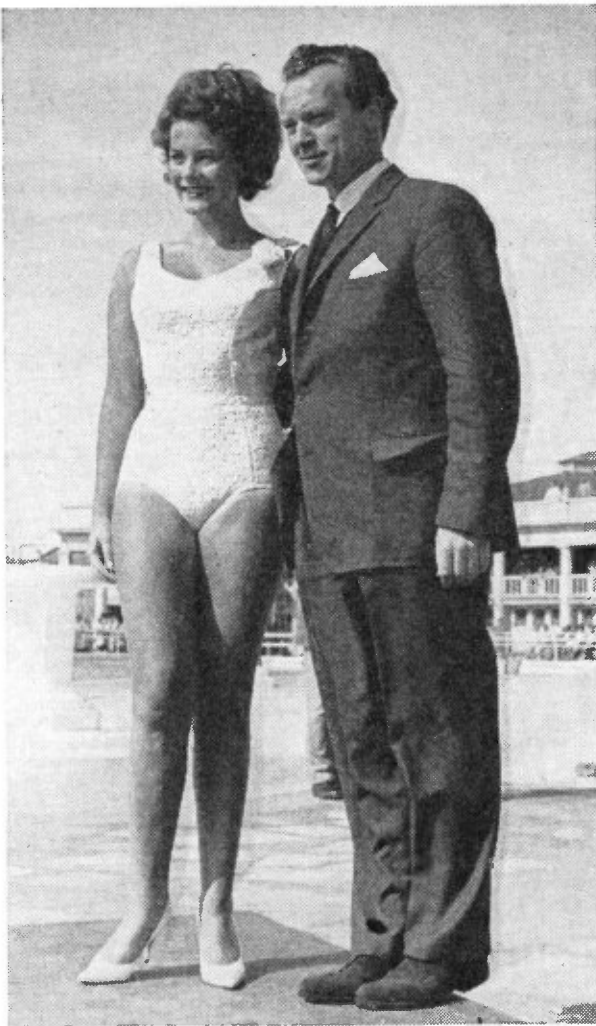
ON A HOT summer's day it is hard to imagine anything as refreshing as a visit to an open-air swimming pool. Whether one intends to partake in the bathing activities or merely relax in a deck chair by the side of the pool matters little—either way it can be equally as enjoyable.

There is however, just one other thing. Should you be an amateur photographer be sure to take your camera along for I can assure you there will be much taking place all around you which will make interesting pictures; glamour, humour, action, child studies are but some of the 'taking' themes.

Naturally, of course, it is the larger pools to be found at our major holiday resorts which have the most to offer, for here throughout the season bathing beauty contests, fashion shows, aqua shows, championship swimming events, etc., are staged. So be sure to make a point, when on holiday, of discovering just when it is the best time to go. The local 'lido' to be found



Some of the 'funny boys' at Morecambe



Winner of one of the heats of the 'Miss Blackpool' Bathing Beauty Competition, Miss Chyrl Driscoll of Manchester, poses with Bert Weedon the guitarist, who was judge

in our inland resorts and city parks also has its quota of subjects and should not be neglected.

The photographic technique to adopt for such subjects is not difficult. Most important, I think, is to remember to take the usual precautions so necessary when using your camera near water. It must be adequately protected, especially the lens itself, against a sudden splash; this is best accomplished by using a filter and lens hood at all times. One should also move well away from the 'splashing' area when changing films or lenses, and never leave the camera lying around on seats, etc., exposed to the hot sun, or again, water.

Most of the subjects available will of course contain a certain amount of action, be they glamorous young ladies parading around the edge of the pool to the appreciation of the judges and spectators alike, or a group of trick divers at an



aqua-show. So it is advisable to use a high shutter speed all the time— $1/250$ to $1/500$ of a second being preferable.

As the light is usually good during the summer months this can usually be easily accommodated when used in conjunction with a medium speed black and white film, and a moderate aperture. When using colour with its slower speed it is still best to use the high shutter speed and wider aperture now necessary, bearing in mind that the larger the aperture the more accurate must the focusing be.

It is usually easier to focus accurately upon some predetermined spot where your subject is due to pass, and wait for the right moment to expose rather than try to focus on a moving subject. For example, for diving pictures focus on the end of the diving board, then just at the right moment when your subject appears in the picture area, expose.

If you possess a telephoto lens do remember to take it along with you. It will be most useful in helping you to 'fill the frame' when it is impossible to get any nearer to a particularly interesting subject. Using this again calls for a high shutter speed, as one is always more perceptible to camera shake when

A child absorbed in Punch and Judy is always a good subject

using the longer lenses, and to use the maximum possible shutter speed is one way of guarding against this.

I mentioned previously the use of a filter to protect the lens. This of course, is not the prime use of a filter and the one which you use must be selected to do the particular job. When using colour the UV filter will be the best choice as this helps to eliminate the slight blue cast so often noticeable in shots taken near large, open expanses of water. If you are using black and white film the filters used are to give the desired tonal effect.

To have the most correct tonal rendering of the skies, used perhaps as a background for the diving pictures, a light or medium yellow filter will suffice; should you wish for a more dramatic rendering with dark to almost black skies and brilliant white sunlit concrete and paintwork, the orange to red range will do the trick.

Incidentally, all the filters used in black and white work call for an increase in exposure to be given. This varies according to the filter factor, which is given by the manufacturers, so do not forget to allow for this. (C.R.)

Whipping away a cloth

IF you have courage and are quick enough, you can whip out a smooth tablecloth from beneath a cup and saucer, upon a polished table, without appreciably disturbing the utensils. Of course a juggler could perform the trick safely with a whole tea service — but you are advised not to attempt anything quite so dramatic. However, here is a very smart trick of the same kind that will win you a reputation for deftness of hand.

Pile up six or seven draughtsmen by alternating the whites and blacks. Set the stack upon a book and rest teacups or tumblers beside opposite ends of the book, with their rims pressing against the edges of the cover. Now take a ruler and start slashing back and forth across the base of the little tower. Keep the ruler flush with the book and move fairly fast.

The pile will visibly shrink and disappear as you propel the draughtsmen

to left and right. If your blows are not too energetic, and your aiming is well practised, you will find that the whites and blacks will be separated into the respective containers.

The trick works because the draughtsmen's inertia keeps them poised in mid air for the instant that each successive counter is shot sideways by your ruler. If you act too slowly, gravity will overcome inertia, and friction between the driven counter and the draughtsmen above it will spoil your experiment and cause the pile to collapse chaotically. Actually, though, surprisingly little practice will make you an expert at this applause-winning stunt. (A.E.W.)

Mighty tubes and corrugations

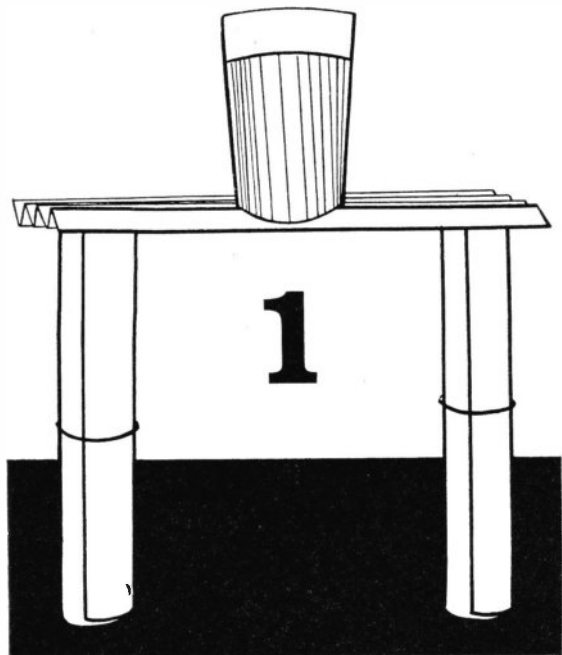
A STRAIGHT tube has immense strength if a force is applied directly along its length. Even a tubular paper drinking 'straw' can be used as a little spear to impale a small uncooked potato.

Hold the potato in one hand. Pinch and grip the straw by its middle in your other hand. Then drive the straw down forcefully upon the potato. If the straw

pleating the third paper concertina-wise, like a paper fan. When you rest the 'corrugated' paper across the erected pillars, you have a featherweight structure that you can blow over with the slightest breath. Yet the bridge supports the weight of a plastic tumbler of water! Do this experiment where an accidental spill can do no harm.

If you show the paper bridge as an

for supporting your whole weight on a 5 in. diameter cylinder, formed from a 9 in. by 30 in. strip of corrugated cardboard cut from a grocery box. Secure the cylinder's shape with string. Balance the cylinder's shape with string. Balance a wooden board across the upright cylinder. Sit on a stool and rest your feet at A and B. Hold on to two friends while you straighten your legs and stand up. If your weight is evenly spread on



travels straight and fast, it runs right through the vegetable!

How many house bricks can you pile on top of a cardboard toilet-roll stiffener stood upon end? We managed six, each of which weighed $7\frac{1}{2}$ lbs! But you must take care that the growing heap of bricks does not overbalance. Realise that a single brick can easily crush the tube lying on its side.

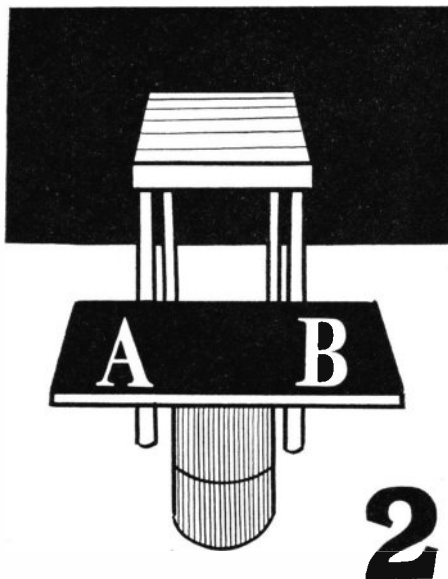
Some modern buildings and bridges are supported solely upon concrete tubes reinforced with steel rods. And the long bones in your arms and legs are tube-shaped, to combine lightness with economy of space and great strength.

Fig. 1 shows how to make a 'bridge' with three sheets of notepaper and two rubber bands. Form each supporting pillar by rolling a paper around a broom handle and then securing the shape with a rubber band. Make a crosspiece by

entertaining stunt, begin by resting a half-filled tumbler on the crosspiece. Then create an atmosphere of suspense by gradually filling up the container with more water poured in slowly from a small jug. The pleated paper remains rigid enough to support the heavy weight, because it resists forces that try to bend it up or down. If the tumbler stands on the middle of the bridge, half its weight presses down along each paper tube.

Light metals are corrugated and fashioned into cellular arrangements like honeycombs, to make aeroplane parts that stand up to the enormous strains and stresses of flying.

Roofing materials made of iron, asbestos and plastics are corrugated to make them extra tough — and corrugated cardboard makes very strong packing. Fig. 2 shows how to prepare



the board, the cylinder of tube-like corrugations supports you easily. Your friends will catch you, should you fall.

FREAK FLOWER

SPLIT halfway up the stem of a white carnation, using a razor blade. Then support the flower upright, with half its stem dipping in a pot of pure water, and the other half in a pot of water containing some red dye or food colouring.

As the coloured water rises up half the stem to nourish the flower, half the petals turn a blushing red. But the other half will stay white.

(A.E.W.)

INSTRUCTIONS TO FINISH THE 'CURLEW'

If standard 8 ft. plywood sheets are used, the joints are most neatly arranged if the sides are arranged with an 8 ft. length from the transom and the bottom with an 8 ft. length from the stem. Two methods of joining are possible. Pieces may be cut approximately to size and the meeting surfaces planed to a long bevel, Fig. 9. This is glued and cramped or put under weights on the bench. A simpler and quite satisfactory way is to make the joint in position, with a joint cover inside, Fig. 10. The long panel is fitted to the framework, then a joint cover made to fit between the lengthwise parts. It is glued inside and held with thin brass nails, driven from outside and clenched inside, then the short piece is added and joined in the same way.

Hold a sheet of plywood temporarily up to a side of the framework, so that it comes a little below the gunwale line. Mark around everything that touches the plywood. Cut out the panel and try it on the opposite side before making the second panel from it. If screws are to be used, drill for them. With most marine plywood the screw heads will pull in and countersinking is probably unnecessary. If the nails are to be used, start them. Fastenings may be at about 3 in. intervals around the edges and up to 6 in. along the risers. Follow the glue maker's instructions. If using a two-part glue, put glue on the framework and hardener on the plywood. Hold the panel in place, preferably with cramps, and drive fastenings at key points to hold the parts in contact, then drive the other fastenings. Fit the opposite panel in the same way.

If using joint covers, make and fit them. When making the forward panels allow a little for the mitred butt joint from the stem to about 15 in. along the chine, Fig. 8. When the glue has



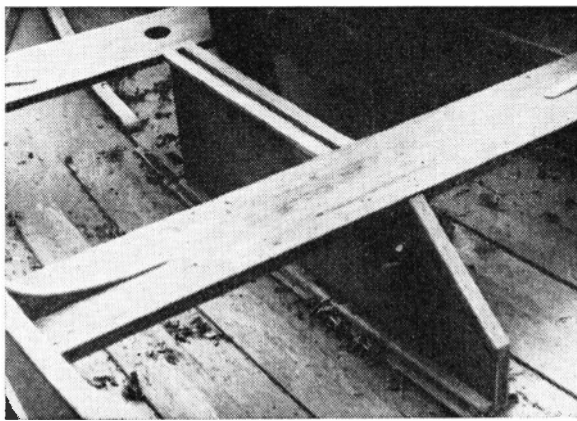
Easily carried by two people

set, level the plywood with the transom, stem and chine except for mitred part, which must be trimmed with a chisel. Use a straightedge to test the surfaces on which the bottom plywood will come. Fair off the hog as well as the chines and side plywood.

The forward bottom panels are twisted to the stem. If the plywood does not bend easily for marking, use a card or stiff paper template. Cut a panel approximately to shape and bend it in place. Mark where the mitre will come, and cut it back to suit. If the plywood is stubborn, it will bend easier if the forward end is fixed first. Add the short aft panels, with joint covers. Apply plenty of glue and use fastenings at closer intervals at the parts with greatest curvature. When the glue has set, level off the surplus plywood. Make and fit the chine



Fixing the first side panel. The lengthwise parts are fixed to the stem and rest in the former slots



Centreboard case details, also showing knees on ends of thwarts

FIG.13

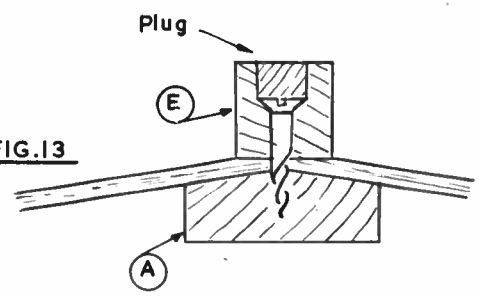


FIG.8

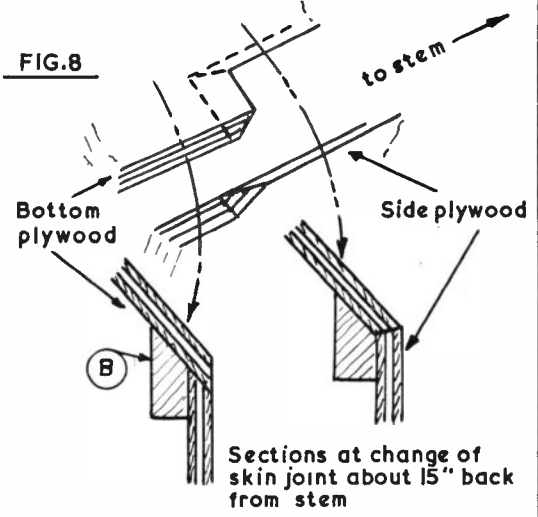


FIG.14

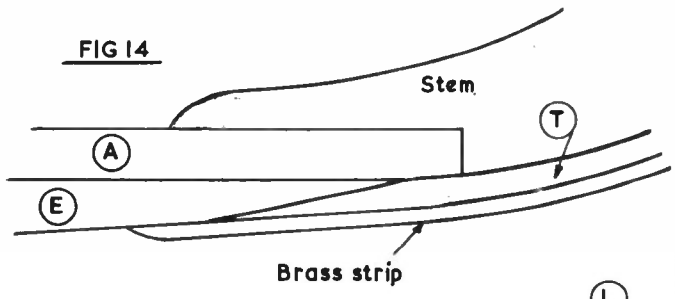


FIG.23

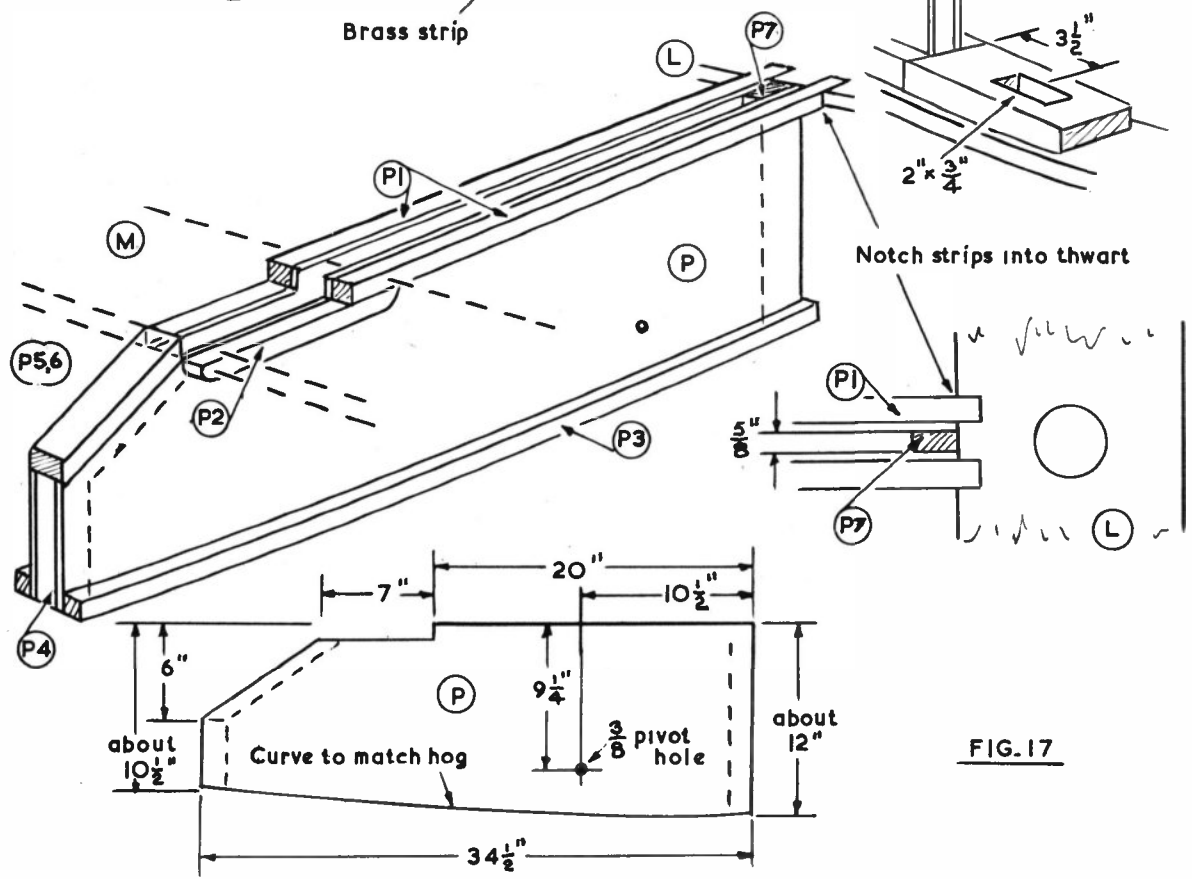
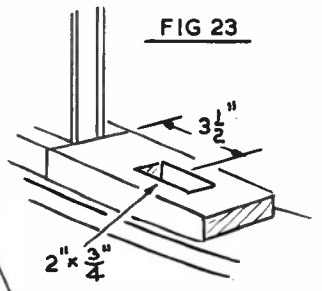


FIG.17

rubbers G, Fig. 11. Take them to within about 12 in. of the stem.

Mark the position of the slot from former 2, Fig. 12, and drill through its ends. Level the plywood to take the keel E. Fix the keel with glue and counterbored screws, Fig. 13. At the slot, put overlapping pieces along the sides, Fig. 12. Taper the forward end of the keel and scarf a stem band, T, to it, Fig. 14. If a piece of half round brass is to be taken around the stem and along the keel, leave a flat surface, otherwise round the stem band after fixing. On the aft end of the keel make a tapered skeg, F, fixed with glue and counterbored screws.

Disconnect the transom and stem from the workshop floor and lift the boat off. Check that it has not sprung by measuring the beam, and fix a temporary strut across the risers near the middle of the boat. Cut off the transom and stem extensions and plane the plywood level with the gunwales. Complete the cutting of the centreboard slot, $\frac{3}{4}$ in. wide.

The bottom is stiffened with rubbing strips outside J, K, and plywood stiffeners inside S, which take the place of bottom boards. The rubbing strips reach the transom, but the stiffeners inside may stop at the joint covers. Fix with glue and screws or nails from inside, Figs. 15 and 16. Make the three thwart L, M, N. If the boat is to be sailed, make a 2 in. hole at the centre of L. Fix L and N to the risers.

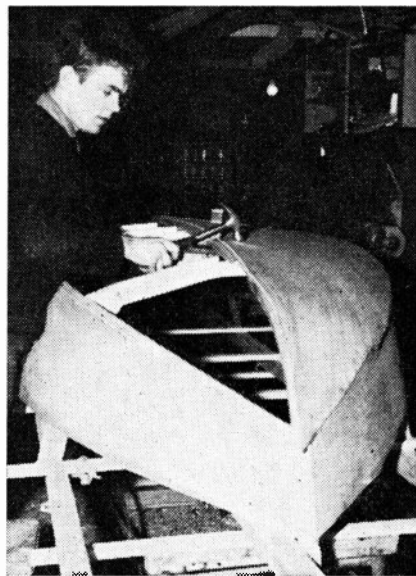
The centreboard case is framed-up plywood Fig. 17. Make one plywood side P, oversize and try it in place. Trim it to fit against both thwarts. When this is satisfactory, make up the whole case. Paint or varnish the inside before final assembly. Screw down the case over jointing compound on the hog. Fix the centre thwart. At the stern sheets, put a piece of plywood between the thwart ends N, and the gunwales, to take the strain if the boat is lifted by its thwarts. Stiffen the ends of the other thwarts with knees Q, which may be entirely solid wood Fig. 18, or solid wood edged with thin strip Fig. 19. Make similar knees at the corners of the transom Fig. 20, and stem Fig. 21. Fix with screws and glue. The gunwale rubbing strip H, is made up of two thicknesses.

Rowlocks will be needed 12 in. aft of the main thwart. Folding types may merely screw on, but for the ordinary type thicken the gunwale Fig. 22, R. Fix a mast step Fig. 23, under the hole in the forward thwart.

This completes the boat itself, which may be varnished or painted after thorough sanding. **Instructions for making the sailing gear will be given in a following issue.**

Fixing the first bottom panel to the hog.

Note notch on edge where change in method of joining comes on the chine



Full-Size Plan

Readers may build boats from this design for their own use without restriction, but anyone wishing to use the design for building in quantity or for sale, should first obtain the permission of the designer, who is the owner of the copyright. He may be addressed c/o The Editor, Hobbies, Dereham, Norfolk.

Although these drawings and instructions provide all the information necessary to build a boat, the work is made easier and accuracy ensured by using a full-scale drawing. Full-size drawings of the formers, transom, stem, rudder, centreboard, knees and other shaped parts are available, price 10s. including postage from Hobbies Ltd.

A complete set of plans and instructions is available price 17s. 6d. plus 10d. postage.

OTHER DINGHY PLANS AVAILABLE FROM HOBBIES

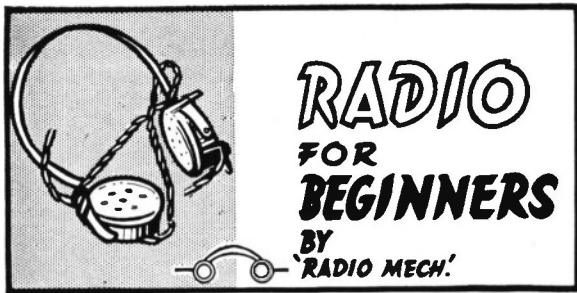
WENSUM. 11 ft. x 56 in. double-chine plywood sailing boat. The basic boat is an open dinghy with a gunter rig of about 66 sq. ft. Weight complete about 220 lb. Draught of hull only 6 in. and with centreboard down about 30 in. The sailing gear is easily removed to make a general-purpose dinghy for rowing or outboard use. Suitable for sailing by a crew of two or will carry four for general use. Price 17/6

GOBLIN. 9 ft. 10 in. x 54 in. plywood pram dinghy of special form, light enough to be easily lifted on to a car roof. Construction is easy and quick. Good foredeck and buoyancy built in under side benches. Weight complete 120 lb. Sail area 52 sq. ft. in a single lug sail. Good performance as a racer and sail numbers are issued. Price 16/-

GREMLIN. 7 ft. 7 in. x 46 in. plywood pram dinghy of special form. This is the longest hull that can be got out of standard 8 ft. sheets of plywood. The bottom is a single sheet, split at one end and sprung to give a V forward and a curve aft. Has been built as a rowing boat for £10 and with rudder, dagger board and sailing gear for £16. Can be carried single-handed. Price 15/-

PETE. 6 ft. x 44 in. flat-bottom pram dinghy. The cheapest and simplest practicable boat. Can be built from one plywood sheet and may cost less than £5. Details of simple sailing gear included. Suitable for angling. Will carry two adults or three children. Price 11/-

Send to Hobbies Ltd, Dereham for full list of plans for Dinghies, Canoes and Power Boats.



8- Push-pull Output

THE ordinary single valve output stage, so far described, is found in many receivers, record players, tape recorders, and audio amplifiers. But for best possible reproduction, high output, and low current consumption, another type of output stage is used. This has two similar valves, and is called push-pull output.

The way in which a push-pull output stage works should become clear from Fig. 23. Here, T1 is a transformer which couples the previous valve to the pair of valves in the push-pull stage. This transformer has a centre-tapped secondary, and grid bias is applied to the centre tap.

When a signal is amplified, one end of the secondary of T1 swings in the negative direction, while the other end swings positive. The valve whose grid becomes positive conducts, but the other valve is cut off. For the next half of the audio cycle, the situation is reversed, the first valve being cut off (grid negative) while the second valve conducts (grid positive).

Another way of expressing this is to say that one valve deals with half of the audio cycle, and the other valve handles the other half of the cycle. The output transformer T2 has a centre-tapped

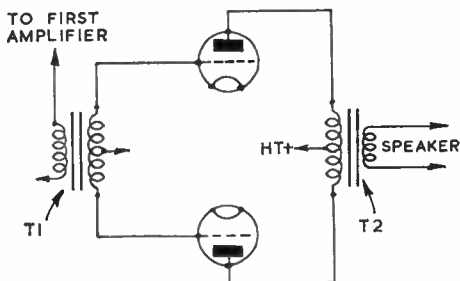


Fig. 23—Push-pull circuit

primary, so the outputs of the two valves are combined, to work the loudspeaker.

Benefits of push-pull

There are a number of advantages obtained when a push-pull output stage is used.

High Output. Two valves, in push-pull, can deliver a very much more powerful signal, than a single valve alone. The output can be several times greater than that of a single similar valve. So push-pull output is always used in large amplifiers, or powerful receivers, record players, or similar equipment.

Good Quality. When a single valve is used, it produces a type of distortion which is largely cancelled out in a push-pull stage. This is called 'harmonic distortion'. So the push-pull stage can give high quality reproduction of speech and music.

Lower Current Drain. If a single valve is used, it has to conduct over the whole audio cycle, as described earlier. This is called 'Class A' working. It means that a fairly large high tension current must flow all the time. But when two valves are used, much higher grid bias can be applied, cutting down the high tension current. The current can be fairly small, but rises to higher peaks when the stage is working at considerable volume. The overall result is a saving in current drain, compared with a 'Class A' stage of similar power. Push-pull is often called 'Class B'. This means that more than usual grid bias is provided.

Practical push-pull stages

Two triodes could be used, exactly as in Fig. 23. But pentodes are more often fitted, because these give more amplification and output. All the usual battery

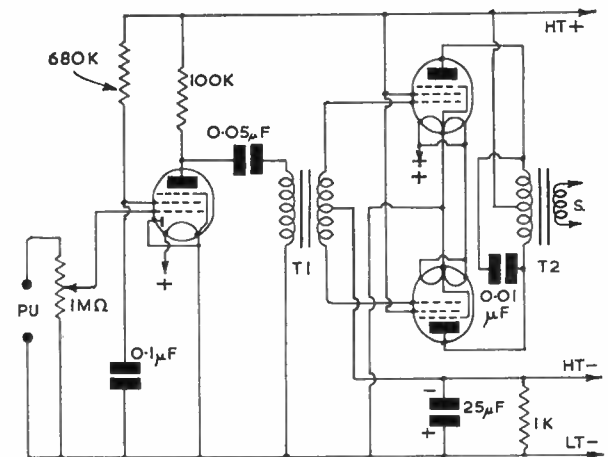
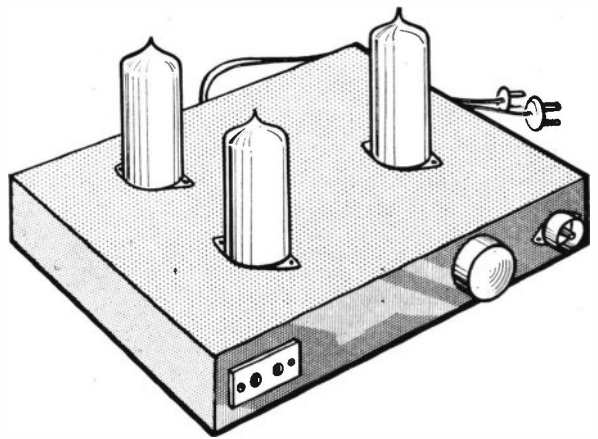


Fig. 24—Push-pull amplifier for radio or records

and mains output valves can be employed in pairs, in a push-pull output stage.

The valves naturally require the usual filament or heater supply, but this is not shown in Fig. 23. With pentodes, the screen grids are also connected in the usual manner.

To avoid the use of the transformer T1, another valve may be fitted. This gives a positive output to one grid, and a negative output to the other, and is called a 'phase splitter'. A valve is nearly always used for this purpose, in mains equipment. But with battery running there are difficulties in using a phase splitter valve, so a transformer is necessary.

Battery amplifier

The circuit of a battery-driven push-pull amplifier is shown in Fig. 24. This has one 1S5 or equivalent valve, and a pair of 3V4 or similar valves. All sections of all filaments are wired in parallel, so that a 1½V dry battery can be used for this supply.

The amplifier is intended for use with a 90V HT battery, and will then give much more output than usually obtained from the average battery-operated receiver or amplifier. The terminals marked 'PU' may be connected to a pick-up for record playing, or to a radio tuner, for radio reception.

The transformer T1 is the input transformer, and has a ratio of about 1:3. A centre-tap is needed on the secondary. Actually, a transformer with no centre-tap can be used instead. To do this, connect two resistors, each of 250K across the secondary. Join the resistors in series, and take their junction, which forms an artificial centre-tap, to HT negative.

The output transformer T2 is of the usual type, with a ratio of about 70:1, for a 3 ohm speaker. It also has a centre tap, for HT positive. This type of transformer is easily obtained.

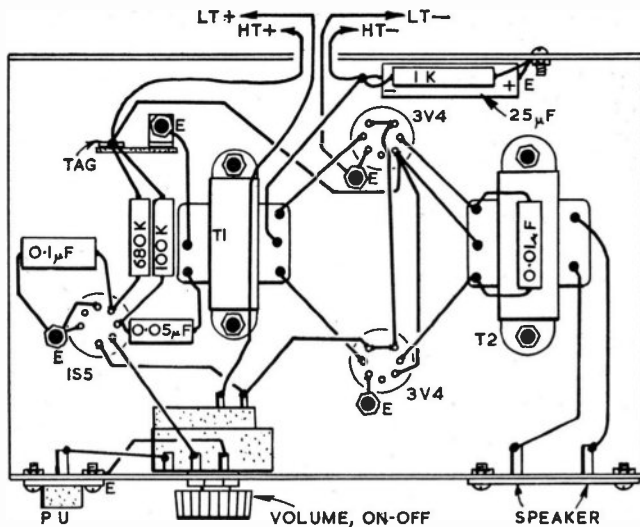
If wished, a 8µF or 16µF 150V to 250V capacitor can be wired from HT positive to LT negative. This brings no advantage while the HT battery is in good condition, but will improve results a little when the battery is much run down.

For full output, the input to the 'PU' terminals or sockets must be 0.2 volt, or 200mV. This is easily provided by a radio tuner, and by most popular gram pick-up units. The 1 megohm potentiometer is the volume control.

The drain from the HT battery is under 10mA, despite the large output. Really good results can be expected if a fairly large speaker, in a substantial cabinet, is connected.

A test of working conditions in the

Fig. 25—
Wiring plan
of Push-pull
amplifier



output stage can be made by pulling out each valve in turn. If the valves are in good order, each working alone will give reasonable results, though naturally less volume than when both valves are in together. This simple test will show at once if either valve is defective.

Building the amplifier

An aluminium chassis 7 in. by 5 in., and 2 in. deep is suitable for the amplifier. Fig. 25 shows the underside of the chassis, and shows where three ⅜ in. diameter holes are needed, for the valve-holders. Place these with the tags approximately as indicated, and mark through the fixing lugs for 6BA bolts. Bolt the holders in place, with soldering tags at E.

The Pick-Up socket shown is for a co-axial plug. With this, an inner wire goes to the centre pin, and the outer screened braiding is connected to the sleeve (chassis). Two separate sockets, or a jack, may be used instead.

The volume control is fitted with a small knob, and has an on/off switch incorporated, and connected in the LT positive circuit. For speaker connections a twin socket strip is bolted to the front chassis runner. Drill clearance holes so that the sockets do not touch the metal chassis.

A tag strip with one insulated tag is an anchor point for the HT positive lead, and two resistors. The 100k resistor is brown-black-yellow, and the 680k resistor is blue-grey-yellow. Each may also have a silver band.

The 1k resistor is brown-black-red, and goes from HT negative to chassis. Positive on the 25µF capacitor is connected to the chassis. If this capacitor

has a bare metal case, cover it with a layer of insulating tape or stout paper. (The case is normally negative, and must not touch the metal chassis.)

Note that all the points E are solder tags bolted to the metal chassis. It is quite in order to build the amplifier on a chassis made from thin wood and hard-board. If so, all the points E must be wired together.

Battery leads are lengths of flex, and all pass out through a hole in the rear runner. With a metal chassis, a rubber grommet should be fitted in this hole. These leads should go to the correct type of 2-pin battery plugs, for HT and LT. It is then impossible to fit the plugs in the wrong batteries.

Transformer T1 is the input or driver transformer. Some models may have connections in different positions. However, the primary is taken to chassis at E, and the 0.05µF capacitor. The secondary centre-tap goes to HT negative. Each remaining secondary lead or tag is connected to tag 6 of a 3V4 holder.

T2 is the output transformer. The primary centre-tap is connected to HT positive. The other primary connections go to tags 2 of the 3V4 holders. The transformer secondary is connected to the loudspeaker sockets.

The input and output transformers which were used with a service battery amplifier with 2-volt valves, and which are sometimes sold cheaply as surplus, do very well for this circuit. One model of this amplifier was the Ex-RAF Battery Amplifier A1368, using PM2HL and QP22B or similar valves. The A1134 is similar.

● Continued on page 170

DECORATIVE TEA COSY

A TEA cosy is not difficult to make yet is always an acceptable gift and a popular item at sales of work. The one shown in our illustration is made from brown felt and appliquéd in other colours with embroidery for decoration. The lining is removable and made from thick foam rubber sheeting.

You will realise that there are many sizes of teapots but for the larger family size you will require two pieces of felt measuring 11 in. by 14 in. We suggest that you purchase 1/3 yard of felt 36 in. wide, the balance being used for one of the motifs. In addition you will need a piece of pink felt 1 ft. square and a piece of yellow felt 6 in. square.

The large pieces are cut almost like a semi-circle as shown by the small diagram in broken lines. We suggest that you prepare a similar template to the necessary size.



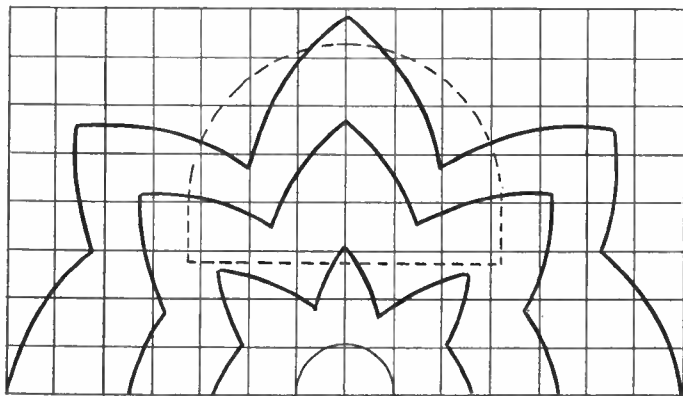
felt, i.e., the largest for the pink, the next for the brown and the smallest for the yellow.

Having sewn the pieces in position we may start the embroidery, filling in the semi-circle at the centre of the base with overlaying stitches in silk thread. You will see that the petals have been em-

stitches in a different shade of silk. These cannot be shown clearly in the photograph since they are quite small.

After completion the work may be pressed and we are ready for the lining. It is not unusual to fit a lining made from wadding or kapok inserted in a bag made to shape. In this instance I used sheet foam rubber, 1/4 in. thick, cutting just a little smaller than the inside to allow easy insertion and removal. The pieces were cut with gimping scissors and blanket stitched round the edges.

We would mention that this type of lining does not slip out if carefully cut since the felt clings to the surface. At the same time the lining is easily removable when the cover has to be washed. (S.H.L.)



The motifs are now cut out and stitched on to the larger piece. The lowest shape is yellow, the centre one brown and the upper one pink. The design shown in the diagram has been made from arcs of a circle and if you care to copy this design we suggest you rule out squares to the size of your own cosy — you may use the template prepared for the cover. You will then be able to transfer the design to the card very quickly.

Cut out each shape carefully using as templates for the different colours of

broidered with different established stitches such as feather stitch, chain stitch and wheat-ear stitch. Finally a line of stem stitch finishes the base.

Only one side of the cosy is treated in this fashion and on completion of the embroidery the two pieces are each blanket stitched all the way round. Note that should it be desired to add a handle at the top, mostly used for removing the cosy from the teapot, it should be attached at this stage. The two sections are then joined together by close blanket

● Continued from page 169

Push-pull Output

After checking connections, the valves can be inserted in the positions shown. The loudspeaker should be in a cabinet, or must be fixed to a baffle board. The latter is simply a stout board, as large as convenient, and having a circular opening about the same size as the speaker cone.

If a meter is to hand, it should be found that about 7V bias is developed across the 1k resistor. More than 1 1/2 V must not be used for the LT supply. The usual type of crystal pick-up, as used for 78, 45 and 33 rpm records, can be fitted with a plug, and connected directly to the amplifier.

Next: A crystal diode tuner.

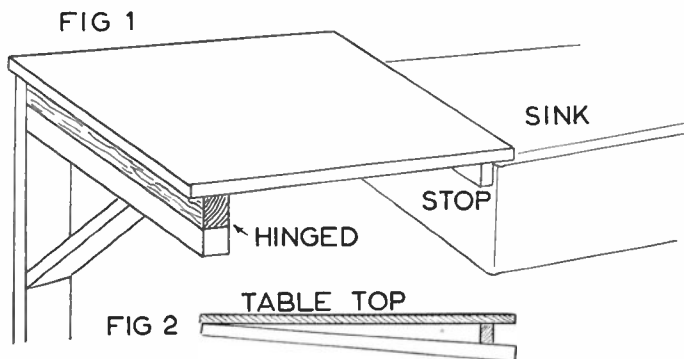
Table top over Draining Boards

DRAINING boards would often make convenient tables but for the fact that they have to be fitted at an angle if they are to perform their normal function. Housewives will know how handy an extra table top may be in the kitchen while amateur photographers may be able to use it as an occasional bench.

There are loose wooden draining boards and the stainless steel variety incorporating a sink so the following suggestions may help.

The older type of draining board usually has a batten screwed on the underside of one end and which acts as a stop against the sink. The other end usually rests on a wooden wall bracket or panel. Our aim is to lower the latter so that the top is level with the top of the sink, eventually making the board level as a working table top when fitted. This can be done (a) by lowering the bracket an inch or so or (b) cutting of the top of the panel.

We have to provide for the restoration of the height when the board is used for a draining board e.g. when washing up and so on. The easiest way is to replace



the portion removed with a fillet of similar dimensions, hinging this on the inside so that it becomes movable. The diagram shows how a fillet of this kind has been introduced for the higher position when the board is required for draining. To convert into a table top we have only to raise the board a little, fold down the fillet and replace the board.

Fixed steel sinks cannot be treated in this fashion but we can cover the entire unit with a sheet of $\frac{1}{2}$ in. plywood covered

with Formica or similar material. In some instances it may be necessary to make the board level by adding a stretcher at one end as shown in Fig. 2. The width of this stretcher should be carefully measured, prepared and screwed on to the underside. Extra long sinks — say those with a double drainer — may require two stretchers.

Both methods will give additional table space and can be quickly completed at low cost. (S.H.L.)

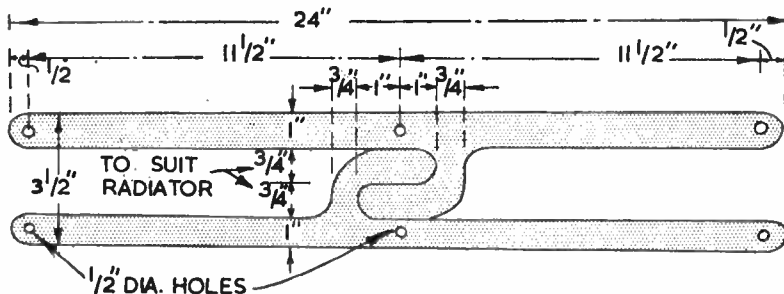
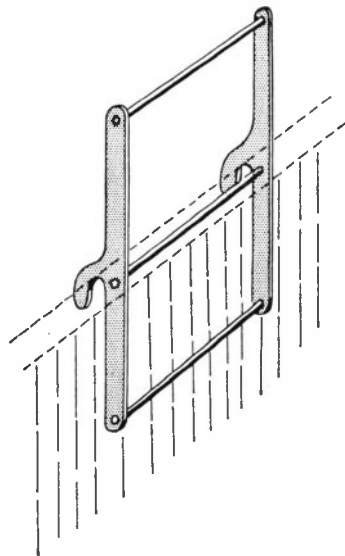
Radiator clothes ailer

THE radiator of a central or background heating system can be used very efficiently for airing small articles. Just make the simple gadget shown, and fit in place.

Cut the two sides from $\frac{3}{4}$ in. plywood with a fretsaw, as shown in the diagram, as this saves wood. Cut three dowels 20 in. long from $\frac{1}{2}$ in. diameter stock.

Drill three $\frac{1}{2}$ in. holes in each side frame, glue the ends of the dowels, and fit them in place. Glasspaper well all over, do not paint or varnish, but leave plain white wood.

In use, just slip the holder over the radiator, and your ailer is ready to serve you just as soon as the radiator is hot. (E.M.)



TOPICS FOR COLLECTORS

SOME interesting match covers have been issued over the past six months. The German Rum label depicting a mermaid goes to prove that even today some credulous people believe in the existence of 'sea-maidens,' and fancy that they have seen them coming up from the deep, or seated on the rocks.

The mermaid is usually represented as a lovely woman with a human head but a body ending in the scaly tail of a fish. Among sailors she was often imagined as sitting on a rock combing her hair and singing, her appearance being supposed to portend a storm. Many stories are told of mermaids enticing human lovers to the depths of the sea. One of the legends told of the Lorelei rock on the River Rhine is of a singing siren. There are also tales of their leaving their ocean home and assuming a human form.

A nice clear picture of Adam and Eve is shown on the other German label — a useful cover for Christian themes.

Mechanical and animal themes have always been popular in Hungary and so we get four well produced covers depicting a steam roller, a crane, a rabbit being chased by a fox, and a peacock.

There are many kinds of cranes, some of which are worked by steam and are made strong enough to move immense weights. One kind, strong enough to lift a ship out of the water, is called a derrick, after Theodoric, the name of a noted hangman at Tyburn in the 17th century, because it is shaped something like the gallows used by him.

The peacock has been known since the most ancient times. It was one of the precious things brought from Asia by King Solomon's ships and it was probably carried into Europe by Alexander the Great on his return from India. When first seen in Athens it is said to have brought together great crowds of people, who came in from the country to see it. But in time it became plentiful both in Greece and Italy, and then spread all over Europe.

The feathers of the peacock are much used for trimming clothes and fans, and for ornamental brushes. The Romans used to think it a great food delicacy. The emperors had dishes served at their feasts made entirely of the brains and tongues of peacocks.

SOME NOVEL MATCH COVERS AND THEMES

By
*R. L.
Cantwell*



A set from Belgium depicting World Statesmen is well worth securing. On label number 4 we have President de Gaulle, the strong-man of France. In your notes include his now famous words of June 1940 — 'The war is not lost, the country is not dead, hope is not extinct,' — which brought an unlooked-for gleam of hope to the people of France, who, after seeing the downfall of their armies and the withdrawal of their British allies must have felt that the Second World War was already over. The Kruschew label is also worth noting.

'Label' pen friends

Those seeking Pen Pals for label exchange should write to any of the following:

Edward V. Pike, 1910 Newhouse, St. Louis, Minn. 63107, U.S.A.

Joe Beyrouthy, (J.E.) Byblos, Libano.
Luzia Oliveira Henriques, Casas Mester Carlos, Laranjeiro, Cova da Piedale, Portugal.

Jan Kapoun, Leninova 647, Roudnice, N.L. Czechoslovakia.

Bernd Konrad, 23 Kiel, Geethestr 9, C/O G. Onken, West Germany.

Miss S. R. Suraweera, Arachchi, Sriyana, Templer Place, Mount Lavinia, Ceylon.

OTHER PEN PALS

Mrs Jean Nicholson, 35 MSQ, Gordon Barracks, Aberdeen, Scotland is interested in photography and stamps, Philip Hully, 39 Marlborough Ave, Gosforth, Newcastle-upon-Tyne, 3, is 14 years old and collects stamps, first day covers, and matchbox labels.

Michael Sinstadt is 13 years old and would like a pen-pal in France or Belgium who is interested in stamps. His address is Lane End Cottage, Old Woodhouse, Leicester.

Miss M. Taylor of 'Tara', Rosehill, Carysfoot Ave, Blackrock, Co. Dublin, Eire, studies English, Irish, Latin, French, Spanish, Geography and Botany, and would like to correspond with an English university student pen-pal.

Brian Mahon, 25 Railway View, Roscrea, Ireland, would like pen-pals.

Nazalious Phiri, of Kamitondo School, P.O. Box 1088, Kitwe, Zambia, is 15 years old and would like pen-pals of his own age.

A. Aslam Choudhary, of 9-Abdullah Street No. 52, Dharampura, Lahore 15, West Pakistan, is 18 years old and collects stamps, view cards and first day covers.



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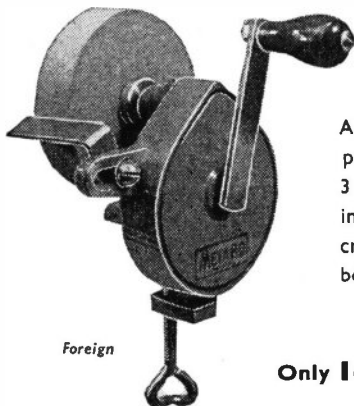
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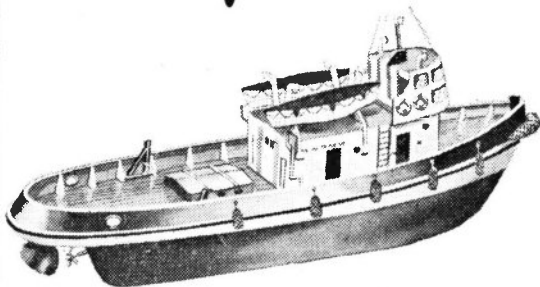
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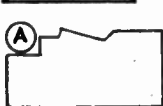
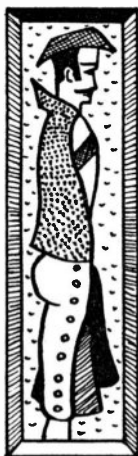
Modern Style Wall Panels

ATTRACTIVE wall-panels in modern style are easy to make from simple materials. Although their appearance is unusual, they can be quickly made, either for decoration at home, or as gifts or articles to sell at bazaars, fêtes and so on.

Their appeal lies in the shape, colour and texture of the materials used, but not in their pattern, so only plain, self-coloured surfaces should be employed. The size does not matter greatly — a 7 in. by 21 in. panel, for example, makes a reasonable picture. A piece of hardboard of this size is cut and given a frame of $\frac{1}{4}$ in. square stripwood or triangular section moulding. This is pinned and glued in place, and the background of the panel painted.

This background must be painted in a strong colour. In the examples shown, Spanish figures are used, and a suitable colour here is bright yellow, to suggest the sand of the bull-ring, or the brilliant sunlight. A little enamel of this colour is mixed with some dry sand and applied to the hardboard. This gives a rough-textured, granular surface which contrasts with the figure.

The head of the figure is made first. This is cut as shown from $\frac{1}{4}$ in. thick wood A, the shape deliberately being kept simple. It is rounded off at front and rear, B, varnished and glued in place. The hair, eyebrow, eye, moustache and



lips are cut from scraps of dark brown or black felt, glued in place, or black enamel can be used.

The main pieces of the figure are cut from pieces of coloured felt, obtainable from handicraft shops. It is best to cut a paper template of the figure first, elongating it to fit the frame. Note that

the lower part of the leg, and the foot are best omitted. The pieces for the jacket and trousers are cut, using two different colours, and fixed in place with adhesive, then the cloak is cut and glued in place over the felt already positioned, to give a feeling of depth in the picture. Both cloak and hat should cover the edges of the wooden head.

If a hand is shown, as in the right-hand panel, it also is made of $\frac{1}{4}$ in. thick wood, cut to a barrel-shape, rounded off and varnished, C. The cape held in the hand is best cut from different shades of one colour, glued in place one above the other. A row of sequins glued down the trouser leg or jacket completes the sparkling effect. The frame can either be left in its natural state, varnished or enamelled in a bright colour.

While the examples given here are Spanish, the same treatment can be applied to figures from practically any country. Magazine and book illustrations are a rich source of inspiration for subject matter for these panels. The main points to observe, whatever the subject, are that the figures are long and thin, and the shapes simple. (A.L.)

Miscellaneous Advertisements

INTERNATIONAL penfriends/M.O. magazine 12/6. Ad. rates 2d per word, minimum 3/- International, 10 Ightham Common, Sevenoaks, Kent.

STAMPS FREE — Empire Packet with 5 approvals (4d. postage). — John Peck, 143 Markham Road, Winton, Bournemouth.

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

PENFRIENDS home and abroad, all ages. S.a.c. for details. European Friendship Society, Burnley, Lancs.

FRENCH penfriends, all ages under 21. Send S.a.c. for free details. Anglo-French C.C., Falcon House, Burnley.

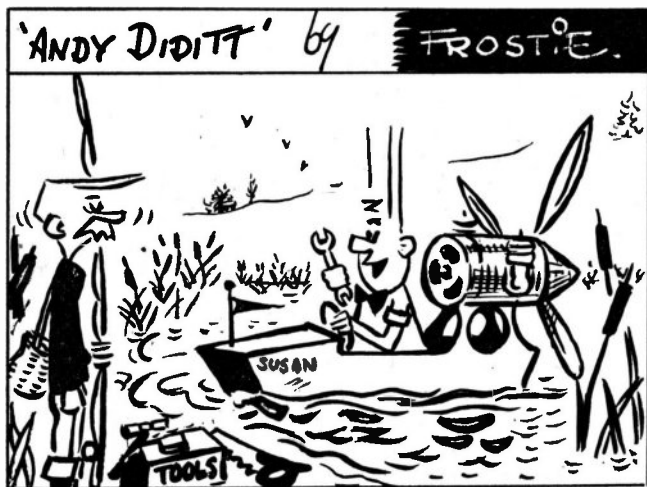
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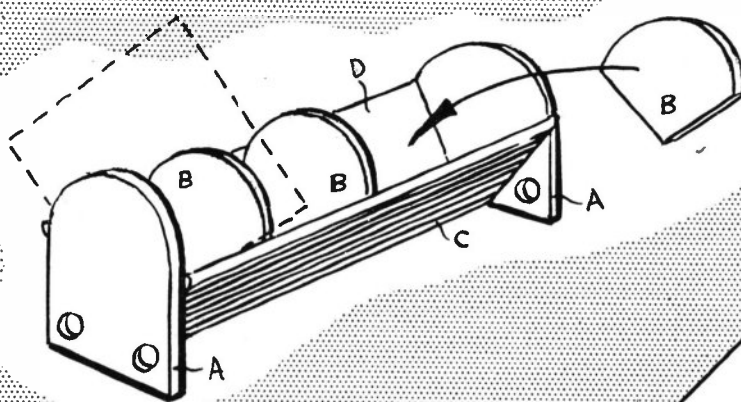


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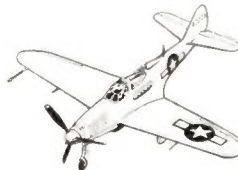
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