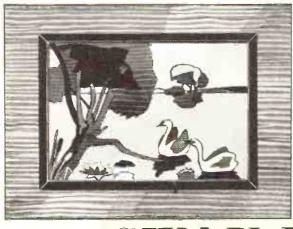


IN THIS ISSUE

						P	age
Swan Lake	-		-	•	-	-	193
Winning 'Cutty Sar	k'	•	-	•			194
'Phoney' Photograp	hs				. 1		195
Pinhole Camera Ph	oto	gra	phy	/		-	196
Magnetic Induction	-	•	-	- 1	-	-	197
Canoeing Waters	-	-	-	-		-	198
The Other Viewpoi	nt						199
A Record Cabinet	•	-	-	-			200
With Rod and Line	•	•	-	-		-	202
Japanese Match Lai	els		-	- 1		-	204
A Useful Pocket St	am	pΥ	/al	let	-	-	204
Patterns for a Cray	on	Ho	lde	r i			207

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



★FREE design inside Make this

charming study into a delightful picture in coloured woods

SWAN LAKE

THE subject illustrated, of swans gliding gracefully along a smooth stretch of water, makes a charming scene for a picture in wood.

It is made on the inlaid principle, all sections being cut out with a fretsaw, and a specially prepared Hobbies kit can be purchased. It includes a panel of $\frac{1}{2}$ in. wood to make the frame, four selected $\frac{1}{16}$ in. inlaid panels of contrasting colours, and sufficient stripwood to make the overlay border.

The frame should be made first. It is cut to the outline shown on the design sheet, and it will be noticed that for space reasons only the top half is shown and workers will complete the whole, of course, by reversing the design and carrying on from the centre lines. The outline should be traced on to the wood and when it has been cut, a small hole should be drilled in one corner and the whole of the centre of the frame removed as accurately as possible. The reason for this is that the panel will later be used as a backing piece for the inlaid picture itself, and will eventually be put back into the frame as the finished work.

To cut the inlays, pin the four pieces of wood together with the whitewood uppermost. Be sure that the pins are outside the area of the picture. Now

198

trace the design carefully on to the whitewood. Another method is to paste the design down, but this is not generally recommended in view of the tendency to warp and the fact that the design has eventually to be cleaned off, thus necessitating extra work.

It is suggested that the first pieces to be cut should be the rushes in the bottom left-hand corner of the picture. Drill a very fine hole at the edge of them, just sufficient to take a fine sawblade (No. OO or O), when working on these sections.

Following this, start removing the pieces of the pattern one after the other



until all is completed. Slight deviation from the lines of the pattern will not matter unduly, as the pieces being cut will be exactly the same and must, therefore, fit when making up. This, of course, assumes that you have followed an essential in this type of work — that is, to keep the saw upright when cutting. Otherwise, if the saw is used at an angle, the bottom sections will be of a different size and fit from the top ones.

Matching up

When all the pieces have been cut, choose the ones which match those shown on the design, referring, of course, to the key, and glue them piece by piece to the backing board. This, you will remember, is the piece cut from the centre of the frame. See that the pieces fit together tightly, and do not be in a hurry. Let the glue squeeze up between the pieces so that the whole is well filled. Now place a piece of paper over the picture and put the work under weights. When it has dried thoroughly, clean off the paper with a suitable scraper such as a Skarsten (a piece of glass will serve if you have no proper tool), and finally clean up with a piece of very fine glasspaper.

You may possibly find that there are gaps in the surface which require filling in. To remedy this, a good method is to use a mixture of white glue — Durofix or similar — and sawdust of the colour required. The mixture should be principally sawdust with just enough glue to make the whole adhere. Rub this mixture well into the places to be filled, and leave to dry before levelling off.

Wax finish

This completes the main work, and you should now provide a suitable finish for the picture. Apply white wax polish as used for furniture, and polish briskly with a soft duster. A proved method is to apply the polish with the fingertips, gently rubbing it in. Then glasspaper very gently over the surface and apply polish again by the fingertip method. To get a perfect result, do not hesitate to make up to as many as six applications of the polish, each followed by gentle smoothing with glasspaper and a final polish. This will give the picture depth and also make it shine. Polishing from time to time, after the picture has been hung, will keep it in excellent condition. Now prepare the stripwood border. This should be mitred and chamfered as shown on the design sheet, and glued into place on the frame. A word of warning here take special care with the mitres, as badly cut joints will depreciate from the look of the finished picture.

The whole of the frame is now cleaned up, and either stained and polished or Kit No. 3218 Hobbies Kit No. 3218 contains a set of inlay panels to make the pictures, wood for one frame and stripwood. Price 9/6 from branches or post free from Hobbies Ltd., Dereham, Norfolk.

wax polished only, as desired. You might possibly like to make the mitred border lighter or darker than the actual frame for contrast. It will depend on the colour and quality of the actual wood, but whatever the finish chosen, the whole of the frame should serve to draw attention to the inlaid picture and not away from it.

The inlaid picture is now placed in position from the back of the frame, and secured by pasting a piece of stiff brown paper over it and the frame, in much the same way as when mounting a photograph. The backing piece holding the inlay picture stands proud of the frame by some $\frac{1}{16}$ in., of course, but this does not matter, as it is not seen.

Prepare the picture for hanging with two screweyes and a length of cord. If the picture is to be hung from a rail, a fairly long length of cord will be required, but if it is to be suspended from some lower wall fitting, then it is preferable to stretch a shorter length of cord fairly tightly between the two screweyes, so that when the picture is hung on the fitting, the cord is not seen.

You will have noticed that apart from the picture already made, there are also sufficient parts to make three others. Although the colours are not the same as those in the original, you will be able to match up two of the three and make quite reasonable pictures. The rest will probably have to be discarded because the colourings are not suitable. For instance, one of the sky pieces of the four inlay panels cut will be of dark wood and would look out of place in the normal picture.

For the two extra pictures you are able to make, find pieces of plywood or other suitable backing wood and glue the pictures down as before. Then give them a framing of ordinary picture frame moulding which is quite cheap to buy, and you have another two passable pictures. These would make nice gifts for friends.

Other uses

As an alternative to making extra pictures from the additional pieces, they can be used as an inlay decoration on other articles you may be making. For instance, they could form parts of trays, firescreens, and trinket boxes or articles of furniture. Often quite small parts of a design can be used to enhance larger furniture such as cabinets and book-cases.



At the Northern Models Exhibition, Manchester, Mr. W. Nattrass won the Hobbies Trophy with this model of the 'Cutty Sark'. Kit No. 2186 for maky ing this 21in. model of the famous tea clipper costs 24/6.

World Radio History

'PHONEY' PHOTOGRAPHS

Entry NTRIES in our contest for tabletop photographs were not very many of our readers had tried their hand at this novel but possibly advanced type of photography.

Perhaps many of you tried, but the results did not come up to expectations! However, as a result of careful 'stage management' some commendable efforts were submitted and those illustrated on this page, far from proving that 'the camera cannot lie', indicate that it can provide evidence so far removed from fact!

Take the boys and the sweet bottle, for instance. Here Mr. J. Grinell of Wolverhampton, Staffs. had put a great deal of thought into his entry. Apart from a couple of willing youngsters, his props consisted of a sweet bottle, a bird ladder and cord from a Christmas card. The young lads were certainly very well posed with the finished picture in mind, and the entry was, indeed, a very good example of what can be done in this type of 'phoney photograph'. For his effort, entitled appropriately 'To the rescue', Mr. Grinell won the first prize in the senior section — a wrist watch.

Mr. C. R. Temple of Norwich sent in several entries, but the one we liked best was that suggesting a car hurtling over a cliff into the sea, and entitled 'Seaside Tragedy'.

Mr. Temple points out that the tragedy was not as great as it appeared from the photograph, for the car was a toy one and the rock was a fair sized



A pal to the rescue

piece of coal! He formed his 'sea' with the aid of crumpled tinfoil, and powdered whitening gave a good simulation of breakers.

The junior entry for this contest was very disappointing, but the two examples illustrated will probably urge more of our readers to have a go at this 'misleading' hobby.

* * * * * * * * * * * *



A seaside tragedy that wasn't



Among the projects to be described in next week's issue will be a novel idea for partitioning a large kitchen or lounge to make a dining recess. A jigsaw for children will be based on 'animals' and there will be much of interest to other hobbyists in their particular fields.

* * * * * * * * * * * * * * * *

PINHOLE CAMERA PHOTOGRAPHY

NOR no other reason than that it is the simple, uncomplicated forerunner of its modern counterpart, too many people mistakenly dismiss the pinhole camera as 'the old crock of photography', whereas, of course, it is nothing of the sort. Rather is the pinhole camera an extremely useful item of equipment, whether employed as a separate medium or as an adjunct to more elaborate apparatus.

By C. L. Marriner

Quite a number of keen amateurs even go so far as to adapt their existing cameras to pinhole photography - a simple matter of substituting for the lens a suitably pierced metal strip, plate, or disc. Nor is the reason far to seek when one examines some of the delightful pictorial results which may be obtained from such conversion.

Apart from the practical advantage of being able to arrange prospective pictures in the camera viewfinder, it is doubtful whether the trouble involved in constant changes from lens to pinhole, and vice versa, is really worthwhile. A much better plan would seem to be the acquisition of a separate pinhole camera and, for those who possess no other camera of their own, this is a case of 'Hobson's choice'.

The essentials of pinhole photography are surprisingly few and easy-tocome-by. Practically any cardboard, wood, or metal box of suitable proportions will suffice for the camera, so long as it is completely light-tight --- all except for the pinhole itself. Beyond that one requires but a sufficient supply of photographic plates and the urge to continue experimenting until a measure of skill has been achieved.

Quarter plate recommended

Although there are practically no restrictions on the dimensions of the photographic plates which may be employed for this purpose, it is, nevertheless true that the smaller sizes yield the best results. Thus, the quarter-plate (4¹/₄ins. by 3¹/₄ins.) is strongly recommended, for a start at least; which in itself will also govern the proportions of the box to be chosen for your purpose.

Now we come to the most difficult part of the entire operation - the successful drilling of the pinhole itself, which must be as flawless as you can make it. No matter what the material, an ordinary pinhole inevitably results in a burr. Instead, use a needle.

The latter are obtainable in various sizes, recognizable by different code numbers. For instance, a number 10 needle produces a hole about 1/60in. in diameter, the ideal size for ordinary landscapes, etc. Architectural and interior work is better attempted with a hole 1/70in. in diameter, the result of using a number 11 needle. For the sharpest definition of all, however, a number 12 needle is best employed, and ensures a clean hole of approximately 1/80in. in diameter.

Paper, cardboard, wood and similar materials being practically impossible to drill with sufficient accuracy and cleanliness for pinhole photography, a thin sheet of tin, copper or brass should be substituted and pressed centrally with a small round point. The result upon



examination will be seen to resemble a tiny pimple, properly called a boss, which must now be carefully honed flat with a smooth file or stone. Thus the metal will be thinned, and may be pierced centrally through the minute hollow with the tip of the chosen needle. Hone once more, and repeat the process over and over again until a clean round hole of the desired size results from your efforts.

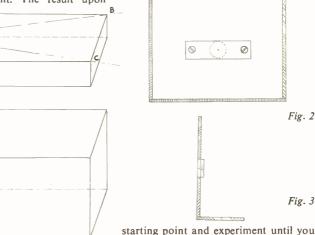
So far as the box itself is concerned, if you are fortunate enough to have a metal box of suitable proportions, all you have to do is drill the pinhole direct through the end. Otherwise, a small disc must first be removed from the end of your selected box to clear the separately attached pinhole strip. This is shown in section in Figs. 2 and 3.

It is important to remember that a plug or disc must be employed as a form

of shutter. A round of wood or cork will serve, or a small flap secured to the front of the camera.

A pinhole camera of the type described here will, of course, need to be loaded and unloaded in a dark-room or changing bag. Clever woodworkers, on the other hand, will probably prefer to devise their own arrangements with dark slides, etc.

Shown in Fig. 1 is an arrangement of corrugated cardboard lining the sides of the box. This is to facilitate adjustment of the distance between pinhole and plate. A quarter-plate is best set at approximately 4ins. from the pinhole, while 6ins. should be sufficient for a half-plate. Use those distances as a



arrive at those best suited to your own individual requirements; for pinhole photography certainly allows plenty of scope for initiative.

As it is impossible to view the proposed picture with a pinhole camera, Fig. 1 also shows an arrangement for roughly estimating the limits of same. However, in cameras with provision for the adjustment of the plate distance in relation to the pinhole, point (A) must be moved forward to coincide with the top of the plate. A similar arrangement on either side of the camera will serve equally well to indicate the proportions of the proposed picture in the perpendicular plane.

Because the pinhole camera is perpetually in focus, no other focusing mechanism is necessary; but adjustments in the definition may be made by altering the distance between the pinhole and plate.

Continued on page 197

Experiments with electricity **MAGNETIC INDUCTION**

F you have the model current detector previously described in this series and have carried out the experiment with a linear conductor near a magnetic compass needle, you will have realised how an electric current, flowing in a conductor, moves a magnet placed near it. This led Faraday to wonder whether moving a magnet near a conductor would produce an electric current. This he soon found to be the case.

Electric currents produced in this way are said to be magnetically induced.

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With the apparatus illustrated in Fig. 61 you can imitate Faraday's original experiment on magnetically induced currents.

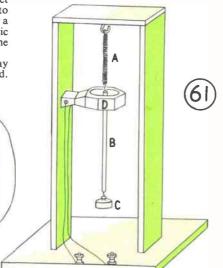
Apparatus required consists of wooden stand; spring; hook; silver steel rod; weight; wireless coil and holder; two terminals; sensitive galvanometer.

(A) is the spring fixed to a hook in the upper part of the wooden stand. (B) is a length of silver steel rod previously magnetized by placing it in a solenoid carrying a fairly heavy current. The solenoid described for the model electric clock will be excellent for this purpose. (C) is a weight which causes the magnet to move up and drive through the coil of about 200 turns. The ends of the coil (D) are connected through the holder to the terminals on the base of the stand. These terminals should be connected to a fairly sensitive galvanometer.

Move (B) quickly downwards through the coil and note the deflection of the galvanometer needle showing that an electric current has been produced. Note what happens to the needle when the magnet stops moving. Next move (B) quickly upward and note what happens. Pluck the magnet and thus make it vibrate freely, noting now the action of the galvanometer needle. What kind of electric current are you generating?

A model moving coil galvanometer

Apparatus required: wooden stand; permanent horseshoe magnet; a little



mercury; two terminals; No. 38 D.C.C. wire; short piece of cylindrical soft iron ‡in. in diameter; two short pieces of dowelling; small piece of mirror; light wooden pointer; screw and washer (see Fig. 62).

You will see how the direction of an electric current through a galvanometer influences the direction of deflection of the galvanometer needle if you make this model galvanometer, and furthermore, you will see how this type of galvanometer, called a moving-coil galvanometer, is another application of

the principle that a coil carrying an electric current when placed in a magnetic field tends to rotate as in the case of an electric motor.

(A) is the permanent horseshoe magnet which fits through two slots in the base of the wooden stand.

The circular hole (C) in the base (B) of the stand is filled with mercury, and one of the terminals is connected by a short piece of wire to this mercury. The other terminal is connected by a piece of wire to the screw (D) on the suspender arm.

The coil (É) consists of about 50 turns of No. 38 D.C.C. wire wound round a rectangular piece of wood. One end of the coil is fixed to the screw (D), and the other end is bared, formed into a spiral round a pencil, and the spiral is pulled out until it just dips into the mercury.

Pieces of cotton keep the wires of the coil together, and a light wooden pointer can be fixed to the coil with cotton. A small piece of mirror can also be fixed to the coil with glue.

(F) is a short piece of cylindrical soft iron about $\frac{3}{4}$ in. in diameter. In this, two holes are drilled just large enough to take two pieces of dowelling. This dowelling is fixed rigidly into the soft iron and is allowed to slide backward and forward through holes drilled in the back of the stand.

With the soft iron cylinder out, pass an electric current through the galvanometer and note which way the coil turns. Reverse the amount and note what happens. Repeat with the soft iron cylinder in position.

Shine a beam of light from a pocket torch on to the mirror and catch the reflected beam on a sheet of paper some distance away. Note how a very minute current, causing only a very small movement of the coil, gives rise to a considerable deflection of the reflected spot of light on the paper. (T.A.T.)

Continued from page 196

Pinhole Camera

By the same token, the length of exposure largely depends upon this selfsame distance adjustment the speed of the plate employed, the condition of the light, and the type of subject.

In pinhole photography a slow plate is to be preferred to a fast one; and with the right conditions landscapes should not require an exposure of more than a few minutes. Develop and fix pinhole photographs exactly as all others.

One thing that should be clearly



understood is that because pinhole photographs are slightly diffused they do not lend themselves to easy enlargements; instead, they should be contactprinted. However, this diffusion is by no means inartistic or unattractive; and with a clean and efficiently drilled pinhole, some really astonishing results can be obtained through the medium especially if the delightful softness of tone is made the most effective use of by printing on matt or semi-matt paper.

CANOEING WATERS

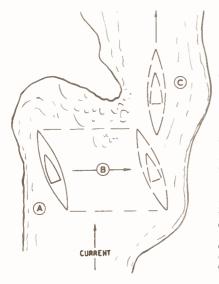
CANOE is such a versatile craft that it can be taken on waters inaccessible to other craft, in fact, some of the best canoeing is to be had on the more remote rivers. Once you have gained some experience on your local water you will want to take your canoe further afield.

Getting a canoe about the country is not difficult. I have had as many as four on the roof of a small car. With a trolley near one end and the other end tied behind the saddle it is possible to

By P. W. Blandford

tow your craft behind a bicycle. You can take a rigid canoe with you by train, providing you can get it in the luggage van — which usually means a maximum length of about 13ft. You can send a canoe of any size by rail at 'passenger parcels rate'. This is quite satisfactory and cheap, as the charge is by weight and not bulk.

The legal position concerning waterways is not simple, but, fortunately, commonsense prevails. You have a legal right to canoe anywhere that the tide flows, so you can go around the coast and up estuaries to the tidal limits without asking permission or being charged a fee. On a number of rivers a public right of way exists. For instance, you can canoe the Severn (our longest river) from near the source to its mouth free. You have a right to canoe the Wye





A typical canoeing scene on the River Wye, near Hereford

(our most popular canoeing river) from near the Welsh border 100 miles to the sea. On some rivers where a right exists there may be locks and you pay a few pence at each of them.

Owners' rights

Other rivers are assumed to belong to the owners of the banks, and you have no more legal right to canoe on the water than you have to walk on private land. Actually, very few owners object to occasional canoes, and there are many thousands of miles of rivers available to you by the courtesy of the owners. On a few rivers, notably the Thames, you have to buy a licence and pay lock fees.

Canals are all private and mostly controlled by British Waterways. You can buy a licence covering the whole system or pay by the mile for single trips. The address of your local office should be in your telephone directory. Canoeists are expected to portage the locks on canals, so some of them can be rather strenuous.

Lakes are the same as rivers — some, such as Windermere, public and others private. Reservoirs cannot usually be used, although a few old ones are available.

The best information on all these waters is in the British Canoe Union's 'Guide to the Waterways', which costs 18/- to non-members. 'Canoeing' by Bliss (Methuen, 12/6) also contains plenty of waterway information, and there is Stanford's 'Canoeing Map', costing 4/-.

Distances are deceptive. The best canoeing holidays are those where no definite mileage is planned in advance. On placid water fifteen miles per day is comfortable, while twenty-five is possible. On canals the frequency of locks are your main concern. A current with you can increase your mileage considerably, although rapids and weirs which have to be investigated can cut your day's progress to only a few miles.

Most canoeists get their greatest en joyment out of tackling the natural rivers where there are no man-made aids to navigation and occasional rapids have to be dealt with. Of course, advance information from clubs or one of the books suggested, is essential, as the rapids on some rivers are dangerous. Fortunately, there are a large number of rivers where the rapids are exciting but not dangerous. Naturally, anyone tackling this sport should be able to swim.

A rapid occurs where the river bed slopes, causing the water to speed up. In the early stages of a river there are often many small shallow parts of this type, hardly big enough to be called rapids. As you approach you can see the uneven water and maybe hear it running over the stones. If you land and examine it you will see a V of smooth water pointing into the rapid. This is the deepest channel and the way for you. Head into this cautiously if you think that even there there may not be enough water. If you touch bottom, get out and wade down, letting the canoe float ahead of you on its painter, then get in again as the water deepens.

The V is present in almost all rapids. If you know there is sufficient depth, paddle fast into the rapid and you will break your way through the waves with

Continued on page 199

World Rad Bristory

Out with a camera THE OTHER VIEWPOINT

FEW doubt that there are two points of view to most questions, but many amateur photographers forget that there are almost always two, or more, points of view in one attractive scene.

A scene appeals to you and so you pause and click your shutter and walk on, looking for the next attraction. But do not walk on — pause and turn in your tracks and look behind at the scene. It is amazing how often theother-way-look gives you a different viewpoint, equally as attractive as the first straight-ahead glimpse which made you pause to click your shutter.

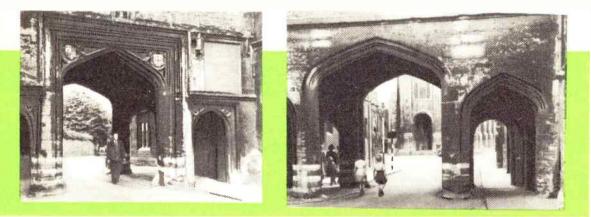
When you see an attractive village street, click your shutter by all means but when you have moved down the street, turn around and look behind. probably, and a totally different scene seen through the opening of the arch.

Turning back and taking the other view sometimes means shooting against the light. Do not forget here that unless you aim at a mere silhouette you must allow exposure for the shadow areas of the subject. If you use an exposure

By E. G. Gaze

meter there are two well tried and much used methods of assessing this exposure figure. You can point your meter towards the light-source, into the light, and give from 2 to 4 times the indicated exposure, or you can take a meter reading in the opposite direction, away from the light and increase it slightly if the subject contains large shadow areas needing some detail to be rendered.

Train yourself into the habit of always turning and taking a second look, from another view-point. This way you achieve a greater variety of lighting conditions for the same subject, find new and at first overlooked view-points. The 'snapper' who always looks and snaps straight ahead is missing many worthwhile prints for his album. The illustrations will serve better than words to prove this — they were taken, each pair, on the same day and at the same time of day, but were made possible by taking the trouble to 'see the other point of view'. It is a habit worth cultivating.



A fine old archway

Points of view you had not noticed looking the other way are now observed. The scene you liked just now looks somehow different from the other way — and lighting conditions may give an entirely different impression of the same subject.

You see an old church tower framed by fresh spring-leaved trees all bright in the sun — you snap it. But do not walk through the churchyard back to the road without turning your head to look behind. You may, perhaps, find a back-lit scene of the same church, as worth taking as the first straight-ahead glimpse.

You find an archway, or a series of them in some nook of an old town; you like the pattern and the old stones you snap them. Now walk through the arch and look the other way — same arch from behind, but different stone pattern, different lighting conditions The same archway from the other side

Continued from page 198

CANOEING WATERS

a shower of spray. The waves are caused by rocks on the bottom, maybe a long way below the surface, and they do not move.

If you have to miss an obstruction it is worthwhile mastering a manœuvre called a 'ferry glide' after the operation of current-operated ferries. If you are going downstream and heading for an awkward spot, backwater until you are holding the canoe against the current, then turn its stern in the direction you want to go (A). The current glancing against the side of the canoe while you hold it at this angle will push the craft across the river (B). When you have

Wort 990 History

reached the spot you want, you straighten up and go ahead (C). This can be practised anywhere that the water flows at two or three miles per hour.

In a rapid river keep clear of overhanging trees, always examine rapids before shooting, only have one canoe in a rapid at a time, if you have any doubts line down or portage, and remember to take all the advance information that you can, although local non-canoeists' advice generally is to be distrusted (their own bit of fast water is almost certainly much worse than any other, and you will pack up immediately if you believe them).

A RECORD CABINET

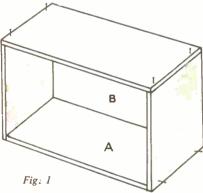
RAMOPHONE records provide a wealth of endless entertainment and more and more of them are being bought. Record enthusiasts in no time find it imperative to have some place to store their records and yet at the same time provide easy access to the records when needed.

So here is a cabinet in which to store your records. It is easily made by any handy man and does not take long to build. In addition, the cost is only a fraction of a bought one. Its size can easily be altered to hold more records or less, as the case may be.

It is designed to hold 12in. and 10in. records, which are easily extracted, and (what is a great recommendation) are quickly identified, as will be shown.

The cabinet is roughly 26ins. long by 37ins. high by 15ins. from back to front. The top of the cabinet can be a resting place for a radio set or a vase of flowers, or such-like items.

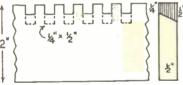
Built in the way described, the cabinet should hold some seventy odd records, each well spaced from each other.



The wood used in the construction of the cabinet will depend on one's financial circumstances and the trouble one is prepared to take over the cabinet. Undoubtedly, the quickest way is to use large single pieces of plywood (of the correct thickness) for top, bottom and sides, and lid. The laminated edges of the ply boards will show, of course, in this case, but these can be concealed to a satisfactory extent by careful staining or painting of the edges.

However, the purist will frown at this and prefer to go to the expense and trouble of building up the top, sides, etc., from boards of real quality wood. Hobbies furniture panels would do well. T By A. Fraser In each case (top, sides, etc.), two panels

These could be lapped or grooved, or merely butt joined (with the help of dowels, perhaps). A close join should be made, with glue, and cramped between thick boards or battens to hold until set. Afterwards, saw the pieces to size and shape, and plane the edges for superior finish.





Expensive panels can be avoided by using any cheap boarding, which can later be covered by some selected veneer. The edges of the cheap boards will have to be either stained or veneered, to harmonize. For an economical job, yet one which can produce really attractive results, this method can be recommended.

In building the cabinet, the first thing to do is to make the sides. These can be of a true square shape, 15ins. by 15ins. if desired, but it is suggested that the front of the cabinet be sloped backward slightly to improve the design. Consequently, the front edge of each side is dropped back lin. at the top, making the top edge 14ins., compared with the 15ins. of the bottom and back.

The thickness of the wood should be anything from $\frac{1}{2}$ in. to $\frac{3}{4}$ in.

Cut two sides and plane or glasspaper the edges (especially the front edge) to a clean finish. Place the two sides together to ensure they are perfectly matching each other.

Next saw out the top of the cabinet. This will be of similar stuff to the sides and the same thickness. The shade should be a perfect rectangle, so use a square to ensure this. The size should be 14ins. by 26ins. (if the cabinet front is sloped in as suggested above. If not, then 15ins. by 26ins.).

Again plane or glasspaper the edges clean. Note that if the cabinet front is sloped as recommended, then the front edge of the top should be chamfered slightly to accord with this.

If the top is made of cheap wood and is to be veneered, then now would be a good time to veneer it. Choose the thin veneer carefully and after applying, hold it down with weights until fixed. Then trim with a knife and clean with glasspaper.

Now make the bottom of the cabinet. Using the same kind of stuff as the top, saw out another true rectangle. The side should be 15 ins. by 25 ins., if the sizes are $\frac{1}{2}$ in. thick (or $24\frac{1}{2}$ ins. if the sides are $\frac{1}{2}$ in. thick).

Clean up as with the top, again

World R 200 istory

chamfering the front edge to accord with the slope of the cabinet front.

Next, place the bottom on the floor, and with thin panel pins (only half driven in) attach the sides temporarily). Two pins to each side will do. See that the edges are flush with the bottom.

Then attach the top in the same way, again only driving the pins half-way. (See Fig. 1). Examine the structure to see if all is true; if not, then repair the deficiencies. If all is correct, then place a sheet of 5/32in. plywood or hardboard over the back and outline the back on the plywood with a pencil. This shape can then be sawn out and attached with half-driven pins to check for fit.

We must now start making the racks in which the records will rest. Although any wood would serve for the racks, a nice quality hardwood is preferable to face up to the fair amount of fine sawing that needs to be done.

The wood should be 2ins. wide and $\frac{1}{2}$ in. thick for the floor racks, while those fixed up on the back of the cabinet should be lin. by $\frac{1}{2}$ in.

The arrangement of the floor racks is seen in Fig. 3. The middle section is for 10in. records and the outer ones for the 12in. records. The relative lengths will depend on the reader's needs. A central extension of 16ins. for 10in. records, with roughly 4ins. either side for the 12in, ones, should meet most needs.

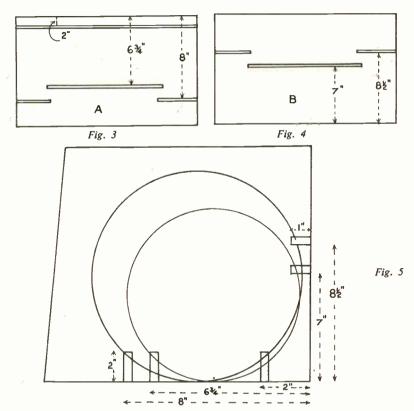
Details for the cutting of the racks are seen in Fig. 2. The slots should be drawn precisely on the wood first with a sharp pencil, using a square for accuracy. They are $\frac{1}{2}$ in. wide and $\frac{1}{2}$ in. apart. The bottom of the slot slopes, being $\frac{1}{2}$ in. deep on one side, falling to $\frac{1}{2}$ in. on the other.

The slots should be sawn very carefully and as accurately as possible, using as fine a saw as one can get. Use a chisel to remove the unwanted wood after the saw cuts have been made. A small-toothed file will correct any slight errors made by the saw.

Much labour will be saved if the several lengths of wood are held tightly together in cramp or vice, and the marking and saw cuts carried across all the woods at once. In this way, the slots for all the racks are made in one operation, and also with proper matching. Round off the tops of the tongues between the slots with a file.

Although it is not imperative, it is advantageous to glue felt strips into the slots, trimming off with a razor blade when fixed. This will protect the records.

Glasspaper the floor of the cabinet and then fix the racks in place, using glue and nails or screws through the bottom. It is very important to get the slots of back and front racks in line with one another, and truly parallel. Lay a piece of straight stripwood (or a T-



square) across the slots to ensure this. Fig. 3 gives the measurements, which should be followed accurately.

The racks on the back of the cabinet should be fixed next. Remember, these are only lin. in depth. Figs. 4 and 5 give the details. In order to get these in proper line with the floor racks, it is advisable to use an actual record placed in the floor racks and then adjust the back wall racks to fit.

For those who wish, the floor of the cabinet, between the racks can be covered with felt for the records to rest on, instead of the bare board.

Now, take the sides of the cabinet and fix on the legs. These should be 36ins. or 37ins. long at the back. The front legs, being splayed, will need to be somewhat longer. Attach the back leg first, then work out the length of the front leg from this.

The legs are of 1 in. by $1\frac{1}{2}$ in. stuff, of good quality, and the tops are chamfered or rounded off. They are fixed with glue and nailed or screwed from the inside of the cabinet side. Rubber feet fixed to the bottom of the legs are recommended.

Glasspaper the inner side of these cabinet sides, also the inside of the back, then assemble the cabinet, using glue and panel pins. When set, clean up the

> 201 (orld Radio History

outside with glasspaper.

The lid can now be made. Take the measurements from the cabinet. The lid fits flush into the opening of the front. A single piece of plywood is quite good enough for this lid. It can be purchased already veneered if desired. The thickness should be $\frac{1}{8}$ in. or so. Take out two troughs in the bottom edge to hold the brass hinges, and two matching troughs in the front edge of the cabinet bottom.

Glasspaper down the lid, both back and front, and attach the hinges, fixing the lid to the cabinet. After this, fix the lid stays. These should be as large as possible. An alternative to the ordinary knuckle-jointed or sliding plate stay, is to use lengths of chromium plated chain fixed with screw-eyes. Complete the lid by attaching two small knobs or handles.

With glue and screws, fix wooden stops 2ins. by 1in. by $\frac{1}{2}$ in. to the interior sides of the cabinet at the top, for the lid to rest on when closed.

The final finish, stained or unstained, polished or unpolished, is left to the reader's own choice.

For identification of the records, we suggest that each slot in the front racks should be numbered. Another piece of paper or card containing titles and slot numbers can be pasted on the floor of the cabinet.



DURING the summer holidays many boys find grand fun fishing in river, lake or pond. Probably, camping takes them to a place close by a nice stretch of water, and in between other happy pursuits an hour or so with the rod is a welcome diversion. Moreover, if you succeed in getting a pan of fish that are good eating, as trout, perch, grayling, or even eels, you have a wholesome variety to the daily menu, and one that, if you are in camp, is very welcome.

It is as well, then, to know something about the kinds of fish we may bring to the basket or bag in summer holidays. By July and August most species of freshwater fish are in season and in good condition, firm of flesh, plump, and active. As to equipment, you will



need rod, line of plaited silk or Nylon, or monofilament; reel; hooks to gut or Nylon, floats, split shot, landing-net if you expect to meet with big fish, basket or bag.

Sundry items include a useful knife, a pair of small pliers useful for pinching split shot on to the line, or extracting hook out of the fish's jaws when you have caught it, some spare float caps, a bobbin of strong silk and a piece of cobbler's wax in case of repairs to your rod. You will need tins for carrying baits, as maggots, worms, etc., and if fly-fishing, a box for your artificial flies. A plummet is also useful for ascertaining depth of the 'swim'.

Floats in several sizes should be stocked. In ponds, lakes, and canals small light floats of celluloid, quills, cork and quill, crow quills, zephyr floats for match fishing especially will be found suitable. For heavy currents and swift streams of the larger rivers, bigger floats, such as goose quills, are necessary to carry more shot for sinking the bait. Get a variety of hooks, sizes ranging from No. 8 to 16, the larger for perch, barbel, carp and other big fish, the smaller sizes for catching roach, dace, chub, gudgeon, etc.

Rivers are generally well stocked with trout, grayling, barbel, and many other species. Canals abound with roach, bream, perch, pike, tench, carp, and eels. Lakes and ponds also provide similar fish to the above, also in some lakes and reservoirs the handsome rudd

is found. Barbel are generally found in swift currents, in biggish rivers. Barbel fishing is more of a specialist's sport, and you need much experience for this, and a lot of groundbaiting with plenty of worms, is required to bring barbel 'on the feed'. Chub are met with in streams, and trout, true riverine fish, abound in

many brooks and rivers, and also in lochs, lakes and reservoirs.

To ensure success

chance of catching them.

To attain success you should know something of the haunts and habits of fish, and acquire some skill in handling a fishing-rod and line, and in the art of hooking, 'playing', and landing fish. Practice makes perfect, and this maxim applies to angling especially. You can pick up a lot from watching 'old hands', and emulating their methods to the best of your ability. By learning as much as you can of the haunts of the various fishes and the kinds of baits to attract them, you will stand a good

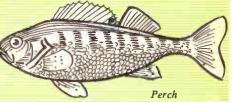


Baits are many and various. Maggots and red worms, lobworms, dew-worms, and brandling worms are good allround baits for most kinds of fishes. If possible, gather your worms a day or two before going a-fishing and place them in a sizeable treepot in freshly-



washed moss. This procedure will harden and scour them, and they will keep on the hook much better, when fishing. Maggots should be carried in a little damp sand, sawdust, or meal in a suitable tin with perforated lid. All receptacles like tins with lids should have holes in the top to allow air to circulate.

Wasp grubs are excellent summer baits for many kinds of fish. So, too, are dock grubs — fat whitish grubs with a brownish head, which are found at the roots of docks and other plants. Wasp grubs, by the way, may be slightly baked before use, otherwise, on a hot sunny day they may develop into chrysalis, or even into wasps, and so be a nuisance. Getting wasp grubs from the



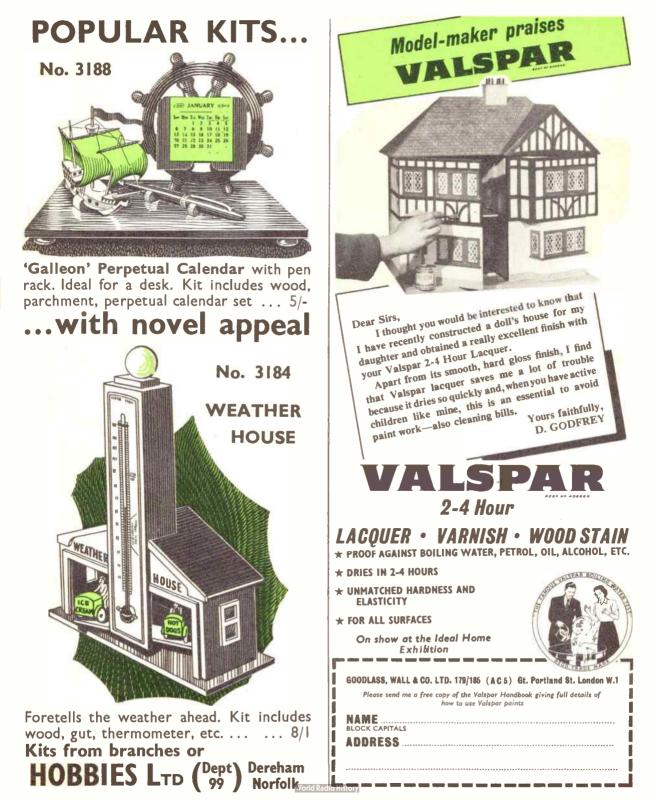
nest may be a ticklish job. The usual plan is to make a gunpowder squib and light this in the hole entrance to the nest at dusk or after. Then push a sod over it, and stamp it down with your heel. In a short time the powder will have done its work, and you can dig out the cakes and secure the grubs. Cyanide is another excellent thing to use, but be very careful, for it is very poisonous. You can, of course, buy a tin of wasp destroyer from a seedsman or nurseryman and use according to directions.

Other baits include bread paste, for roach and others, hempseed, stewed pearl barley, breadcrust, fruits as cherries, etc., for chub, and cheese is another excellent hook-bait for these fish.

> When out fishing in warm summer weather, do not leave worms or maggots exposed to the hot sun. Keep maggots in a box in a little damp sand, and worms in moss slightly damped.

Where a fishing licence is required, do not omit to take one out, and produce it to the water-bailiff or owner of the water if requested. When camping in a strange district, always make enquiries locally as to whether the fishing is free or whether by permit or by payment.







PHILLUMENISTS with a limited purse soon realise the need for specialisation. English match labels date from 1834, when lucifer matches superseded the flint and steel. Since then thousands of labels have been issued by various makers throughout the world. Many early labels are valuable, but those of firms who no longer exist are scarce and beyond the average collector's scope.

Japanese labels are worth attention and are obtainable in packets containing 100 of the common varieties (see illustrations) costing 4/- each.

By R. Cantwell

Apart from the usual designs like birds, fish, architecture and so on, stamp centenaries and public holidays are represented. Coffee, jam, milk and even insurance agencies are advertised on these Oriental match covers.

In your notes remember to mention that in Japanese towns wonderfully picturesque processions often take place. Called *Matsuri*, these colourful parades include gorgeously decorated twowheeled carts and floats drawn by gaily caparisoned oxen in shining harness and coloured ribbons. Following in their wake are smaller models of the carts and bullocks pulled along by crowds of happy, laughing children.



But do not get too absorbed in your notes. Practise also a little research. Look out for early Japanese brands marked Macassar, Batavia, Samarang or Padang, which were on sale in Malaya and the East Indies about thirty years ago. Also Japanese propaganda labels of the Great War period, which were printed at Bangkok, and distributed to Malaya and the Dutch East Indies.

Examine them for errors. For example: the Japanese equivalent for matches (haya-tsukegi) may have been misprinted on some.

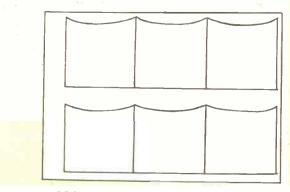
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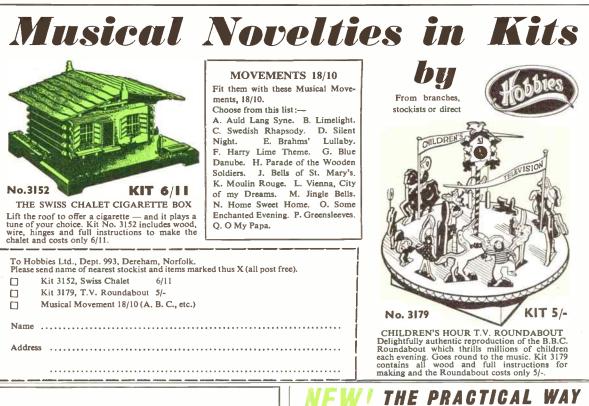
You will need a few sheets of plain paper, a sheet of tracing paper, gum, and a small piece of stiff cardboard to make the cover. Cut the plain paper into pages approximately Sins. by $3\frac{1}{2}$ ins.

Now cut the tracing paper into strips 4½ins. long by 1½ins. deep. With pencil, divide and rule it into three equal-sized pockets. Run a streak of glue along each pencil line and along the bottom, and fasten to the pages as shown. You can decorate the cover as you wish, and if you fasten the pages inside it with wool, cord or push-through type

of paper clip, other pages can then be added or deducted as desired. Torn pages can also be renewed. (W.S.)







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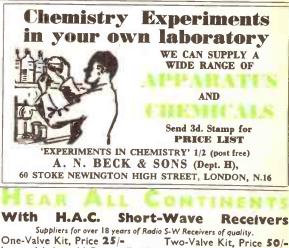
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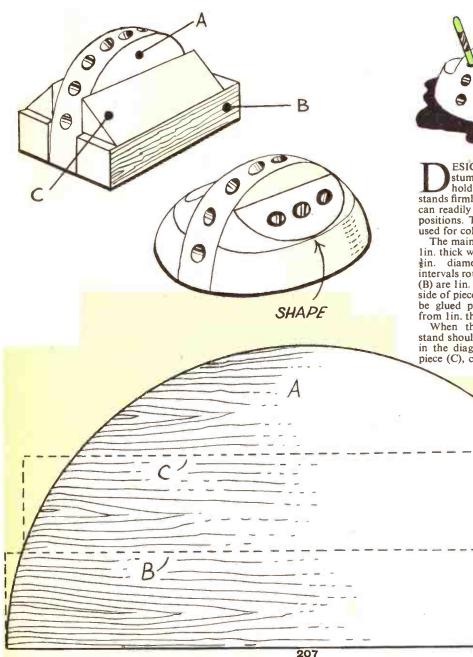
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(B) are lin. square and are glued on each side of piece (A). On top of these should be glued pieces (C) which are shaped from lin. thick wood.

When the glue has set the whole stand should be finally shaped as shown in the diagrams. Drill further holes in piece (C), clean up and paint. (M.p.)

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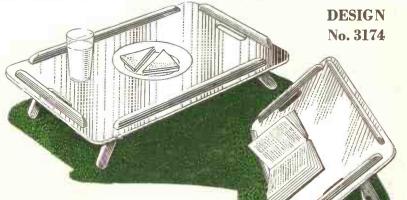
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