

Hobbies

WEEKLY

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For all your needs you should make a WORKSHOP CUPBOARD

THOUGH of pleasing appearance, this cupboard is easy to construct and will be found very useful. At the bottom is a fairly deep drawer for storing all those items which are needed to be ready to hand. A central cupboard with two doors offers space for larger items, and at the top is a door which opens downwards.

This discloses a space particularly suitable for papers, reference charts, etc., and the door is supported by two thin chains to form a desk upon which plans, notes, and so on can be spread. A useful article, altogether, which occupies a minimum of space results.

The finished appearance is quite modern and the whole is amply

strong, though all troublesome and difficult joints have been avoided. Spring catches are used on all the doors for convenience.

Materials to Use

It is suggested that $\frac{1}{2}$ in. thick tongued- and -grooved board be used throughout, though plywood is quite suitable for the shelves. In any case no difficulty should arise in using whatever wood may be to hand, though some of the dimensions will require slight adjustment if the boards are of different thickness to that mentioned.

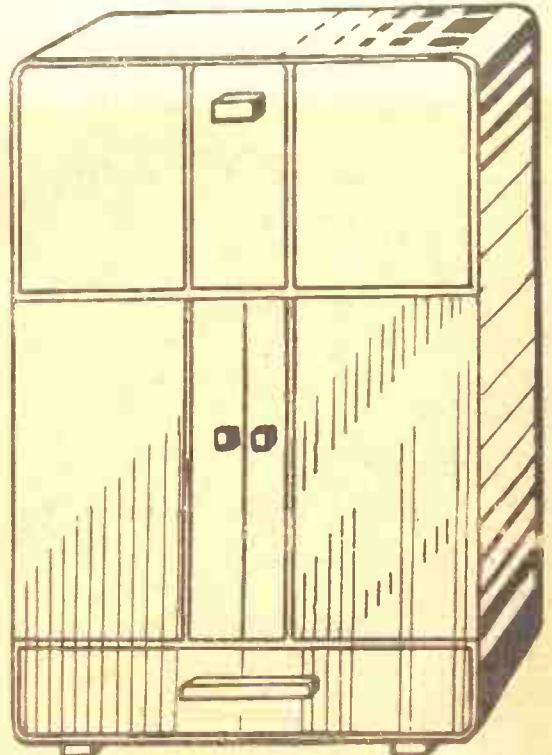
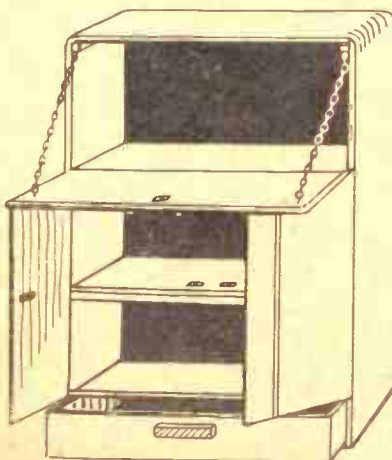
In addition to a quantity of $1\frac{1}{2}$ in. and $2\frac{1}{2}$ in. wire nails, three spring catches and catch plates will be required. Two short lengths of chain are also needed, and these can be obtained from the popular stores or an ironmonger. Hinges and screws complete the necessary fittings. The drawer and door knobs are cut from wood.

The Main Framework

After cutting out the planks for the sides, the six side pieces can be nailed on. Fig. 1 shows dimensions and spacing. Some of the $1\frac{1}{2}$ in. nails

are suitable here.

The top, bottom, and six shelf supports are then added. Nails $2\frac{1}{2}$ ins. long can be driven into the ends of the latter to make sides, side pieces and supports absolutely firm and solid. The top is supported



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by strips as shown, and screw-eyes to hold the chains are driven into the ends of these, as illustrated.

No strips are used in the bottom, as these would make the drawer awkward to fit. However, strips which act as small ornamental feet are nailed across as shown, and with additional nails through sides and

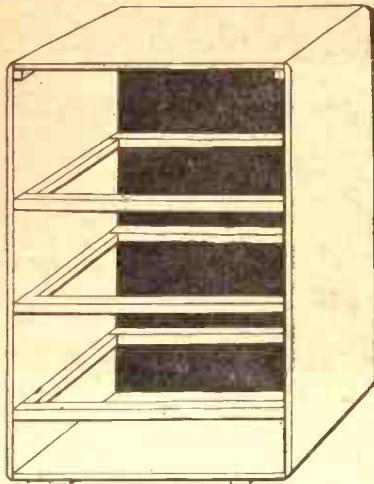


Fig. 1—Carcass of the cupboard

back, the bottom will be quite secure.

No difficulty whatever should arise if the parts are cut accurately to the sizes shown, and a rough finishing with glasspaper is advised before nailing together. To improve appearance, the corners of the cupboard are rounded, which can be done with a rasp.

The Doors

The detail at Fig. 2 shows the top door or flap, and Fig. 3 the central doors. Large sheets of ply are good material to use here, and the vertical strips will have a considerable strengthening effect. If tongued-and-grooved boards are used, they should run at right angles to these strips—e.g., horizontally. Such boards may be strengthened by additional strips across near the outside edges, if desired.

The flap is hinged upon the top shelf support. When open, a central spring catch engages with a catch plate screwed inside the cupboard. The chains (attached to screw eyes) are of such a length that the flap is held out to form a flat table.

Handles

The double doors are shown in Fig. 3 and construction is very straightforward. Some small blocks screwed on from the inside form handles of modern appearance, and the vertical strips are spaced to agree with those on the upper flap.

The small vertical inside strip only needs to project about $\frac{3}{16}$ in. over the edge of the left-hand door. A small groove will have to be cut in the shelf supports to accommodate it

when the door is closed. The right hand door can then be closed on top, this being better than merely having the doors meet edge to edge.

The Drawer

All the dimensions of the drawer are seen in Fig. 4. Plywood let in a groove is best for the bottom. If nailed on sides and back, then these pieces should be reduced in width by

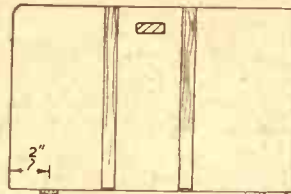


Fig. 2—View of upper door

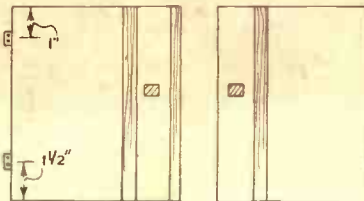


Fig. 3—The double central doors

the thickness of the material used for the bottom, so the drawer can slip into the $\frac{1}{16}$ in. space provided.

The front of the drawer is larger so it meets the lower edge of the central doors, and overlaps the sides of the

For ease of application, appearance and general finish, a quick-drying medium oak varnish stain is recommended. The final result will be enhanced by the vertical strips, as most soft woods show the grain well.

Inside Painting

A complete brush-over inside with a thinned varnish is recommended, and it is a good idea to use a lighter shade here. The addition of any required small partitions in the drawer or other sections of the cupboard will suggest themselves, and may be carried out in accordance with individual requirements.

Such a cabinet should be well made and well finished. It is just

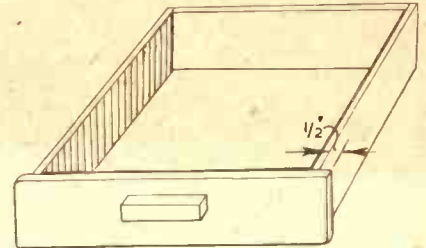


Fig. 4—How the drawer is constructed

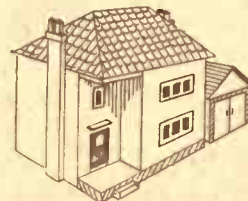
the sort of tool chest to keep in the kitchen if no room elsewhere, and as such should be an example of the craftsmanship and carpentry you are able to undertake. Put your best work into it, not only in construction

CUTTING LIST	
<p>CABINET</p> <p>Top—2ft. by 1ft. 6ins. Bottom—2ft. by 1ft. 6ins. 2 sides—3ft. 6ins. by 1ft. 6ins. Back—3ft. 6ins. by 2ft. lin. 6 shelf supports—2ft. by 1 1/4 ins. square. Side supports—1ft. by 3ins. by 1 1/4 ins. square. Under top strips—1ft. 6ins. by 1 1/4 ins. square. Feet—1ft. 6ins. by 1in. by 2ins.</p> <p>TOP DOOR</p> <p>Door—2ft. lin. by 1ft. lin. 2 strips—13ins. by 1 1/4 ins. by 1/2 in. Block—2ins. by 1in. square.</p>	<p>DOUBLE DOORS</p> <p>2 doors—1ft. 9 1/2 ins. by 12 1/2 ins. 2 strips—1ft. 9 1/2 ins. by 1 1/4 ins. by 1/2 in. 2 blocks—1in. square. Strip on inside—1ft. 9 1/2 ins. by 1/2 in. by 1in.</p> <p>DRAWER</p> <p>Back—1ft. 11ins. by 6ins. Front—2ft. lin. by 7 1/4 ins. 2 sides—1ft. 6ins. by 6ins. Bottom—1ft. 11ins. by 1ft. 5 1/2 ins. Handle—1in. by 1in. by 3ins.</p>

cupboard, and the bottom. When closed, therefore, the drawer fits flush. A little smoothing with glasspaper will make it act easily without sticking, provided it has been cut correctly.

After rounding the top corners of the flap, and the lower corners of the drawer front, so these coincide with the curved corners of the cupboard, the whole should be given a thorough glasspapering.

but to give it a smooth, pleasing and attractive appearance.



DOLL'S HOUSE

How to make in a simplified step-by-step manner a desirable four room Doll's House with electric light and separate garage if required

ALL MATERIALS EASILY OBTAINABLE
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How the handyman can make an elastic driven MODEL SPEED BOAT

READERS frequently write asking for details of a simple elastic-driven model speed boat, so we now give details for an attractive little model of cheap and easy construction. The sizes we suggest for the boat are given in the plan and side view Figs. 1 and 2 respectively.

These sizes can, of course, be altered if desired to suit any special size pieces of wood at hand. We must, however, warn the worker against having the boat too large, as the elastic drive cannot be expected to act on a large and, therefore, heavy object. We consider the sizes suggested here the limit for elastic. In fact a 12in. model would be just as effective and, no doubt, more speedy than the larger model.

The simplest of construction has been designed, and a hundred or so turns of the propeller to wind the elastic should be sufficient to drive the boat for some time. It will, of course, be understood that as soon as the winding has been done, a finger must be kept on the propeller while the boat is gently placed in the water. Then, on release the elastic drive will carry the boat forward at quite a good speed.

The best results are got from having a light and hollow hull, and the simplest way of getting this is to build up the sides on to a base piece and a top deck, as shown in Fig. 3.

The Hull

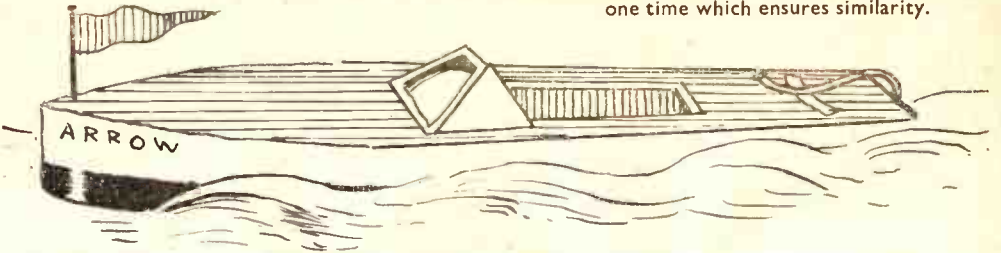
The shape of the hull pieces is shown in the plan, Fig. 1, and it should be a simple task to draw them out full size from the measurements given. Base and deck may be both $\frac{1}{4}$ in. thick, and cut round with the fretsaw. To get both deck and base perfectly symmetrical, which is a vital point, first draw the centre line, shown dotted in Fig. 1. Then draw the two parallel sides

towards the stern and finally complete one of the side curves of the bow.

Next trace this curve on thin paper including the centre line, and, turning the paper over and matching up the centre line, draw over the bow curve with the pencil, thus making sure of the true curves of the pointed bow. After one piece, say, the deck piece, has been

and hold the wood at this part.

The correct shape of the sides is given in the outline, Fig. 4. In cutting this outline keep well to the outside of the line to allow for trimming and cleaning off along the line of the deck and the base. Use waterproof glue if this can be got. In making the sides it might be suggested that both be cut at one time which ensures similarity.



thus completed and cut out with the fretsaw, lay it on the second piece of wood and draw round it, as a template, for making the base.

Cockpit Opening

The latter piece will be slightly less in length than the deck. This can be done by taking off a little wood at the straight stern with the fretsaw. The deck only will have the opening cut in it to form the cockpit and if desired a little border or edging of thin wood could be pinned round, as seen in Figs. 1 and 2.

When the two pieces are cut, they are held together at the bow and the stern by two shaped blocks of wood. The bow block is $1\frac{1}{2}$ ins. deep and $1\frac{3}{4}$ ins. wide, as measurements and shape shows. The stern block is $1\frac{1}{2}$ ins. wide and $2\frac{1}{2}$ ins. long. Glue and pin the blocks to the deck and base, the result being as shown in the partially cut away view, Fig. 3. In this detail, A and B, are the deck and base, and, C and D, bow and stern block respectively.

The two sides of the boat are made from wood about $\frac{1}{16}$ in. or less thick. Plywood is quite good although if not well painted and protected it is liable to peel and split away. As the curve towards the bow of the boat is but slight it should not be difficult to bend

Cleaning and Painting

The edges of the deck and base are coated with the warm glue, and the sides then put on and further held with fine brass pins or brads. Holes must be made at equal distances along the edges and $\frac{1}{8}$ in. in for the pins to prevent splitting the wood.

Glasspaper off all the edges when the glue has set hard, and then coat the angles inside as far as possible with the glue to fill any small places and to make a permanent covering to the wood. To make the hull watertight—and this is a most important matter—it should first have a coating of red lead paint followed by two coats of paint or enamel.

The sides would look nice enamelled white, with bright red below the water line. The deck should be yellow ochre in colour lined up to represent the deck planking. A very simply-shaped spray hood could be added, as shown, just in front of the cockpit. It could be made from tin bent and pinned to the deck.

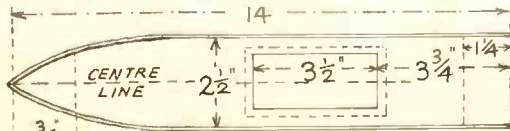


Fig. 1—A plan view of deck

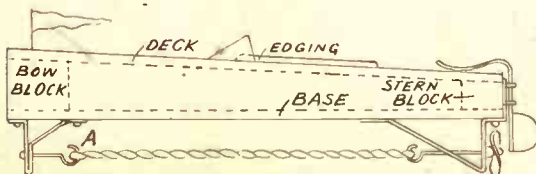


Fig. 2—Side view with bow and stern blocks

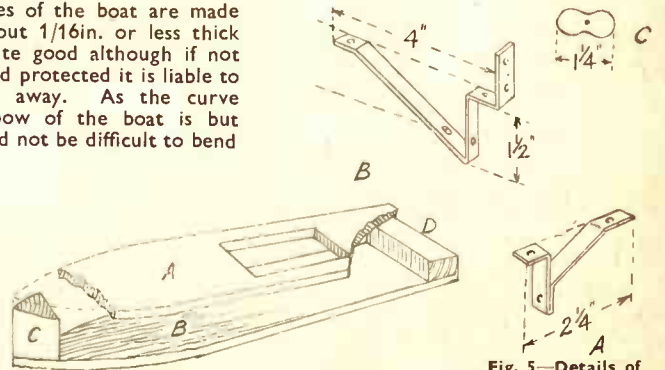


Fig. 3—Broken view showing construction

Fig. 5—Details of propeller fixing

Fig. 4—Shape and measurements of side

The elastic to drive the boat is held by brackets formed from strip brass of sufficient stiffness to withstand the tension of the elastic when wound up. A little experimenting as to thickness of brass should be made at this point.

The bow bracket, A, in Fig. 5, will require a strip about 3½ ins. long. It will be angled up and drilled with holes for the fixing screws in two places and in the upright for the passage of the wire connecting with the elastic. Small round-head screws will hold the bracket securely to the base. It will be noted that the hole in the upright passes through both thicknesses of metal. A similar strip of brass must be cut about 5½ ins. long for the stern bracket, B, Fig. 5. Here, it will be noted, are four holes to take the fixing screws. Two of these pass into the stern block of the hull and two into the base.

Take care to get the two flat surfaces, where they screw on to the base, in direct alignment, as indicated by the dotted lines in both the diagrams. Also note in bracket, B, the holes for the holding wire. These must be drilled in

alignment also, as shown, so as to get free running. Set the brackets carefully in place and make holes for the fixing screws before driving them in.

Next cut off two pieces of brass wire and at one end of each, form fairly large loops or hooks to take the ends of the elastic. The bow piece of wire should be put through the bracket and the straight end bent up with the pliers and burred over.

Propeller

The propeller is made from a piece of sheet brass or tin cut to the shape shown at C, Fig. 5, and drilled for the wire. To make a really strong job of the joint between the shaft and the propeller, a short brass sleeve similar to that found on clock pinions, should be soldered to the latter and then this is passed over the shaft and then soldered to this again. Before threading the wire, which now has the propeller on it, through the holes in the bracket, a glass bead should be put over to lessen the friction between the stern and the bracket upright.

Elastic Drive

At least five strands of square aero-plane elastic are needed to give a reasonable amount of power to the boat. The actual number, however, will be governed by the thickness and variety used. Before winding the elastic rub a little glycerine on each strand, to help to preserve it. The type of elastic suggested for use with this boat is like that used for model aeroplanes, about ¼ in. wide and 1/32 in. thick.

A rudder could be added to the boat by first running in centrally in the stern, two brass eyes—these may be put in the place of the screws as fixing to the bracket, B. Run through these eyes a piece of stout round wire with the top turned over to meet the deck and to form the tiller. Below the eyes the wire may be hammered flat and a piece of shaped brass or tin soldered on. The rudder must be so shaped that when turned to one side there is sufficient room left for the fingers to wind the propeller.

How to replace your old style wooden frame with a modern METAL MIRROR FRAME

OLD mirrors, with unsightly wooden frames, can be made to look very attractive, and certainly, a whole lot more modern, by fitting them with a neat metal frame. The procedure is a very simple one, entailing little actual skill, and should present no difficulty whatever to followers of our metalworking articles.

First of all, detach the mirror from its wooden frame, rub clean, and examine the edges. Any rough edges must be smoothed over with a file. Do not attempt, however, to use a rough file or you will probably chip the edges of the glass.

Get a piece of thin clean material slightly larger than the mirror. Lay the mirror on the material and mark right round the edges. Take off the mirror and add a margin to your outline, equal to

the thickness of the mirror, plus ¼ in. After marking this margin mitre off the corners, as shown in Fig. 1.

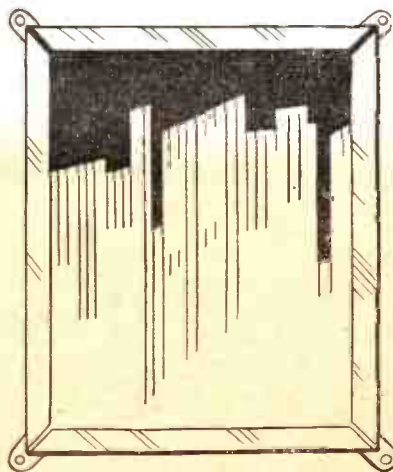
The next job is to fold up the marginal edges, to form a shallow box, into which the mirror has to fit. This can be best done by using a mallet and the edge of the bench iron. Be careful to throw the lap off equally all round, as, if this is uneven, it will detract from the appearance of the finished job.

Place the mirror inside the metal casing and rest both flat down in a perfectly level surface. Then, very gently, ease the ¼ in. overlap on to the edges of the mirror, using a mallet very lightly, until the mirror is firmly encased. The metal should now form a very neat and unobtrusive frame.

The Pendants

Having framed the mirror, the next job is to provide means whereby it can be attached to the wall. The method can be varied to suit individual tastes. It can be suspended from one pendant at the top—it can be slung from two pendants, placed half-way down each side—or it can be fastened at all four corners. The latter method is to be preferred, because, in addition to its undoubted security, it presents a much neater finish.

Cut out four pendants to the measurements as indicated in Fig. 2 and file smooth. Rest each piece in turn on a piece of lead or hard wood, and punch through the screw holes, filing off the resulting burr afterwards.



Next, solder the pendants firmly to the back of each corner, with the screw holes clear. File off surplus solder and give the whole job a rub with fine emery to take off any roughness of the edges.

To finish off, give the frame two coats of reliable enamel. Either a black or a white finish will look smart, especially if, as is usually the case, the mirror is to be used in the bathroom.

Paint Preserver

WHEN you have finished with your paint, pour a little water on the top to prevent a skin forming. When coming to use, pour the water off. The paint will be as good as ever.

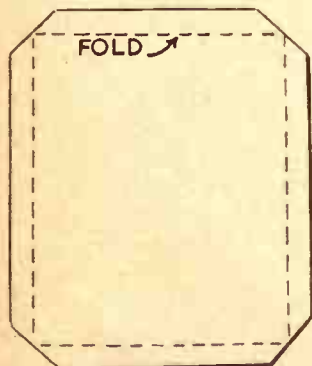


Fig. 1—The back and rim shape

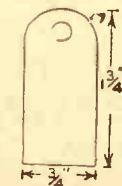


Fig. 2—Hanger

For articles of use, or decorations, patterns can be used for METAL FRETWORK

DO you realise what attractive pieces of work can be undertaken if you substitute sheet metal for wood in cutting out many of the fretwork designs published in these pages, and shown in the Hobbies Handbook? In these days of shortage of wood it is an idea worth considering, and the construction will provide quite attractive pieces of work with just as much interest in their making.

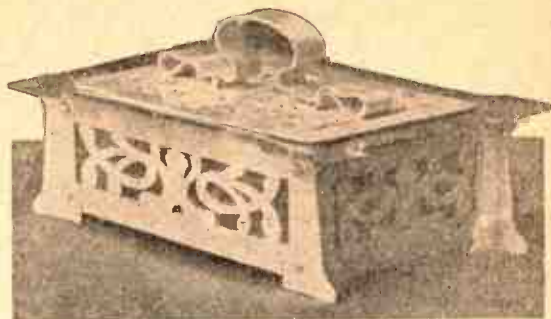
We have undertaken a number of experiments, and found that the work is both pleasing to undertake and readily done with materials which can now be more easily obtained possibly, than wood

cigarettes, trinkets, ladies' handkerchiefs, matches, etc., such things as tea-pot stands, simple pen racks, ring and watch holders, calendar stands and so on. The process of making them is virtually the same, and once you have made the attempt and found the way of doing it, then the work can go forward quite easily and simply on the same process throughout.

There are several little points to remember, and the details here will cover them so you may not have to worry about trials which would otherwise arise. The metal itself is thin—thin enough to cut quite easily with the ordinary metal cutting blade if held firmly in the V of the cutting table. The pattern to be cut is affixed to the metal by means of glue. It is not advisable, however, to fix several patterns at once because they are apt to peel off as the glue hardens up. Rub the glue thinly on all the metal, then put the pattern down flat.

Cutting

Proceed with the cutting in the usual way, and if there is any tendency for the pattern to pull up, dampen the paper slightly—not too much—and press it down again. You should thus be able to complete the cutting before the glue has hardened. When finished, the paper pattern can easily be pulled off the metal, or if it is hung on too firmly it can



For interior work with the fretsaw, you have to make a hole through which to thread the blade. This can be done if you have a very fine metal bit in the ordinary brace. Failing that, you could punch a hole through with a small nail, the point of which has been slightly blunted. Lay the metal on a piece of hard, firm wood, place the end of the nail in its exact position and give a sharp swift tap with the hammer.

Holing

Get the hole through the metal just enough to admit the blade. There is no need to make a big hole, nor to hammer away hard in piercing it. The nail should make just a little hole and may possibly burr out the underside. This, however, will disappear when the waste part of the design is cut away. Practice this hole-making on a waste piece of metal first, until you get the right blow so that you can make the hole without bending or denting the metal. For this reason, of course, it is essential to be on some hard, firm surface.



itself. Of course, metal cutting fretsaw blades are needed, but they can be used in the ordinary handframe or in the fretmachine exactly the same as an ordinary wood cutting saw.

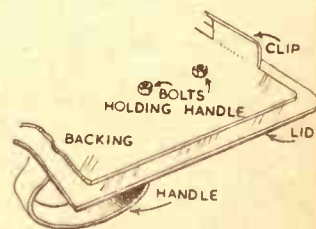
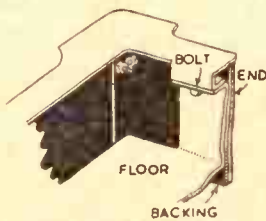
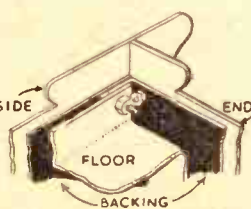
The actual difference in them is that the teeth are much more numerous on the metal cutting blade. They are, too, made of special hard material which enables the worker to cut almost any sheet metal comfortably and easily.

Aluminium Sheets

Aluminium, perhaps, is the most easily obtainable now, and you can get sheets of this in various sizes for quite reasonable sums. It should be of 20 or 22 gauge, and it has the advantage of being reasonably soft to cut, can be easily bent to sharp angles or curves, and normally has a bright and attractive polish. Advertisements of this material are to be seen in many periodicals, and a few odd pieces are sufficient to make a trial.

The result of such work is seen in the photograph. This is a small trinket box design taken from the Hobbies Design Book A, which merely serves as a suggestion, and, no doubt, readers will be able to think of many other possibilities. These actual books of fretwork designs are, indeed, a source of many suggestions of practical, everyday articles which can be just as well cut in metal.

There are, besides, boxes for



Three suggestions of how metal is bent and fixed for forming floor and handle to a box

be soaked off with warm water and finally rubbed away.

There is another point to remember in using metal. Generally one side has a better surface or a more highly polished face than the other. This is the face which should be kept uppermost—the one on which the pattern is pasted. If you turn it over and do it the other way round, then you will probably find the metal surface has become scratched on the work bench. That is a great point in using any of this material—to see that the highly polished surface is not scratched or bent about too much.

In cutting, get the sawblade quite tight in the handframe or machine, and hold the metal close to it and quite firmly on the cutting table. A certain amount of lubrication is needed to the saw to prevent it running hot. A little thin oil on an ordinary artist's paint brush is quite sufficient. If the brush is kept handy it can be drawn up and down the blade occasionally just to give a thin film of oil to the teeth as the work proceeds. Do not overdo it, but apply just sufficient to keep the fretsaw blade damp.

The aluminium can be finally polished

with ordinary metal polish, used on a soft clean rag. It is advisable first to give a rubbing with methylated spirits to clear away any grease or finger marks which may be on the surface although not obvious.

In certain cases you may like to add a metal background behind the fretted openings, and in such cases a good plan is to paint this a bright colour to serve as relief for the actual side. Ordinary enamel can be used for the purpose, a nice shade of blue or red being most popular for this class of work.

Construction Needs

Apart from cutting, there is the question to be considered of the actual construction, which must essentially vary from that usually employed in normal woodwork. Small bolts and nuts can be added in inconspicuous places, and very often the metal can be bent or curled to make a fixing on its own. The photograph of the trinket box shows the method of this, and the other details here give added instruction. Nothing definite on this can be provided because each job to be undertaken needs to have its own particular form of join.

A little thought, however, before you commence, and you can easily see the best way of fitting and joining up parts, etc. In many cases the use of metal is an advantage, in that parts can be screwed together, or as in the case of corners,

several layers can be bolted together quite inconspicuously. We show you how this is formed in one corner of the detail here, and the underside of the lid illustrated indicates clearly how the underneath is added below the fretted portion, and then the whole thing bolted through to the handle above.

Screw Fixing

The interior sides of the box can be bent to form a clip ring into which the lid itself will fit firmly. The little screws and bolts used are those small ones such as incorporated in Meccano and are normally obtainable from most ironmongers or hardware stores.

All these suggestions can probably be improved upon in different cases. Before you begin work at all on the design you must plan how you can best fit the parts together, and cut them accordingly.

Holes for the screws can be punched, or better still, cut out with a metal cutting bit of the diameter required. The screw heads are not conspicuous, and the nuts are, of course, fitted inside in some out-of-the-way spot. As you see in the photograph of the box herewith, the bendable material can be curved into quite shapely results.

Decorative Overlays

Apart from utilising this metal in designs for actual boxes or constructed

articles, there is always the opportunity of small pieces of metalwork forming additional decoration for existing articles. Here again, many of the designs in the Handbook give useful suggestions.

Overlays can be used to cut in metal as attractive additions to ordinary furniture or carpentry. You can cut the outline, for instance, of a galleon or a Dutch figure, or an animal or bird, and if cut in metal and fixed it certainly makes an added attraction to the whole thing. Monograms give individuality to a gift, and look well cut in this metal and fixed to the lid of a small wooden box, to bookends, cigarette boxes, etc.

Emblems

Then, too, if you are interested in any particular Movement, you could cut a metal plaque or feature which is linked up with its activities. The emblems of Scouts or the Red Cross, or British Legion, or Toc H, could all be cut quite attractively in metal and used as practical decorations for walls, or doors, cupboards, etc.

Apart from the aluminium mentioned, there is the possibility of obtaining sheet brass, which could be utilised in the same way. On the other hand, you may be in a position to get zinc, although this is much harder both for cutting and bending. In any case, the suggestions put forward here are worth serious consideration, and an endeavour should be made to try out this unusual and attractive form of handicraft.

Every reader should make a point of CARING FOR BOOKS

EVERY book lover likes to see his books in good condition. Yet as books get a fair amount of handling they need a little attention if they are to retain their good condition, for with the years, bindings are likely to become brittle and crack or tear easily.

Quite a pleasant hour or two can be spent putting in some repair work on your favourite books. A few practical hints on the subject may come in useful. Here are a few items which you will need for the job.

A pot of good paste and some invisible mending paper. If you have to deal with leather bindings, an excellent glue can be made with 1 oz. of rubber placed in a bottle and covered with bisulphide of carbon until dissolved.

Cleaning

Bookcases should be completely turned out once a year if they are enclosed. One reason for this is due to the fact that books frequently suffer in consequence of a wall being damp, yet unnoticed because of the bookcase. If it is found that the wall is damp, steps should be taken to have matters put right.

This may be due to a faulty gutter, or the wall may be porous and need repointing. Sometimes an application of damp proof solution will be found sufficient to stop any further damage. When books have become mildewed on the covers a drop of oil of lavender applied on the finger tip, wrapped in a soft rag will usually be effective in removing mildew.

Olive Oil for Leatherwork

Leather bindings will with time become powdery, and for this reason they need an application of olive oil to feed the leather and prevent its becoming perished. Use the oil sparingly on a soft cloth and rub gently.

Removing fingermarks from pages is rather a tricky business and great care must be taken to use a very clean soft india rubber, while at the same time the page must be held firmly during rubbing, otherwise it may easily tear or become creased.

Transparent Mending

When pages have become torn or loose, they can quite easily be mended with the aid of transparent adhesive paper. When replacing the loose page

fold the adhesive paper and stick one side of the fold to the page that is loose and the other side of the fold to the adjoining page which is firmly fixed. Always tuck the hinge back as far as possible.

Bad Backs

The backs of books are apt to suffer badly in careless handling, so when the binding becomes loose and separate from the page, it will be found necessary to stick three bands of tape across the back of the pages. There should be one at the top, one in the middle and another at the bottom to give adequate support, and be sure to cut tape long enough to allow it to extend 1in. beyond the cover on either side.

Later when the glue has hardened up and tapes are holding firmly, arrange the pile of pages in its proper position inside the cover. Now stick the ends of the tape on to the cover itself. This allows the cover to open easily.

Books whose covers and backs have faded in the light can have a weak solution of peroxide of hydrogen applied to them, or a little household ammonia will brighten up the colours.

HAND PUPPETS

THE making of puppets is now extremely popular as proved by our recent series of articles, and during the summer many readers may have seen, besides the ever-popular Punch and Judy, such entertainments as Living Marionettes. Here are two extremely amusing novelties, which can be performed either now, in the open air, or carefully rehearsed for the winter indoor party season. The first, The Dancing Highlander, requires certain "props", but the Talking Hand can be done at very short notice.

Highland Dancer

As will be gathered from the illustrations, the Highlander's lower legs are really the performer's first and second fingers. The knuckles have a remarkable resemblance to knees, on a smaller scale, of course.

The upper part of the body is made from stiff card or thin plywood, and has two loops at the back through which the fingers are inserted. The loops are made from wide strong tape or elastic and are sewn on. Or a wire stapling machine may be used if available.

Dress Details

The details of dress are either painted with poster paint, or actual scraps of material may be glued on. Possibly a half-and-half policy will be best, with some features painted on. For example, the hat, jacket and facial features can be painted and other parts stuck on, as for example the plaid, kilt and whiskers (cotton wool).

The actual size of the figure will, naturally, vary according to the size of the performer's hand. The size given in

the diagram, however, is a good average for a boy's hand. Test the figure before spending a lot of time in dressing it up. If necessary, make it larger or smaller.

The stockings and boots are cut from an old kid glove or finger stall. A white one is best, but brown ones may be painted if necessary. Tiny wooden soles are fitted inside, with cotton wool stuffed in to give some semblance to a foot. Absolute accuracy is not needed, however.

The Performance

The sketch shows how to hold the figure. If it is made to dance on a thin board supported over two blocks, the Highlander will give a kind of tap dance. Music is either hummed or provided by piano or gramophone—a lively Highland reel, of course.

With practice, two figures can be manipulated. As a novelty item in a puppet show, where several performers are involved, a whole line of dancers (perhaps dressed as Highland Lassies) can perform but careful rehearsal is needed here.

It looks better if the performer puts a long black gym stocking over his hand and arm (two holes being cut to let the necessary fingers through) and wears a kind of large black bib. In this case, the Highlander should be painted brightly with no black or very dark parts. He will then show up well against the dark ground.

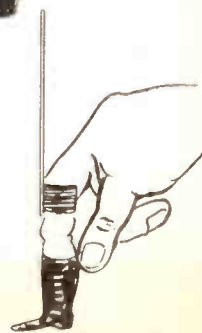
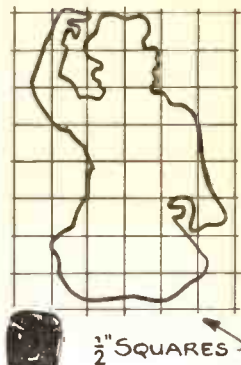
The Talking Hand

In the Talking Hand, all the "props" you need are two circular pieces of paper, each about the size of a sixpence, with an unused matchstick stuck through each so the head alone shows (see sketch). These can be carried round in a matchbox.

Have ready a penny (or half-crown), a handkerchief, and a piece of red chalk or a lipstick you may be able to borrow from a lady.

Either the left or the right hand may be used (both, later). Clench your fist so that

the second finger sticks well forward at the knuckle (see sketch). Insert the "eyes" and "mouth" where shown, and rub a little red on the "cheeks". Arrange the handkerchief, shawl fashion over the head, and there is an uncanny



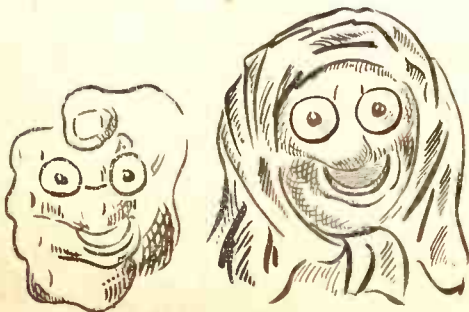
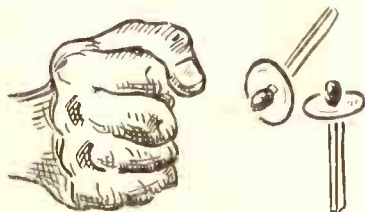
The Highland figure and details of making

resemblance to an old lady. If you move the fingers slightly, the effect is very amusing.

If you are anything of a ventriloquist, you can carry on a conversation or duet with the "old lady", but the effect is just as amusing if performed in dumb-show.

Bench Pencil Holder

A HANDY place in which to keep your carpenter's pencil when at work is to bore a hole in your bench with a brace and bit. Bore the hole deep enough for the pencil to stand upright when not in use.



How the hand is made with eyes and hood

WEBLEY AIR PISTOLS

Marvellously accurate for target practice.

No licence required to purchase.

Senior Mark 1

Junior Webley Air Rifle

Write for List. WEBLEY & SCOTT LTD., 166 WEAMAN STREET, BIRMINGHAM, Eng.



An armchair holdall in leather, or fancy material is this LADY'S FANCY WORK-BOX

SINCE mending, darning and knitting are usually done in the evening, it is an asset to have a work-box that can be comfortably placed on the flat arm of the easy chair. So many of these articles offered for sale in the shops are too large and cumbersome for this, so we have prepared an article showing how to make one easily and cheaply, specially for this purpose. The handles are weighted and hang down on either side well below the arms of the chair and help to steady the box, preventing it from being accidentally knocked off.

The box itself, as shown, has no lid; instead the handles fold over when not in use and serve to keep the wools, etc., in place. It is intended to hold mending wools, silks or knitting, but can readily be adapted to other uses by suitable alteration in dimensions.

The Box

An ordinary card shoe-box, which is approximately 11ins. by 5½ins. by 3½ins. will serve as the box itself. This could be readily reinforced by adhesive tape or transparent gummed tape at the corners and along the bottom edges. A stronger box could be made from ¼in. wood, glued and pinned together, using fine fretpins and starting the holes with a fine drill before tapping the pins home.

The floor could be of ¼in. material and can be made to fit between the sides. The outside measurements of the box are shown in Fig. 1. The size of the box can obviously be altered to suit individual requirements, but it will entail a similar alteration in the size of the covering material. Keep the width of the box rather less, if anything, than the width of the chair arm.

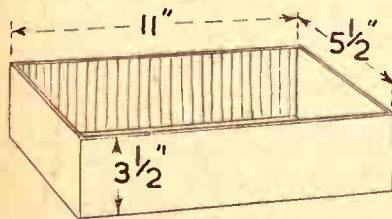


Fig. 1—Details of actual box

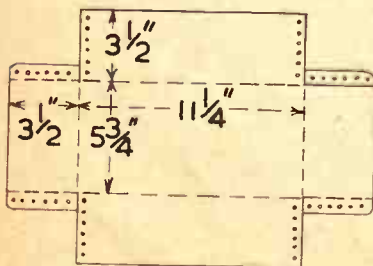


Fig. 2—How to lace the corners

A piece of leather, real or imitation, trimmed to the sizes shown in Fig. 2 is needed. As can be seen, this will fold together to make a covering for the box. The ornamentation on the sides is not difficult, but we suggest that the reader who has had no experience in this direction, obtain one of the popular books on leather work, which can be bought quite cheaply at any good bookstall.

A simple design is suggested in Fig. 4. Designs executed in coloured inks, stains or even enamel can also be quite effective, provided they are suited to the colour of the leather.

In Fig. 2 you will see the corners are punched with holes to provide for a single row of lacing, while the diagram in Fig. 3 gives an alternative method. The plastic material for lacing can be purchased at most large multi stores or can be obtained from shops that specialise in "Arts and Crafts".

Alternative Covering

A good covering can be made from material such as is used for loose covers. Indeed it would give a very smart appearance if the box were covered with the same kind of patterned material used for the chair cover.

Failing this, a plain material can be used and the design painted in enamel or coloured waterproof ink. Since this is for the lady of the house she might consent to do the design in fancy embroidery.

Coloured buttons stitched on to fabric can also make pleasing designs. They can be bought in many different shapes, including a variety of flowers. These can be stitched on to form posies, or the plainer type can be made into geometrical designs.

Each handle consists of a long piece of material, about 2ins. wide. It is folded to form a double thickness of 1in. wide and punched along its length for lacing. Each handle is weighted at the centre and a piece of material sewn or laced com-



Fig. 3—An alternative method of lacing

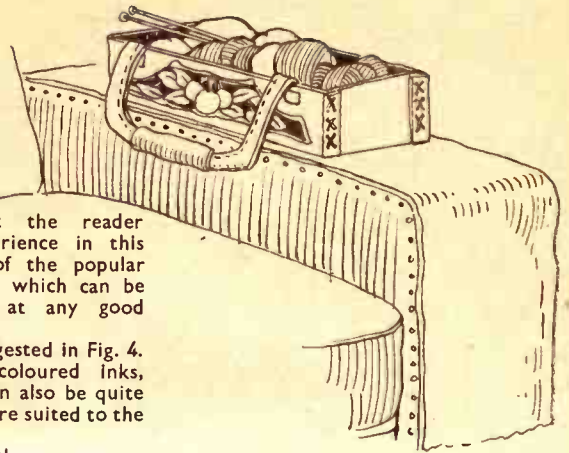


Fig. 4—The embossed design and position of handle slot

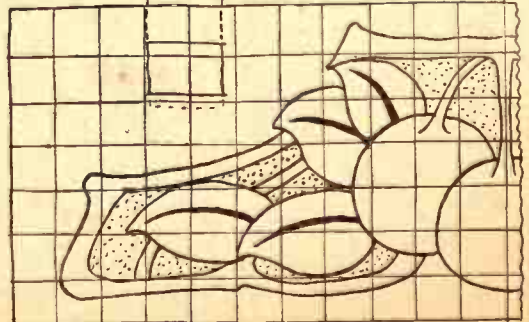
pletely round, as shown in the illustration. The weight will consist of a strip of lead beaten to shape, or a length of ½in. iron bar. A handful of lead shot sewn into a bag to form a thin "sausage" or a number of steel ball bearings, are only a few of the alternatives that suggest themselves as weights.

As shown in Fig. 4, the covering is slit to take the handle, and the piece left showing forms part of the design. They can be laced in place to be in keeping with the lacing on the rest of the box.

Stitching

Although the lacing gives the more artistic effect, it can be dispensed with if desired, and neat ornamental stitching used instead. A strong needle and thread must be used, and the holes, if working in leather, pricked through with a burnishing awl as work proceeds. If cloth fabric is chosen, the stitching is merely another simple job of sewing and could be done quickly and neatly on the sewing machine.

To complete the job, the inside of the box can be lined with coloured paper, pasted in place, or if a wooden box has been made, it can be given a coat of clear varnish.



The amateur photographer should be careful to avoid these HOLIDAY ERRORS

WHAT a thrill is experienced when the spool of film shows eight or 12 perfect negatives, every exposure correct, perfect development and a picture in every one. Well, it is not an impossibility and there is no reason why any amateur should think it is due to luck or a freak.

We must first recognise that any failure is 99 per cent due to our own fault or carelessness. Let us, therefore, run over some of the common mistakes; common because everybody who has not had a few year's experience is likely to make them.

Beware of Colour

Colour is something which attracts the eye. Generally it adds beauty to a scene or object. And as a photographer is always on the look out for something that is beautiful and attractive he, or she, is naturally influenced by colour. Very often, without any thought, the camera is brought into action and another exposure is made.

If a few seconds consideration had been given as to what that scene or object would look like without any colour, simply black and white, then that exposure would not have been made. It was quite regular in bygone days for photographers to carry in their camera

although the subject presents a lot of colour, there is a picture worth taking, then try to give a little thought to the exposure time; and endeavour to get into the right position for the best composition.

The next error that spoils hundreds of 'pictures' is known as 'baldheads'. To the uninitiated this may sound a somewhat silly expression but, as a matter of fact, it is very explicit. It simply means a print without any detail in the sky.

At this time of the year it quite frequently happens that the sky is without any sign of a cloud. It is completely blue. If a photograph is taken on such a day and the sky happens to be included, then the top half of the

might easily be termed that of 'distance'. Everyone likes to stand on high ground and take stock of a glorious panorama of the countryside. It is only natural that amateurs desire to place such a view among their records. But how often that desired record turns out a hopeless failure. The resultant print is simply a very poor suggestion of a few lines of



Note the value of clouds compared with the view below

print will appear as a white patch. It is this effect which gives us the term 'bald-head'.

No print with such a defect can be termed pictorial. From a composition view point it is completely without balance and to the trained eye it is lacking something and becomes uninteresting. Is there a remedy? Quite frankly there is

no remedy in the actual taking. If there are no clouds then it is quite impossible to introduce any in the negative. They can, however, be introduced from another negative, when making an enlarged print, but that is another story.

The best advice is not to expose until some clouds make their appearance. This may mean waiting till another day but even if it does and even if you may not be able to be at that spot again, it is still better not to waste a film on it.

The third common error is one which

hedges, trees and one or two small hills in the far distance.

The fact is that far too much is attempted. We are endeavouring to reduce the miles of panoramic scenery into the space of 3½ ins. by 2½ ins. on a film. When one thinks about it, it really seems very remarkable that occasionally a good result is obtained, but usually the attempts are not too good.

Position

Every amateur has at some time or other tried, but thanks to the use of good view finders the attempts are not now made so frequently. When you are faced with such a desire it is advisable to move about until a position presents itself where there are definite objects in the foreground, middle distance and away at the background. If such a position can be found it will be noticed that the foreground object will catch the eye, lead it to the middle distance object and so on to the remainder of the picture and this without destroying the effect of a panorama and distance.

In fact a successful effort is being made of the composition of what might be termed a broad or open landscape. A group of trees in the foreground will answer extremely well for getting this effect, but an empty or open field in that position makes the whole scene hopeless.

Then there is one 'avoidance'. It cannot be called an error because in a



The absence of cloud makes the picture a "baldhead"

cases a small piece of blackened but transparent glass, which was used to view a colourful scene, to see how it would actually appear as a black and white print.

Exposure on such subjects must be as near perfect as it is possible to get. This must be followed by correct development, for it is only by such careful work that the colours can be truly represented by the tone values, or, as they are sometimes termed, half-tones.

If, therefore, you are satisfied that,

(Continued foot of page 238)

A Craftsman's Notebook

Car Numbers

THOUGH I am not myself a collector of car numbers I have nevertheless been interested in some newspaper gossip on this subject. It was mentioned that over a period of fourteen years one reader had managed to collect numbers right from 1 to 999.

Among several variations it seems that one popular method is to start by spotting a number plate bearing number one, then number two, and so on in numerical order up to 999. But from what I gather this is a task that would probably take years and years, some enthusiasts having been at it for more than ten years and still hundreds off their goal.

For any who do indulge in the pastime I would stress the importance of safety first, practising it only from a safe distance and never allowing number plates to divert one's attention from the direction of the traffic.

Craftsmanship on Show

A FEATURE of the large agricultural shows which always interests me is the section devoted to rural crafts. Here we may watch the clogger shaping soles from blocks of alder or birch, or a specialist in another line making hurdles, or get a glimpse into the ways of the thatcher, the wheelwright, the blacksmith, saddler, and others.

The comparatively simple tools employed, the ease with which these experts seem to do it, is inclined to make some jobs look easy. But we know that such skill is acquired only through patient toil and practice, and often enough a craft is handed down a family from one generation to another.

To learn the art of making a really good besom broom, they tell me, takes four or five years. Besides knowing how to bundle and bind the twigs to give good and lengthy service, those who follow this trade must know exactly when to cut and how to stack the raw

material for weathering to ensure the proper pliancy.

Mass production by machinery and changing fashions has, of course, put an end to many a rural craft. But the hand-made products of the real craftsman cannot be surpassed for quality.

How to Handle Rabbits

AT a gathering of novice rabbit keepers a controversy arose about the right and wrong methods of picking their pets up, some being of the opinion that it is cruel to take them by the ears, others that it is harmful to handle them by the body.

To lift and hold the creatures aloft by the ears alone is certainly not advisable, nor should they be held around the middle in case it causes injury. What, then, is the usual method?

Some authorities suggest the loose skin at the nape of the neck. The method favoured by most of the experts I know, however, is to take them firmly though gently at the roots of the ears. But at the same time—and this is most important—support the rabbit by placing the other hand under the rump.

Thus the ears merely provide something by which to hold it steady, the whole weight being taken off them by lifting and supporting the body with the hand beneath its hind quarters.

Serviceable Sacking

HOME craftsmen will find the sack useful. By which, of course, I do not mean the sort of "sacking" which puts somebody out of a job, but one or two ordinary sacks.

Opened down the seams and provided with tapes complete coverage is available at a moment's notice when the worker is engaged at the bench, protecting the clothes from wear and tear, stains and splashes.

A piece kept handy is all ready for dusting down the bench or mopping

up spilled liquids, another for the hands will save soiling towels. A small sack with a thin board inside to hold it flat has its obvious use on the floor.

In a different way a sack helps a young enthusiast who includes amateur boxing among his recreations. Stuffed with straw and slung from the ceiling it's an obliging recipient for his punches.

Hints for Amateur Paperhangers

DURING recent years there has been so little opportunity to use wallpaper that a few brief reminders may not be amiss for amateurs about to do a room in this way. A novice at the job will probably appreciate the services of an assistant.

The waste edges having been trimmed off the paper start on a wall free of doors or windows and get each strip in place before cutting the next to length, to make sure of matching the pattern. Make certain that the first piece hangs absolutely vertical by suspending a weighted length of string.

Working from the top, brush the whole carefully into position, using the usual type of broad brush with fairly stiff bristles, though if this is not available, a large dry duster will serve. Sometimes it may be necessary to draw it partly away from the wall again to take a crease out or get it straight.

Proceed round the room to the right, joining the paper edge to edge with the pattern in perfect line, and make sure it goes squarely into the corners.

Outsize in Trees

BECAUSE there was no sawmill in Buse in England big enough, an 80ft. walnut tree, 10ft. in diameter, which was felled near Malton, had to be sent abroad for sawing up.

Certainly a sizeable tree. There are groves of trees in California, however, which outclass it easily, with twice the diameter and three times the height.

I refer to the giant Sequoia species. Some of these mighty redwoods tower to nearly 300ft. and measure 70ft. or more around the base, being credited in some cases with an age of 5,000 years.

The Craftsman

Photography—(Continued from page 237)

way it is no fault of amateurs. Nevertheless it is something to be avoided. Post Office Officials cannot consider photographers and, consequently, telephone and telegraph poles are erected in places where, pictorially, they should not be and are often in a position to spoil a view. Who wants to take a snap of a lovely old cottage if there is a pole sticking just in the way?

It is really surprising how many times the camera has to be put away because of these obstructions. The author knows where one of the finest Beech trees to be found in the whole of England stands. It is a perfect specimen, but trying all angles it is quite impossible to take a photograph of it without including a

pole belonging to the G.P.O.!

The foregoing items deal entirely with the selection and the making of pictures, but before leaving the matter of errors it will, perhaps, serve a useful purpose to remind our readers of some other mistakes that are sometimes made which lead to disappointments.

When a folding type of camera is in use it should not be closed before changing the film after an exposure. Because in some instances it may cause straight scratches on the surface of films.

A speck of dust on the surface of a film before exposing results in a blank transparent spot on the negative and a black spot on the print. See the inside of the camera is dust-free before reloading.

When inserting a film into the camera be sure to wind the start of the cover paper on the empty spool so it runs free of the spool flanges. Otherwise the paper will pass on to one of the flanges after two or three exposures have been made and it will be impossible to turn the spool for further exposures to be made.

Do not let the camera lay on the sand or in the sun, place it in its case after each exposure; a little care and thought applied in this way will save many failures and much disappointment.

The illustrations selected for this article are intended as examples of a 'bald-head' as compared to a similar scene with clouds, and also a distant view with foreground and middle distance details.

MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 3d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Order and Stamps must accompany the order and advertisements will be inserted in the earliest issue. Announcements of fretwork goods or those shown in Hobbies Handbook are not accepted. Orders can be sent either to Hobbies Weekly, Advert. Dept., Dereham, Norfolk, or Temple House, Temple Avenue, London, E.C.4

AMERICAN'S famous magazines, post free for one year. Popular Mechanics, 22/6; Popular Science, 20/-; Mechanix Illus., 12/- For a list of others, send S.A.E. to—Willen Ltd., Dept. 57, 101 Fleet St., London, E.C.4.

LONELY? Join Friendship Circle. Details 7½d.—Secretary, 34 Honeywell Road, London, S.W.11.

25 AIR Mails free with approvals, postage 2½d.—P.B. 24855, "The Pastimer", 183 Bowes Road, London, N.11.

STAMP approvals 3 a penny.—Jeffreys, 2 Bay View, Craigavon, Port Talbot.

FREE! 12 special stamps including Airmails, to all requesting discount approvals. Postage 2½d.—V. M. Glover, 214 Wharnclyffe Gardens, London, N.W.8.

FREE! 2 Golden Jubilee, George VI; approvals from ½d.; discount.—Bishop, 40 Marine Parade, Hythe, Kent.

PRODUCTION wanted from home-workers to make fancy leather and felt goods. Write for rates of pay, etc.—Dept. 39, Wearwell Products Co., 2 Tarleton Street, Liverpool.

SETS cigarette cards, clean, charming, cheap. Lists free.—116 Whoberley Avenue, Coventry.

STAMPS Free!! Twenty unused (2½d.—G. H. Barnett, Limington, Somerset.

"HOME WOODWORK". Fifty useful things to make. A practical handbook with 188 illustrations, 2/6 posted.—G. F. Rhead, Thurston End, Hawkedon, Bury St. Edmunds.

ROLL films developed and printed, 2/6. 2½in. x 3½in. prints, 2½d. (sepia, 4d.). Post only.—F. George, 100 Acomb Street, Manchester, 14.

FREE—Packet of stamps to applicants for personal approval service. Bargains! State interests.—Gapp, 21 Charlton Court, High Street South, London, E.6.

MY seaside surprise stamp packets are worth while. 1/-, 2/6, 5/- (S.A.E.).—Day, 73 Thornton Gate, Cleveleys, Blackpool.

AUTOGRAPHED jigsaws of famous sporting personalities; Don Bradman, Dennis Compton, Len Hutten, Bill Edrich. Stamp for full list. 3/3 each post free from—The Hobby Shop, Bold Street, Southport.

HOBBIES Bench Lathe. With 2ft. bed and 1ft. 2ins. between centres. For motor drive. Price 90/-. Usual Hobbies Stores or lists from Hobbies Ltd., Dereham, Norfolk.

DOLLS House and Bungalow plans, with complete kit material. Details from—Hobbies Ltd., Dereham, Norfolk.

100 DIFFERENT stamps free (including triangular and pictorials), to approval applicants enclosing postage.—N. Johnson (Dept. H.), 19 Hillside, Slough, Bucks.

LONELY? Then write Secretary L.U.C.C., 5B.B. Hay St., Braughing, Herts. Genuine. Est. 1905.

BE Taller. Quickly! Safely! Privately! No appliances—no tablets—no dieting. Details, 6d. stamp.—Malcolm Ross, Height Specialist, BCM/HYTE, London, W.C.1.

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

TRANSFERS for decorating toys, trays, furniture, fancy goods. List and samples free. Flowers, pixies, dogs, nursery rhymes.—H. Axon Harrison, Jersey.

SHORTHAND in one week. Test Shesson, 3d.—Dutton's (H.B.), 92 Gt. Russell St., London, W.C.1.

RUBBER tyred Metal Disc Wheels finished in red, green or blue enamel. 2ins.—2/6. 3ins.—3/- per set of four. Post paid. Other sizes available up to 9ins.—The Joyden Toy Co., 193 Chase Side, London, N.14.

DOLL'S House fittings and papers; send S.A.E. for list. Doll's house plan special, send 2/6. Trade supplied.—Zimplan, 88 Ware Road, Hoddesdon.

BE Taller in 14 days or money back. Details, 1d.—Stebbing System, 28 (HB) Dean Road, London, N.W.2.

BLUSHING, shyness, nerves, self-consciousness, fears, ended. Details under plain cover, 1d.—Stebbing Treatment, 28 (HB) Dean Road, London, N.W.2.

NOVELTY Calendar designs painted on plywood for cutting out. Date cards supplied. Excellent Xmas gifts, profitable to sell. 1/9 each, half dozen, 9/-. Cleaver, 50 Windsor Road, London, N.W.2.

DOLL'S House papers. 30 designs including green and red pantile. Samples and patterns, 1/-.—Sutton Models, Billericay.

THE free gift of the year. Jubilee, Coronation, Peace, Silver wedding stamps. All free request approvals. Enclose 3d. stamp. (Without approvals, 1/3).—H. A. Smith (PTS), 13 New Road, Scole, Diss, Norfolk.

ANIMAL, bird and alphabet cut-out patterns. Set of figures and letters to stand. Realistic and correct. 1/6 packet (posted).—Hobbies Ltd., Dereham, Norfolk, or ironmongers everywhere.

ALWAYS wanted—old boys books, "Magnets", "Gems", "Populars", etc., anything. Good prices paid.—H. A. Smith, 13 New Road, Scole, Diss, Norfolk.

HOME watch and clock repair outfit. Includes watchmaker's eyeglass, tweezers, screwdrivers, oilers, brush, oil, plus explanatory booklet and blue prints. In container. Skill unnecessary. Invaluable for all fine work, 12/9 inclusive.—D. Bolster (Dept. A.), 5A Station Parade, Ashford, Middx.

£5 to £20 weekly earned at home, running your own Mail Order business. Details, 1d.—Stebbing Publications Ltd. (HB), Naphill, High Wycombe.

WHEELS for toys, and other accessories. Full lists will be sent on application to The Joyden Toy Co., 193 Chase Side, London, N.14.

THE ideal drive for home workshop, tools and models, Brook ¼ h.p. "CUB" electric motor—single phase split phase. May be obtained from your local electrical contractor.—Brook Motors Ltd., Empress Works, Huddersfield.

WILSON'S Lorries. Britain's finest models. Kits from 2/9 and hand-built, 7/6. Send for lists, 3d.—Wilson's Lorries, Dept. H., 1 Gt. Winchester Street, London, E.C.2.

MALTA Set free to genuine approval applicants enclosing 3d. stamps.—Richardson, 170 Orchard Way, Croydon, 2.

HOME Movies. 9.5 cine films in great variety. Sale, hire, stamp lists.—Wayland, 223 Longley Road, Tooting Junction, S.W.17.

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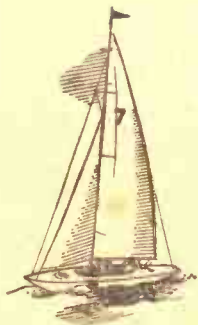
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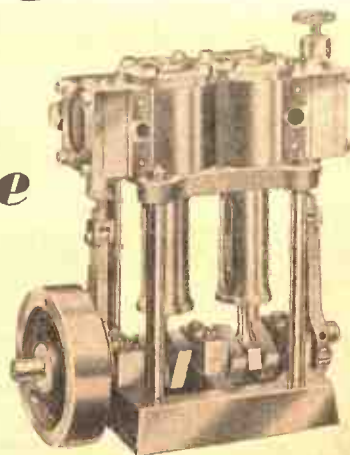
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