

HOBBIES WEEKLY

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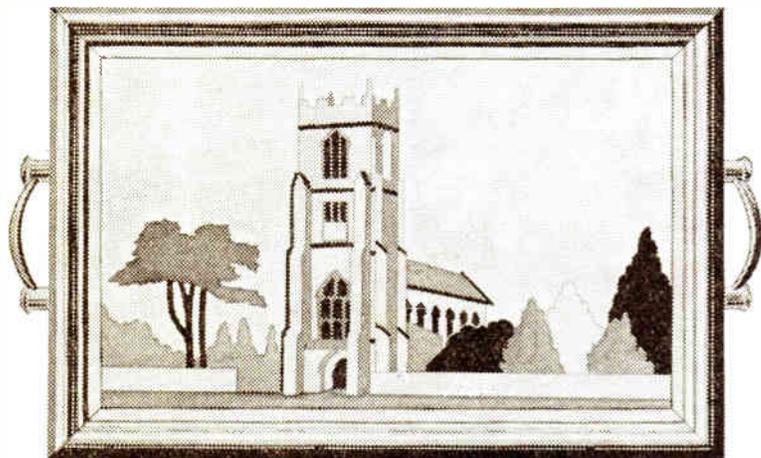


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★ This Week's FREE DESIGN Sheet ★



be able to make at least two others which will be attractive enough for use. The remaining one is usually waste, as the colours left will not match up to make a reasonably authentic picture.

The inlay work and construction, generally, is within the capabilities of any careful worker, and even the beginner should not be afraid to tackle the job. It is made from four specially selected $\frac{1}{8}$ in. inlay panels, a backing panel 15ins. by 10 $\frac{1}{2}$ ins. and necessary moulding and fillet strips. Those purchasing a complete kit receive all these items, plus a pair of chromium-plated handles. Glass, however, is not supplied in the kit, owing to the difficulty of sending it through the post, but a piece of suitable glass (24ozs.) is easily obtainable at any ironmongers.

How to Begin

The first step is to make the actual inlay picture, which measures 13 $\frac{1}{2}$ ins. by 8 $\frac{3}{4}$ ins., inclusive of its surround. Pin the four inlay panels firmly together with

AN INLAID TEA TRAY

THIS fine old church of the Transition Norman period, set in the heart of the English countryside, makes an attractive subject for all lovers of inlay work. When completed its beauty will be ever-apparent in the form of a very useful tea-tray, the daily use of which will bring recurring pleasure to the worker.

The inlays are cut from $\frac{1}{8}$ in. wood with the fretsaw, which will be found

'The Village Church'

easier than the form of inlay done with knife-cut veneers. An added advantage of fretsaw inlay is that all the pieces of wood are cut at the same time, so that when the cutting is finished, the worker has, in fact, the makings of four pictures. Only one of these, of course, will conform to the original pattern, but he will

the white board uppermost. Make sure to keep the pins outside the picture area, including the surround. Then with the aid of a piece of carbon paper and sharp pencil, trace the design on to the white board.

To commence cutting, drill a small hole between the picture surround and the picture proper. The drill used should have a fine point. Now insert a OO or O Hobbies sawblade through the hole and

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For Modellers, Fretworkers
and Home Craftsmen



SEND FOR A KIT

For making this tray you can obtain a Kit (No. 3102) containing all necessary materials, including tray handles, from any Hobbies branch, or post free from Hobbies Ltd., Dereham, Norfolk, price 19/4.

start to cut, removing the pieces of the pattern one after the other until the job is complete. There is no need to worry if you deviate from the lines of the pattern here and there, for all the pieces being cut will be exactly the same and must, therefore, fit together when finished. Take reasonable care, however, to keep to the lines, and in any case, make quite sure to keep the fretsaw upright—this is most essential in this type of work.

Finally, cut round the straight edges of the picture surround.

Assembling the Picture

To put the inlay work together, first glue down the surround (in white wood) on to the actual baseboard. The position of the surround can be seen by reference to the design sheet, and to make sure that the surround remains firmly in place, a fretpin or two can be used. These should be placed so that they are eventually hidden by the fillet pieces. Now glue the rest of the picture into place, being careful to choose the

correctly coloured pieces, as indicated on the design. Use plenty of glue, so that it squeezes up through the interstices between the pieces. Place a piece of paper over the work, and then put the whole thing under weights until the glue is thoroughly hard.

Cleaning Up

When dry, clean off the paper with a scraper (the edge of a piece of glass will do nicely), and finish with glasspaper to get a perfectly smooth surface. If reasonable care has been taken, there should have been no errors in cutting, but just in case the worker finds that one or two joints are rather open, it is as well to know how to fill them. A good method is to use a mixture of white glue, such as balsa cement, and sawdust of the colour required. The mixture should be composed principally of sawdust, with only sufficient glue to make it stick together. Rub this mixture well into the spaces to be filled, and leave to dry before levelling off.

When the picture is finished with a good wax polish, glue the fillet pieces in place, making sure not to squeeze excess glue from under the edges on to the picture.

Next, the moulding has to be cut, and should be neatly mitred at the corners. Secure the moulding in position by screws run in from the underside of the baseboard. Three pieces of moulding are

fixed first, and then the glass is slid into place from the open end before the fourth piece is secured to complete the work.

Finishing

Now fix the handles and finish the outside woodwork as required. This can be stained and polished, or merely wax polished according to choice. If available, a piece of green baize should be glued to the back of the tray to avoid damage to tables, or alternatively small rubber feet can be used for the same purpose.

As intimated earlier, the worker will find that, apart from the picture he has made, he has sufficient pieces left to make three more pictures, though they may not necessarily be as perfect as the original. It is quite normal, however, to get two passable pictures out of the three remaining. The last one will be of little use, as the colours will not be right.

If the worker has spare baseboards, moulding, etc., he can thus make another two trays from the usable pictures, either for sale or for gifts. Or he can arrange the pictures on suitable plywood backing pieces and mitre ordinary picture frame moulding round them, so that they can be used for wall decoration. He will not wish to have these extra pictures in his own home, of course, but he should have no difficulty in disposing of them.

EASY TO MAKE WITH A FRETSAW

Some Useful Decorative Overlays

ON page 31 this week we give six patterns for overlays which can be used for many purposes. It is practically impossible to buy decorations of this nature but it is quite easy to make them yourself with the aid of the fretsaw. This valuable craftworker's tool makes the job easy even for the amateur.

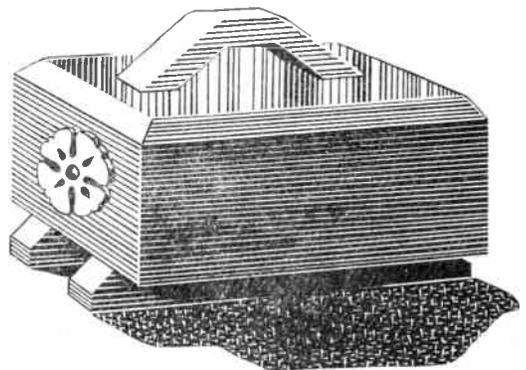
The overlays can be cut from a variety of materials, including wood, metal, Perspex and leather. The process is quite simple, just drill holes in the interior frets and cut these out with the fretsaw, then cut round the outlines.

Use Carbon Paper

Marking out is done by tracing and transferring to wood or leather by means of carbon paper, or tracing and sticking down to metal or Perspex. The paper can be removed by soaking in water if a non-waterproof glue or paste is used.

When cutting metal use a metal-cutting saw and brush a little oil along the lines of the pattern to help the saw to cut smoothly. Use oil in a similar

Full-size patterns are on page 31



way with Perspex. Remember that metal and Perspex can be cut just as easily as wood.

Many Uses

The uses for the overlays will readily suggest themselves to you. Boxes of all descriptions, trinket and cigarette boxes in particular and even small pieces of

A suitable decoration for a trinket box

furniture are among the articles which can be improved. The illustration on this page shows how to use the overlays. Do not try to put too many on one article. In this particular case one on each end is quite sufficient. (M.p.)

Making Multiple Printing Blocks

By A. Fraser

THE printing of allover patterns on textile fabrics and paper is a pleasant and rewarding occupation, but it must be admitted that printing from small individual blocks or sticks is somewhat slow. A method is described here which will speed up the printing process and enable large areas to be covered with patterns in a comparatively short time.

We will assume that the reader has already at hand some small block he has cut for himself from linoleum, or wood, or even rubber eraser. The size of the block really is immaterial.

The first thing to do is to see that the block is cut truly straight-sided and rectangular. (The reason for this will be apparent later.) The block need not be a

the block edges were cut fairly close to the pattern.

Incidentally, when cutting these edges, put a slight bevel or chamfer on them, sloping inward to the top of the block. (This is for casting purposes, to facilitate withdrawal of the mould.)

The block is now covered very thinly with Vaseline, castor-oil, or any other greasy or oily substance which will prevent the plaster of paris from sticking to the block. A hog-hair brush is handy for getting into the crevices. Floor polish, by the way, may be tried in preference to the greasy substances above.

the level of the retaining wall is reached. You will probably have to level it off a bit with a piece of board or old ruler.

Give it plenty of time to set, and when certain of this, remove the wall and lift off the mass of plaster. Turn it over and gently ease out the block. If the operation has been successful, we should be left with a perfect mould.

If there are any imperfections in the vital parts of the pattern, such as a hole caused by an air-bubble, then it would be best to prepare the cut block again and produce another mould. But this will not often occur. In our example, the plaster mould would be as in Fig. 3.

Having got a successful plaster mould, the next task is to cast in it the numerous blocks which will be joined together ultimately to form the large

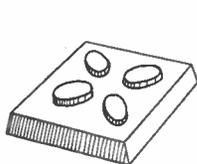


Fig. 1
Original block

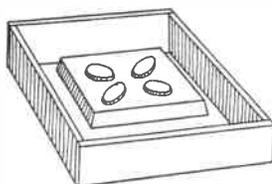


Fig. 2—Preparing the mould

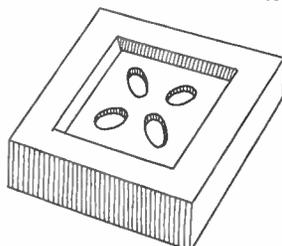


Fig. 3—The mould

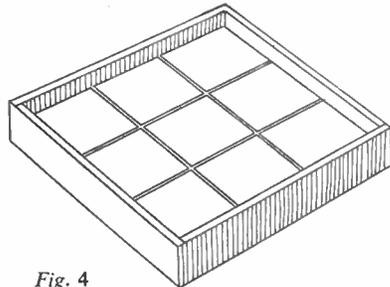


Fig. 4
Multiple block ready for backing

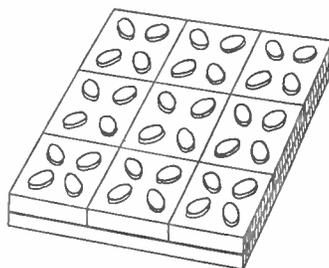


Fig. 5—Finished multiple block

square—it can be oblong, if need be, but it must be straight and rectangular. A typical block is shown in Fig. 1. For ease of illustration, a simple pattern design is used. The reader can adopt a more elaborate one than this.

See that the unwanted areas near the edges of the block are well cut down below the level of the printing surface. Another point to notice is whether you have left the proper margin between the pattern and the edges of the block. If the margin is considerable, there will be too much space between the patterns. Therefore, decide on a satisfactory spacing, and cut the block limits accordingly. In the example illustrated, the patterns were intended to be in close conjunction with one another, so

The block is now laid on some flat surface such as a board, or glass, or sheet metal. A retaining wall is then placed round the block, leaving about a $\frac{1}{2}$ in. to 1 in. surround. The height of this wall should be about a $\frac{1}{4}$ in. to $\frac{1}{2}$ in. higher than that of the block, but if you can make it higher, then all the better.

The retaining wall can be of wood board, or even stout cardboard held with gum strip. Lightly grease the inner sides of this wall, and also the base-board within. Fig. 2 shows the arrangement. All is now ready for the plaster of paris. This should be prepared as directed on the packet, and mix more than sufficient for the job.

Pour the mixture over the block until

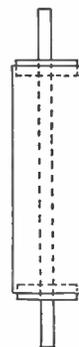


Fig. 6

final block.

Prepare the mould, as we did the original block, by smearing it all over with Vaseline, etc. The mould will be absorbent, so allow time for the first application to sink in, and then give a second light coating. Remember to get into the crevices.

To make the cast, pour the prepared plaster in, and with a piece of wood, level it off at the top of the mould. No plaster should be allowed to come over the lip of the mould. In fact, it would be better if the level of the plaster were slightly below the level of the lip.

When the plaster has set hard, the cast can then be removed from the mould. A slight tapping of the mould will help if the cast proves stubborn. It may be stated here that the mould could easily be made of the synthetic rubber compound, now widely used, which allows the cast to be disengaged with great ease.

The number of cast blocks you need will depend on the size of the final block that you wish to handle. This will

● Continued on page 21

Wiring up Extension Speakers

By F. G. Rayer

FROM time to time readers enquire about the possibility of using an extension loud speaker for the kitchen, bedroom, etc., or even for out-of-doors during the summer months. The cost of such an extra speaker is quite low, and well worth while.

Two leads may then be taken from these to the secondary of the output transformer. This transformer may be identified easily because two leads will pass from it to the speaker in the

silence the receiver speaker while the extension speaker is working. This can be done by cutting one lead from transformer secondary to receiver speaker, as shown at X in Fig. 1, and fitting an on/off switch. If the cut ends are too short to reach the switch, flex can be used to lengthen the wires.

Again, it is sometimes desirable for a person at the extension point to be able to turn off the speaker there. This can be provided for by including an on/off switch in one lead. The switch may be mounted in the extension speaker cabinet.

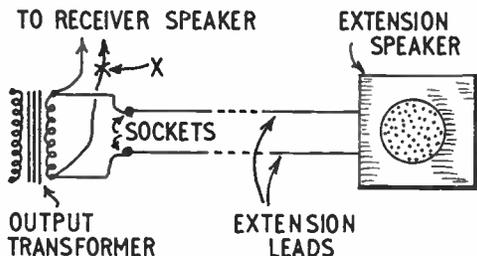


Fig. 1—Connections for low impedance extension

There are various methods of connecting the extension speaker to the set. Wrong hook-ups should be avoided, as they may give poor results, and there is risk of shocks, especially with mains sets.

Low Impedance Working

Low impedance working is the method employed in almost all commercial receivers fitted with extension speaker sockets and with its connections are taken from the secondary of the output transformer, as in Fig. 1. With the usual receiver, the impedance here

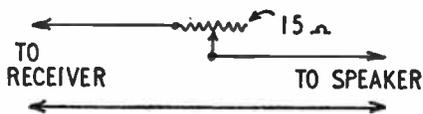


Fig. 3—Volume control circuit

will be 2 to 3 ohms. This means that a 2 to 3 ohm extension speaker must be used. The ordinary permanent magnet moving-coil speaker, without transformer, is of this impedance, and is most suitable.

Though a coupling transformer is required in a receiver, when using such a speaker, it is *not* required when a second such speaker is employed for extension purposes. Indeed, if a second transformer is used the extension speaker cannot operate properly, and volume would be extremely low.

If no sockets are fitted to the receiver, a twin socket strip, or two terminals, may be fitted at some convenient point.

receiver. In many cases the transformer is actually fixed to the speaker frame. The extension leads must not be taken to the primary of the transformer, which will be wired to the output stage and H.T. circuit.

This form of extension speaker connection has the advantage of simplicity, and no high voltages are present in the extension leads. Its disadvantage is that with very long extension leads loss of volume will result, unless very thick wire is used. For all ordinary purposes, twin flex is satisfactory.

Switching

It may in some cases be necessary to

High Impedance Connections

This method has to be used with the old type moving-iron speakers, which will not operate with a low impedance circuit. It also has the advantage that only one lead is required, when an earth is possible, and that the loss of signal strength is very small, even with a

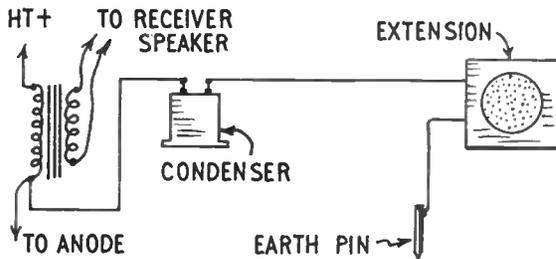


Fig. 2—High impedance form of connection

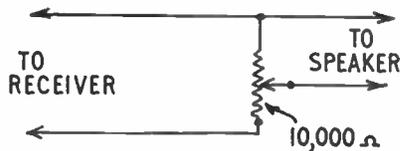


Fig. 4—Volume control for high impedance

very long extension circuit of thin wire.

Fig. 2 shows connections, any metal spike serving for the earth pin. This is particularly convenient when using a speaker out-of-doors. If no earth is available, as may be the case inside the house, then a second lead becomes necessary, and is taken back to the earth socket of the receiver.

The condenser may be of 1 to 2 mfd. and should be a reliable one with good insulation. With a mains set, it should be rated at 500 V working, or more. It is wired to the *anode* side of the output transformer primary, and may be fitted in the receiver. It keeps H.T. voltages out of the extension line and speaker.

If a moving-coil speaker is used with this circuit, it must have a matching transformer (which is not necessary in Fig. 1). This transformer would be fitted in the extension cabinet. Its primary would go to condenser and earth pin, and its secondary to the speaker.

An old high-impedance speaker can be brought into service in this way. The circuit impedance will be several thousand ohms, so that the resistance of the lead or leads is of very little importance. But with Fig. 1, the circuit impedance is only 2 to 3 ohms, and this explains why much volume is lost if long leads, or thin connections, are used with it.

Either the receiver speaker or extension speaker may be fitted with switches, in Fig. 2, exactly as explained for the circuit in Fig. 1. If two connections are employed because there is no earth, twin flex should not be used, but separate wires. (Twin flex may be used in Fig. 1 because the low impedance makes the capacity between wires unimportant.)

Volume Controls

It is desirable for a person at the extension point to be able to control volume, and with a low impedance circuit this can be done as shown in Fig. 3. The actual value of the variable resistance is not important, but needs to be about 10 to 25 ohms, and it is of wire-wound type. It is simply added in one

lead, and may be fitted in the extension-speaker cabinet.

With a high impedance extension, the circuit in Fig. 4 is used, the control being a potentiometer of about 5,000 to 10,000 ohms. A switch can be used in addition.

Listening in Bed

The circuit in Fig. 2, with volume control as in Fig. 4, is suitable for operating the usual type of medium or high resistance headphones, either for listening in bed, or for a person of hard hearing. When phones are used with a mains set, a high quality condenser of about .25 to 1 mfd. should be included in each lead from the receiver. This assures that no mains voltages or H.T. voltages can reach the phones, which could result in shocks, especially if they are of the type with bare terminals which may be handled when adjusting the earpieces.

As volume with phones may be deafening, the volume control should be turned right back to the zero position, to begin with. This is particularly wise with mains sets.

Though a loudspeaker will operate when standing alone, it must be mounted on a baffle, or enclosed in a cabinet, for best results. The actual dimensions of the cabinet are of no real importance, except that extremely small cabinets are slightly less satisfactory. For the usual speaker, which is about 6 to 7ins. in diameter, a cabinet about 10 to 12ins.

square and 3 to 4ins. deep is satisfactory. It may be made from $\frac{1}{4}$ in. ply, or have a front of $\frac{3}{16}$ in. ply and $\frac{1}{4}$ in. or $\frac{3}{8}$ in. top, bottom and sides. Gauze may be stretched across the cut-out, inside, to improve the appearance. Dust may be kept from the speaker by enclosing it in a gauze bag, or by stretching gauze across the cabinet back. A solid wooden back is not recommended, as cabinet resonance may be set up, giving 'boomy' results. If a solid back is used, it should have several large holes cut in it.

If a cabinet is not wanted, a baffle board can be used instead, with similar results. Such a board may be of almost any convenient dimensions, though very small sizes have the same limitations as a small cabinet. About 10ins. to 12ins. square is suitable for a small speaker, though larger sizes can be used. The board should be fairly stout—preferably not thinner than $\frac{1}{4}$ in. or so. The diameter of the loudspeaker cone is measured, and a circular hole is cut in the baffle of the same size. The speaker is then screwed with the cone behind this hole. Gauze may be added to keep out dust, as with the cabinet. Such a baffle can be hung in a corner, fairly near the ceiling.

Finally, a few receivers exist which employ 15 ohm output transformers. With these, a 15 ohm speaker should be used, not the 2 to 3 ohm type. This detail will normally be mentioned in the maker's instructions, if the receiver or speaker is not itself marked.

● Continued from page 19

Multiple Printing Blocks

be decided, no doubt, by the size of the roller available for inking up.

When the number of blocks is decided upon, and the casts made, these should be laid face down on some flat surface, such as a sheet of glass, or a drawing-board. They should be pushed up close to each other and held in place by a frame, easily made of four pieces of wood. (See Fig. 4.)

The task now is to join all the blocks together firmly and permanently to make one solid block. If the blocks are exceptionally thick, merely gluing them together may be sufficient. But with thin blocks, other ways must be found.

One way is to pour plaster over the assembled blocks, to form a thick layer. Before putting this backing on, seal the joints between the blocks, and where they meet the frame, with thickish plaster. This will set almost immediately (the plaster blocks being absorbent) and prevent the subsequent fluid plaster from leaking down to the fronts or faces of the blocks. Afterwards, the backs of the blocks can be dampened and the plaster poured on.

Another method is to put a thick layer of adhesive mixture (composed of whiting, paint and glue), pretty stiff in substance, over the blocks and then press over this some thick cardboard or hardboard. This will take time to harden.

Simplest of all is to paint the blocks (to lessen their absorbent nature), then put a little putty on each block, and finally press on thick hardboard. The putty will harden in time and hold the blocks to the board fairly securely.

The final multiple block, as shown in Fig. 5, should be strong and rigid, and well able to stand up to the pressure of inking and printing.

Before inking, the block should be treated to get rid of its absorbent character and allow the printing ink to remain wet when applied. This can easily be done by applying a couple of coats of linseed oil or shellac varnish. Wax should not be used in this instance, because printing ink would take badly to it.

For inking large blocks it is almost imperative to use a large roller and a

large piece of glass to roll the ink on. A good roller can be made, to suit any large block, from a strong cardboard tube, two circular blocks, a length of dowel, and a length of rubber inner tubing from a motor cycle tyre (Fig. 6). The circular blocks are glued to each end of the tube, and have centre holes bored in them to allow free passage for the dowel rod. The projecting ends of the latter serve as handles for the operator to hold. The rubber tubing, of course, is pulled over the cardboard tube, and it is this which transfers the printing ink from glass to block.

In conclusion, it may be noted that there are on sale casting compounds with very hard setting properties. The use of one of these would be preferable in place of ordinary plaster, but it would be more expensive.

USEFUL 'MOULD' HINT

ON occasions where it is impossible to get a mould turned, use a sandbag made of heavy canvas measuring about 10ins. square. Almost any shape can be worked in this way with the use of hammers. (E.M.B.)

An Easy-to-Make Book Cabinet

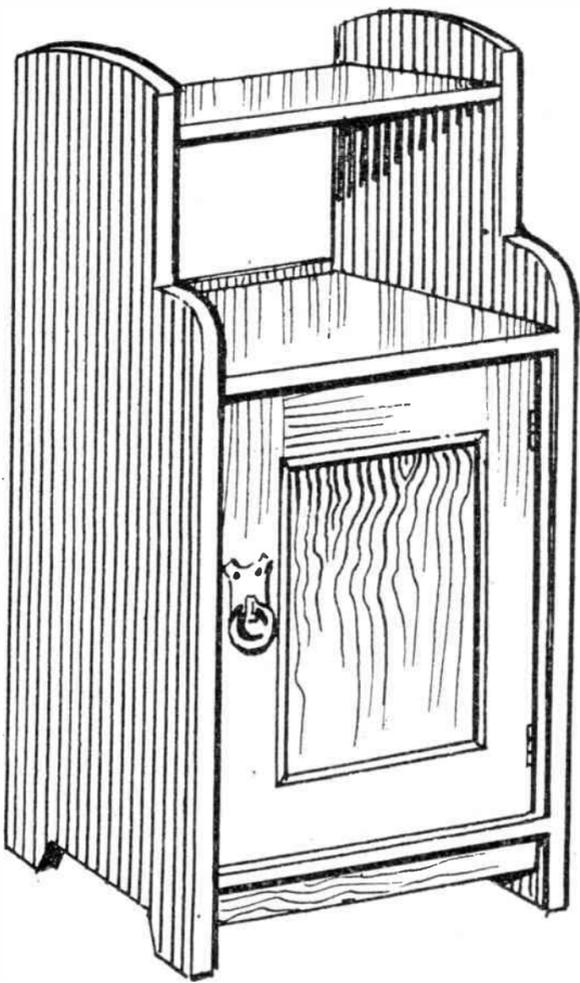


Fig. 1

THE attractive little cabinet shown in Fig. 1 stands 3ft. high and is 14ins. wide and 12ins. from back to front. Full working dimensions are given in Figs. 2 and 3, the latter being a cross-section through the cabinet with useful details. The cabinet would look well in either oak or mahogany and the finish to the wood might well be left to the individual choice of the maker.

Construction

The two sides (A) are 36ins. long by 12ins. wide by $\frac{3}{4}$ in. thick. If wood of this width is unobtainable, then two narrow pieces may be butted together and glued up. Fig. 2 shows how the curved top is set out, and the simple shaping of the quarter-circle, lower down. The lower ends of the sides may be simply hollowed out for effect as shown in Fig. 3. Having cut and prepared the sides, lay them on a bench or table and mark across three pairs of lines where the parts (B), (C), and (D) come. The pieces (B) and (C) are to be $\frac{3}{4}$ in. thick, while (D) is $\frac{1}{2}$ in. thick. Therefore, set the pairs of lines to suit this.

Fig. 4 shows that (B) and (D) are open-tenoned into the sides, and (C) housed, or slotted, in. If desired, the latter could also be tenoned through. The mortises could be cut with the fretsaw using a coarse saw, or they may be chiselled out.

If all three 'shelves' are tenoned into the sides then they will each measure 14ins. long, with pieces (B) and (C), 12ins. wide, and piece (D) 9ins. wide. If shelf (C) is housed at each end, the length of it will be 13ins. long. Carefully fit each shelf to the ends before actually gluing and clamping them up.

wide. Either of two methods may be adopted in framing the rails together. Fig. 5 shows how the stopped-dove-tailed halving joint is made. This joint needs carefully setting out and cutting, but when finished it makes a good stiff joint. The second method, that shown in Fig. 6, is the more generally used in

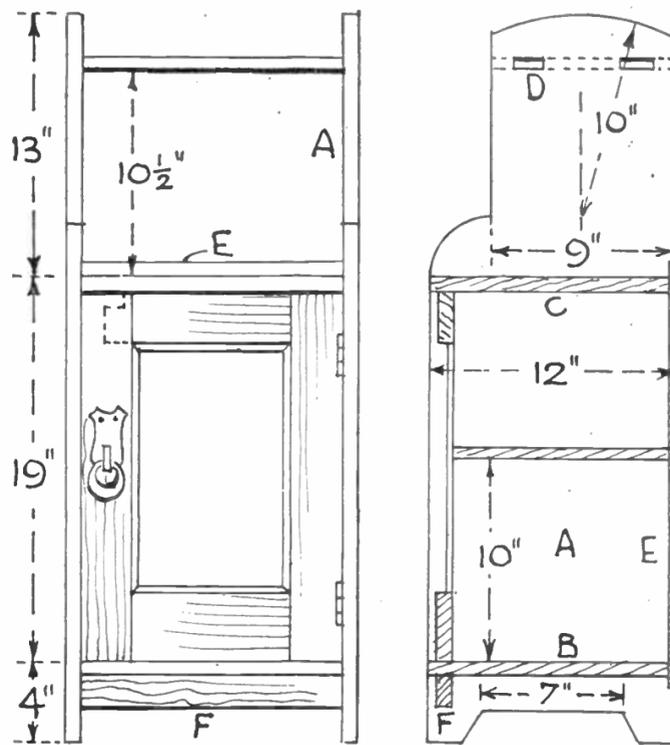


Fig. 2

Fig. 3

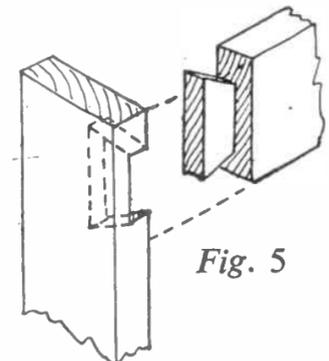


Fig. 5



Fig. 7

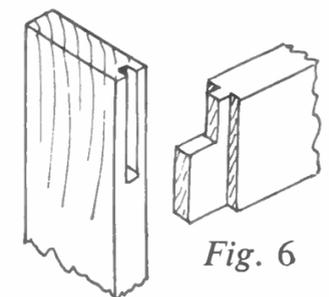


Fig. 6

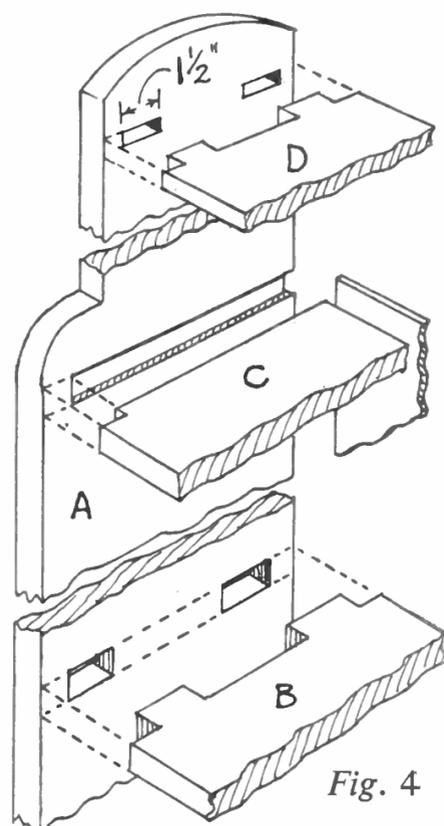


Fig. 4

The back (E) may be $\frac{1}{4}$ in. plywood, 21ins. long by 12 $\frac{1}{2}$ ins. wide, and it is glued and screwed to (B) and (C) with countersunk screws. The cross rail (F) may be glued and screwed through to the shelf (B).

The door is made from $\frac{3}{4}$ in. stuff, the upright rails and the top rail being 2 $\frac{1}{2}$ ins. wide, with the lower rail 3 $\frac{1}{2}$ ins.

this case, but here again the mortise needs care in chiselling in, whereas the tenon is not difficult to make.

The joints should be well glued and either screwed or pinned with hard wood dowels. Square up the door frame carefully and then measure the opening accurately for the filling panel which could be $\frac{1}{4}$ in. plywood.

Around the inside of the opening first glue and pin in $\frac{1}{4}$ in. by $\frac{1}{4}$ in. fillets, either butted or mitred at the ends, then lay the panel on this and finish around on the outside of the panel with quarter-round beading mitred and glued as the detail Fig. 7 shows.

The Inside Shelf

Cut a piece of $\frac{1}{2}$ in. board for the inside shelf, and glue and screw bearers for it of $\frac{1}{2}$ in. by $\frac{3}{4}$ in. stuff. Between the sides and the back, inside the cabinet, glue a length of triangular fillet to keep out the dust. The shelf inside will answer as a sufficient door stop when the door is closed. A shaped copper or brass plate with drop handle will add to the appearance of the door. When fitting the hinges to the door cut in the recesses to take both flaps to insure a close fit. (S.W.C.)



THE ISSUES OF NEWFOUNDLAND

COLLECTORS who specialise in one particular country are often prepared to add new issues to their collections until the end of their lives. Occasionally, however, due to historical events, some countries cease issuing stamps and new countries appear.

Collectors of the stamps of Newfoundland were able to see 'the end of the road' when the colony became a member of the Canadian Federation on 31st March, 1949, and ceased issuing her own stamps.

Newfoundland is the tenth largest island in the world and is situated on the North-East side of the Gulf of Labrador. It is 350 miles long and the average breadth is 130 miles. Maps appear on

depicted were Sir Humphrey Gilbert, the Gilbert Coat of Arms, Gilbert in the 'Squirrel', Gilbert's statue at Truro, the arrival at St. John's, the Annexation, the fleet leaving Plymouth, Gilbert commissioned by Queen Elizabeth, Compton Castle, and Eton College.

Colonisation from England began about 1610, when the London and Bristol Company for colonising Newfoundland was formed. The 300th Anniversary of this event was marked by a set of 11 values in 1910. This set includes stamps showing King James I, John Guy, Guy's ship, the Arms of the Colonisation Co., and Sir Francis Bacon.

Quarrels between the English and the French fishermen continued for over a

action in which the contingent took part. The 1923 3c. shows the Statue of the Fighting Newfoundler at St. John's. In World War II about 10,000 men enlisted in the British and Canadian forces. The island provided sea and air forces in the U.S.A.

Gandar Airport is one of the most important in the world and many of the first fliers to cross the Atlantic landed there. The 1931 one dollar air stamp shows the routes of some of these historic flights.

The coastline of Newfoundland is very indented with bays. The west coast is bordered by the Long Range Mountains. Other mountains are the Anguille Range, and the hills by Bonne Bay. The 1937 3c. shows the Gulf of St. Lawrence,



*South-West arm,
Trinity*

Coat of arms

The Caribou

Codfish

Newfoundland Dog

the 1908 2c., the 1928 1c. and the 1933 20c. stamps.

Little is known of early Newfoundland history, but the island was discovered by Jean Cabot on June 24th, 1497. Both the French and the Portuguese visited the island in the early 16th Century and established fisheries there. The 400th Anniversary of the discovery was marked by a special set of 14 values. The subjects depicted include Jean Cabot, Cabot's ship, 'Matthew', leaving the Avon and King Henry VII. In 1947, the 450th Anniversary of Cabot's discovery was commemorated by a special stamp showing Cabot off Cape Bonavista.

Sir Humphrey Gilbert arrived in St. John's Harbour in August, 1583, and claimed Newfoundland for England. Unfortunately, Sir Humphrey's ships were the victims of a severe storm on the voyage back to England. Sir Humphrey himself was among those drowned. The 350th Anniversary of the annexation was commemorated in 1933 with a set of 14 values. Included in the subjects

hundred years, but in 1713 the colony was ceded to England under the Treaty of Utrecht. The colony had its own representative assembly in 1832, but responsible government did not come until 1855.

The year 1846 seems to have been an unlucky year for Newfoundland, for in that year half of St. John's was destroyed by fire, many fishing vessels were sunk in a hurricane, and blight ruined the potato crop.

On March 1st, 1927, the Judicial Committee of the Privy Council awarded part of Labrador to Newfoundland. The 1928 'Publicity' issue 1c. value shows a map which includes Labrador and the 30c. of the same set shows Grand Falls, Labrador.

Newfoundlanders took part in both World Wars. In World War I the Newfoundland contingent distinguished itself at Zeebrugge and Sulva Bay. The 1919 Caribou set of 12 values commemorates the service of the Newfoundland Contingent, each value being inscribed with the name of a different

the 1897 3c. Cape Bonavista, the 1937 20c. Cape Race, the 1923 1c. Twin Hills, Tor Cove, the 1923 2c. South-West Arm, Trinity, the 1923 5c. the coast at Trinity and the 1923 12c. Mount Moriah, Bay of Islands.

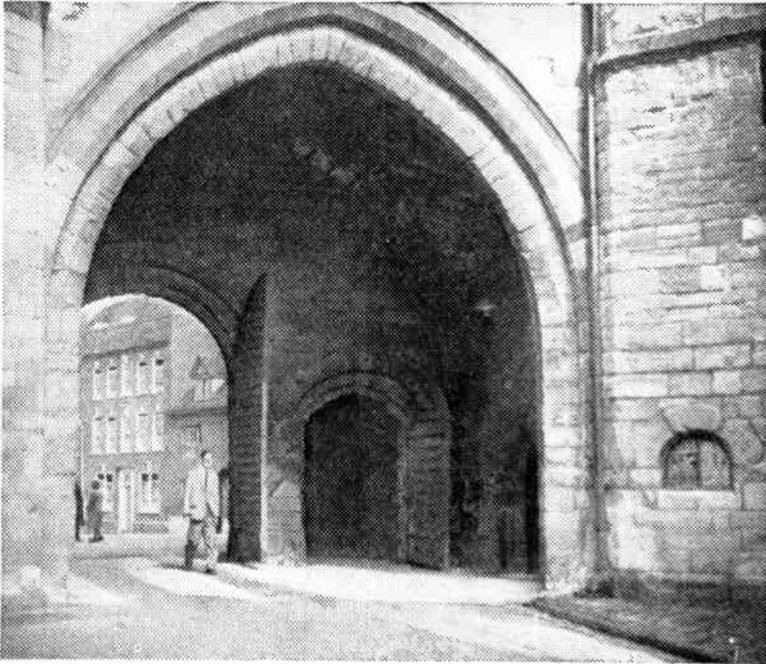
The capital is St. John's and other towns are Carbonear, Bonavista, Grand Falls, Burin, Placentia, and Botwood. St. John's is well featured on the stamps. The 1928 6c. shows a hotel, the 10c. the War Memorial, the 20c. the Colonial Building, the 9 and 14c.'s Cabot Tower, and the 12 and 28c.'s the General Post Office. An aerial view of the town can be seen on the 1943 7c. Air. A view of Placentia appears on the 1923 20c.

About one third of the area of the island is covered by lakes and rivers. The largest rivers are the Exploits, the Humber and the Gandar. A view of the Humber River can be seen on the 1923 4c., whilst the 6c. and 15c. of the same set show the Upper Steadies and the river near the Little Rapids respectively. Topsail Falls appears on the 24c.

● **Continued on page 28**

Always Aim for Good Quality

Says E. G. Gaze



A soft print, with detail both in shadows and highlights. obtained from a very contrasty negative by using 'wet' exposure method

W E all know those evenings when, after an hour or more spent with the enlarger in the dark-room, we examine the results in white light—and groan. Our negatives to be enlarged were all of good printable quality as regards density, contrast and definition, we took care in focusing the enlarger and assessing accurate exposure time from test-strips—and yet the finished prints lack *quality*. We feel that the print lacks 'something'—or it may even carry visual defects due to image blemishes.

The 'something' lacking is often due to *method of working*: the print hasn't the richness the negative promised, or the high-lights are degraded. Follow these checks on your method of working:

Solution Temperature

There will be instructions with the particular brand of developer you are using, giving the working temperature—usually about 65°F. To use it at too low a temperature, or to use it too diluted or weak through over-use, cannot produce an image of full rich tones. So check

solution temperature with a thermometer. To maintain it at the correct level, room temperature should be a little above that figure. If you can't control dark-room temperature overall, then there are solution-heaters on the market—but a handy way is to stand the solution dish over a saucepan of steaming hot water.

Timing of Enlarging Exposures

For your test-strip and the final enlargement you need some accurate method of timing. Counting zebras is one way—but apt to be erratic. A proper dark-room clock or metronome is accurate, but can be expensive. Your wrist-watch with a seconds dial is a handy substitute; but not if left on your wrist during exposure when you might be using your hands to shade in or hold back parts of the image and cannot see the dial. But don't just take it off and lay it on the work-bench—a wrist-watch may be an inexpensive dark-room timer, but an expensive item to replace if knocked off the bench! Hang it on a nail near the enlarger, visible in the light from your safe-light while you expose.

Incidentally, a luminous watch *can* fog printing paper if left too near for too long.

Stray White Light

This is the most common reason for degraded, sparkle-lacking prints—exposure to stray white light during exposure or development. Check your safe-light to make sure it is a *safe* light, check the enlarger for light leaks when it's switched on—especially around the negative carrier. A good test, if you suspect stray light, is to place a coin on a small piece of printing paper, leaving it near your developing dish—after normal printing time, develop. If there is an impression of the coin—a white circle in a patch of grey tone—then you have stray actinic light wandering around.

Paper Contrast

Match your grade of printing paper to your negative. Medium or normal grade for normal negative; soft for a harsh contrasty negative; hard for the dull, too soft negative. If you haven't always got a softer grade to hand here are two useful tips to soften the contrast grade of a normal grade.

First, you can 'flash'—place the paper on the easel, remove negative carrier and flash enlarger on-and-off as swiftly as possible. This momentary exposure to even white light will cause over-all fogging. A print now made normally on this sheet will have its contrast range softened or lowered.

Secondly, you can use 'wet' exposure. Soak the printing paper in the developer, drain it, then place it on the easel and switch on enlarger for the time your test-strip gave for the thinnest parts of the negative (the darkest on the final print). Switch off and wait for this image to appear—then switch on again and expose for the time the test-strip gave for the densest portions of the negative. Then put the paper in the solution dish and develop right out.

The theory of this method, of course, is that the first exposure builds up an image of the darkest parts of the print, and that on further exposure this image acts as a self-mask preventing further light-action—the result being to let the remainder of the print build up and so lessen the total contrast level.

A variation of this method is to let the whole development take place on the easel under continued exposure, even shading in portions as usual if necessary.

Provided your paper is fresh, the developer is fresh and not prone to fogging, and total exposure time not too prolonged, you can obtain a print that has very soft qualities: but, papers and developers vary in their effect using this method. It's worth knowing, and trying, however, when you find yourself with a negative of extreme contrasts. The illustration was made in this way, using the variation of easel-development under continued exposure. Despite high contrast range of the negative—between the upper parts of the inner archway and the brilliantly-lit outer portions—detail was recorded in the high-lights, and sufficient detail in the shadows. Without this method a good deal of shading-in, or even masking, would have been necessary to keep detail in the shadows while building up the high-lights; even on a soft grade of paper.

Maybe, by now, you've found an answer to that lack of 'something' in your final print. But what about the visual defects due to blemishes—blotches, spots and stains? Here the answer is method and cleanliness!

Let's take the most common faults in turn again:

- (1) Patches on prints, often regular in shape, which show under-development—due to air bubbles preventing free access of developer to paper in the solution dish. Remedy—slide paper under solution surface end-wise, turn over and repeat, keep whole under surface and rock solution. Air bubbles clinging to the paper surface don't like this treatment!
- (2) Stains on prints—due to contamination of hypo with developer, or vice versa. Remedy—clean fingers and dry ones, or, better still, a pair of plastic or perspex tweezers for each solution. Stains also arise if the print is left in too long in an effort to 'force it out'; maybe because the print is badly under-exposed or the developer too cold or too weak. This is one of the reasons why 'wet' exposure method given above is rather unpredictable—added to which a print exposed to air while development is taking place can lead to stains through oxidation. But if 'wet' exposure is chancy and a last expedience, normal dish development should certainly not be, so do not take print out of the developer until it is completed.
- (3) Spots on the print. A serious cause of trouble, this—dust on the negative, enlarging lens, negative carrier glasses, even stray particles on the printing paper, all can bring a plague of spots and squiggles. Dust anywhere in a settled position above the printing paper's surface

will be projected many times enlarged as an opaque particle, resulting in a white spot on the print. Remedy—dust negative before inserting it in the carrier, see that lens is clean. A tip here: with the usual type of double glass carrier it is almost worse than useless to dust it with a cloth—more fibres come loose, the dust removed rises, and settles again. Try rubbing each glass briskly between the thumb and forefinger from corner to corner.

Another point here—to bring an enlarger from a cold storage place into a warmer dark-room may lead to condensation on the condenser itself. A blurred condenser cuts down light, dulls contrast, blurs definition or may even cause irregular patches of exposure. A remedy for this is to remove either the lens or the lamp-house top and allow the condenser to warm up gently to room temperature before beginning work.

- (4) Scum on the finished print. This often arises in districts where the washing water is hard. If not removed by a final rinse in running water, or if it has dried on the print, then a swab over with cotton wool soaked in meths. will clear it,

and, incidentally, harden the print surface and clean up old, dirtied prints amazingly.

- (5) One last bogey, often remembered when exposing the film in the camera but overlooked when exposing the negative in the enlarger—shake or vibration. This can play havoc with all your careful focusing, careful timing and processing—definition goes down the drain! Remedy—have your enlarger on a firm table or bench so that your movements about the dark-room during exposure do not transmit vibrations to the enlarger. Here, too, there is much in favour of an enlarger control switch *not* fixed to the enlarger body, often on the easel itself, where the very act of clicking on and off can cause vibration.

To sum up: if dissatisfied with the quality of enlargements from good negatives, then pause and run over these two main items—method or working in the dark-room, and cleanliness. It is often surprising what a little extra care and forethought will do for your finished print—after all, good method is necessary for efficiency, and cleanliness is next to goodness. So aim for *good quality!*

Make this useful

Rack for Brooms and Brushes

Says Victor Sutton

THERE is usually a small nook or alcove in the house which can be utilised to hold the brooms and brushes which otherwise so often clutter up the cupboard.

All you need is a piece of stout floor-



board 6ins. wide and 1in. thick to fit in the corner. This can be fitted and held by brackets at a convenient height. The slots are cut to whatever depth is needed as long as enough is left to keep the board in shape. You can get four

brooms into the panel shown provided the broom heads are not too large. The best plan is to measure the brooms to be stored first and then adjust the cut-outs.

You can add hooks to hold brushes, which have a piece of string tied to the handles. To keep materials for cleaning all in one place, put the polish tins along the back.

TWO WEEKS LEFT!

There is still time to enter Hobbies Grand Fretwork Competition—the closing date is April 30th. Do not miss this chance of winning a prize. Send your entries to the Competition Dept., Hobbies Ltd., Dereham, Norfolk.



Damage To Oilskins

A BATTERY which I kept in my cycle saddle bag has made my oilskin cycle outfit assume a burnt colour. Can you tell me how to restore this to the original colour? (B.A.—Earl Shilton.)

THE sal ammoniac from the battery has attacked the fibres of your oilskin as well as the proofing. It would be unwise to attempt to restore the colour, as any treatment by rubbing or with a liquid would almost certainly cause the already weakened fibres to part. If the affected part still appears sound, continue to use the outfit, but I am afraid you will soon find that the material will break, and the only cure is to cut it out and patch the place. If there is the slightest sign of moisture in the affected part, hang it to dry thoroughly, otherwise the action will continue and the damage will spread.

Marks from Radiators

I RECENTLY redecorated my front room, and as I live in a centrally-heated house, would like to know how I can stop the radiators from making a dirty brown mark on the wallpaper. (T.J.—Dagenham.)

A NON-HEAT conducting screen may cure the trouble experienced from the radiator. Cut two panels of plywood to suitable size, and interpose strips of 1in. thick wood between them. Cram the space left with any good non-conductor of heat, such as slag wool, granulated cork, or shredded blanket material. Stand this between radiator and wall. If a finish is desired, use aluminium paint.

Articles from Horn

I SHOULD like some advice on the making of articles from horn. (A.C.—Onich.)

BRIEFLY stated, the method is to boil the horn to remove any fleshy matter, then saw it to size, using a fretsaw with metal-cutting blade. Other shaping is done with files and glass-

paper. Fastening is done usually by riveting or by screwing. Final finish is achieved by the use of superfine glass-paper, then by rubbing with pumice-powder moistened with water, completed by rubbing with salad oil applied with a clean fluffless linen pad.

Ventilation for Work-shed

MY work-shed is constructed of corrugated iron. Is there any preparation with which I can coat or paint the inside in order to prevent or reduce the condensation which makes working very unpleasant, apart from rusting up my tools? (H.P.—Southend.)

THE interior of an iron shelter such as you describe, should, if possible, be covered with matchboarding, to leave a space between for air to circulate. The best you can do if that is not practicable, is to provide as much ventilation as you can. It should not be too difficult to fit an outlet for stale air in the curved wall, as near as possible to the top. An adjustable ventilator in the door would help also. In any case, you are advised to paint the interior with 'Zat', an anti-condensator's preparation. If not available locally, it can be bought direct from Concrete Paint Co., Barnstaple, Devon.

Balsa Cement Stains

PLEASE tell me the best way to remove balsa cement stain from my suit. (J.L.—Birmingham.)

IN an endeavour to remove the stain you should place a pad of absorbent cotton beneath the stained portion, and swab the stain freely with acetone (highly inflammable). If the stain is too heavy to yield entirely to this treatment, push out the stained part into a cone, bind tightly above it with string and soak the stain for some minutes in acetone, squeeze out and rinse in fresh acetone. Remove the string and allow to dry.

Painting Over Varnish

I PROPOSE to redecorate my dining room, the woodwork of which is at present varnished. The condition of this is still very good and retains a high gloss. I now wish, however, to paint the woodwork, and have been told it is essential to remove all the varnish before the paint

will adhere to the surface, without fear of flaking or chipping. I have also heard that by first cleaning the surface and then painting it with aluminium primer paint, before adding the undercoat and top coat, this may possibly prove satisfactory. Your advice would be appreciated. (C.G.—Palmer's Green).

PAINTER'S 'knotting' might be used successfully as a priming coat over the varnished surface. Also aluminium paint should prove satisfactory. The latter forms an excellent undercoat for all paints, and adheres well to a smooth surface. Either should prove satisfactory for the job you contemplate.

Patches on Table

I HAVE an oak table, stained and polished dark. Through ironing on it, several light coloured patches have appeared. Can you tell me the best way to restore these to the original colour? (E.M.—Anglesey).

AS the heat of the iron has removed the polish, the only remedy is to repolish the table top. Remove the remains of the old polish first. A proprietary brand of varnish remover, such as you can buy at most ironmongers and paint shops, will be the quickest and cleanest method. Rub down with glass-paper and then, if necessary, re-stain. A powder stain, soluble in methylated spirits will be needed. Dissolve a little in the spirits, add a small portion of clear varnish or polish, and brush over the table. Repeat if necessary, to match the colour of the table. The top can then be repolished. If inexperienced in french polishing, we suggest you try one of the amateur polishing sets now on sale. Alternatively, you could give the table-top two coats of white hard spirit varnish, rubbing the first coat down when dry, with worn glasspaper, before applying the second. If the colour after the first coat is not quite deep enough, you could add a little of the stain to the final coat. Apply the varnish in a warm room.

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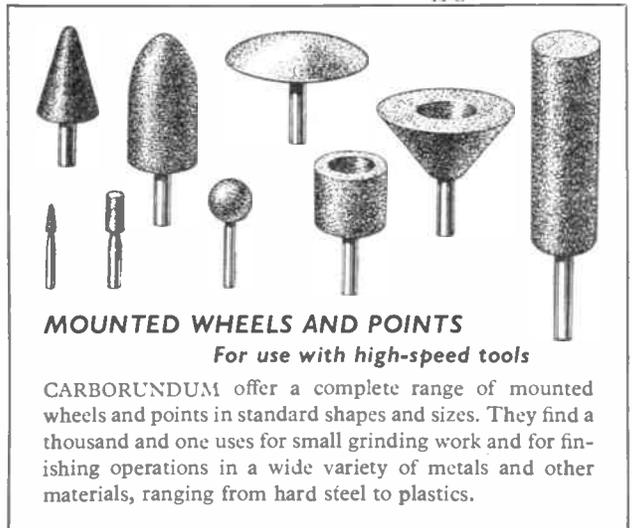
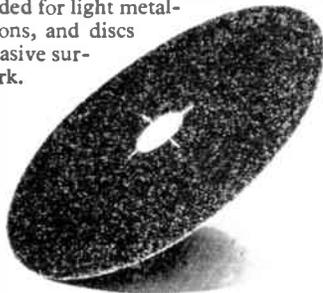


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WHERE there is much movement or vibration in a machine there is a risk that nuts may work loose on their studs or bolts, so in such things as aircraft and car engines various means are used to lock the nuts. Some of these methods are useful for the amateur to know.

The best-known locking arrangement is the lock-nut (A). With the two nuts jammed together, most of the strain comes on the top one, so to be logical, the top nut should be the thicker one; but they are usually arranged as shown, with the thin-lock nut on top because there would be difficulty in using the average thickness spanner on it if it was below. To lock the two nuts properly, tighten the first nut completely, then tighten the second on it—have a spanner on each nut, and pull back the lower one slightly after the top one is tight.

The Split Pin

Another well-known locking device is the split or cotter pin. Nuts are made with slots across the faces (B) or a better arrangement is seen in the castellated nut (C) where the slots are in a narrower round part above the spanner surfaces. These can only be used in places where it is possible to get a drill into position after the nut is tightened, to make a hole through the bolt for the split pin. In some cases it is

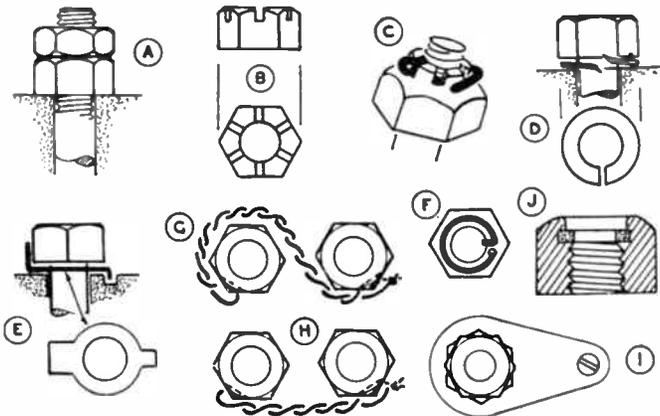
By P. W. Blandford

possible to make a trial assembly and mark the position of the hole, then remove the bolt for drilling.

There are several kinds of spring washers. Some are really intended to

washer with projections on opposite sides. One tab is turned down into a small hole or over the edge of the component. The other tab is left flat until the nut is tightened, then it is turned up one of the faces.

A circlip (F) is a ring of spring steel wire, with one end turned in and one



provide a little play in a joint, but those for locking are hardened steel, with sharp ends which dig into the nut or bolt head (D).

Another device for a bolt head or nut is a tab washer (E). This is a fairly stout

turned down, which fits on top of a nut. It is a good fit on the bolt and one end goes into a small hole on the nut and the other into a hole in the bolt. If the nut attempts to slacken, the tightness of the circlip is increased.

Another locking arrangement in which attempts at slackening tighten the lock is seen on aircraft parts. Each nut has a small hole drilled diagonally across a corner and pairs of nuts are tied together with wire, so that any attempt by one to loosen tightens the wire (G). Wiring straight across is not correct (H). In this case one nut (the left one) could loosen at least half a turn.

A different idea, used on some machinery, is a locking plate (I), which is a sort of spanner. This fits over the nut and is itself locked by a screw.

A safety arrangement which is becoming increasingly popular is the stiff nut. There are several makes, using different ways to obtain stiffness. One type looks like an ordinary nut extended slightly. There is a fibre ring above the threads (J) and as the bolt screws through the nut it cuts its own thread through the fibre. Although this is not a positive lock there is enough friction in the fibre to prevent the nut working loose. These nuts are obtainable in all sizes and are very useful to the amateur mechanic for all sorts of jobs—even such humble things as fixing cycle mudguards.

● Continued from page 23

Stamp Collector's Corner

The town of Grand Falls, on the Exploits, is the centre of the pulp and paper industry. The Anglo-Newfoundland Development Company's mills cover eight acres and are the best in the world. The forests supplying the timber cover an area of 3,000 square miles. Corner Brook Paper Mills are shown on the 1937 8c. and mills can also be seen on the 1910 10c. and the 1932 8c. The 1897 6c. depicts logging and the 1910 9c. a logging camp.

The principal industry is fishing, there being an unlimited supply of herring and codfish. Other fish caught are hake, turbot, haddock, trout, halibut, eel and salmon. Seal from the ice floes are hunted for their skins and blubber. The codfish appears on the 1866 2c., the 1880 2c., the 1932 1c. and the 1937 1c. Salmon fishing is depicted on the 1897 24c. and a salmon fish is the subject of the 1932 and 1937 10c.'s. Fishing forms the subject of the 1897 8c., whilst fishing fleets appear on the 1932 30c. and 48c.,

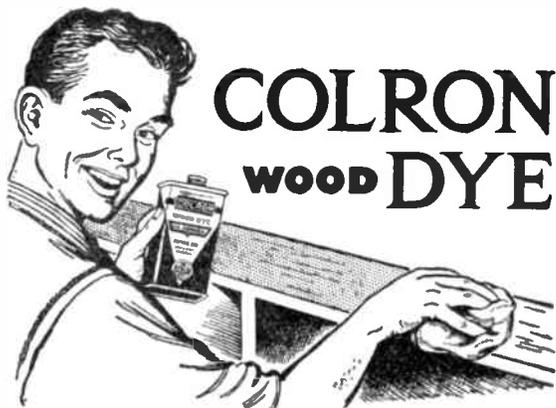
and the 1937 48c. Seals are featured on the 1866 and 1880 5c.'s, the 1897 15c., and the 1932 and 1937 15c.'s. A sealing fleet is shown on the 1932 and 1937 25c.'s.

The caribou, or American reindeer, although non-domesticated, is hunted for its skins under Government control. The 1919 Commemoratives show a caribou's head, and the animal can also be seen on the 1932 5c. and the 1937 7c. The 1897 4c. shows a hunter standing beside a dead beast and the 1923 9c. shows a caribou crossing a lake.

The beautiful Newfoundland dog can be seen on the 1880 3c., the 1932 14c. and the 1937 14c.

Newfoundland is rich in minerals. Iron, copper, silver, nickel, gold, asbestos and mica are mined. The iron mines at Conception Bay are among the largest in the Empire. Mining is the subject for the 1897 5c. and the 1932 24c. depicts the loading of iron ore.

(E.L.F.)



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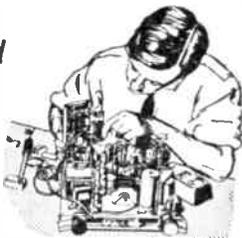
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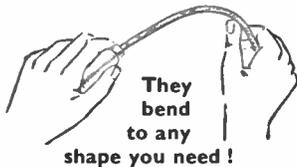
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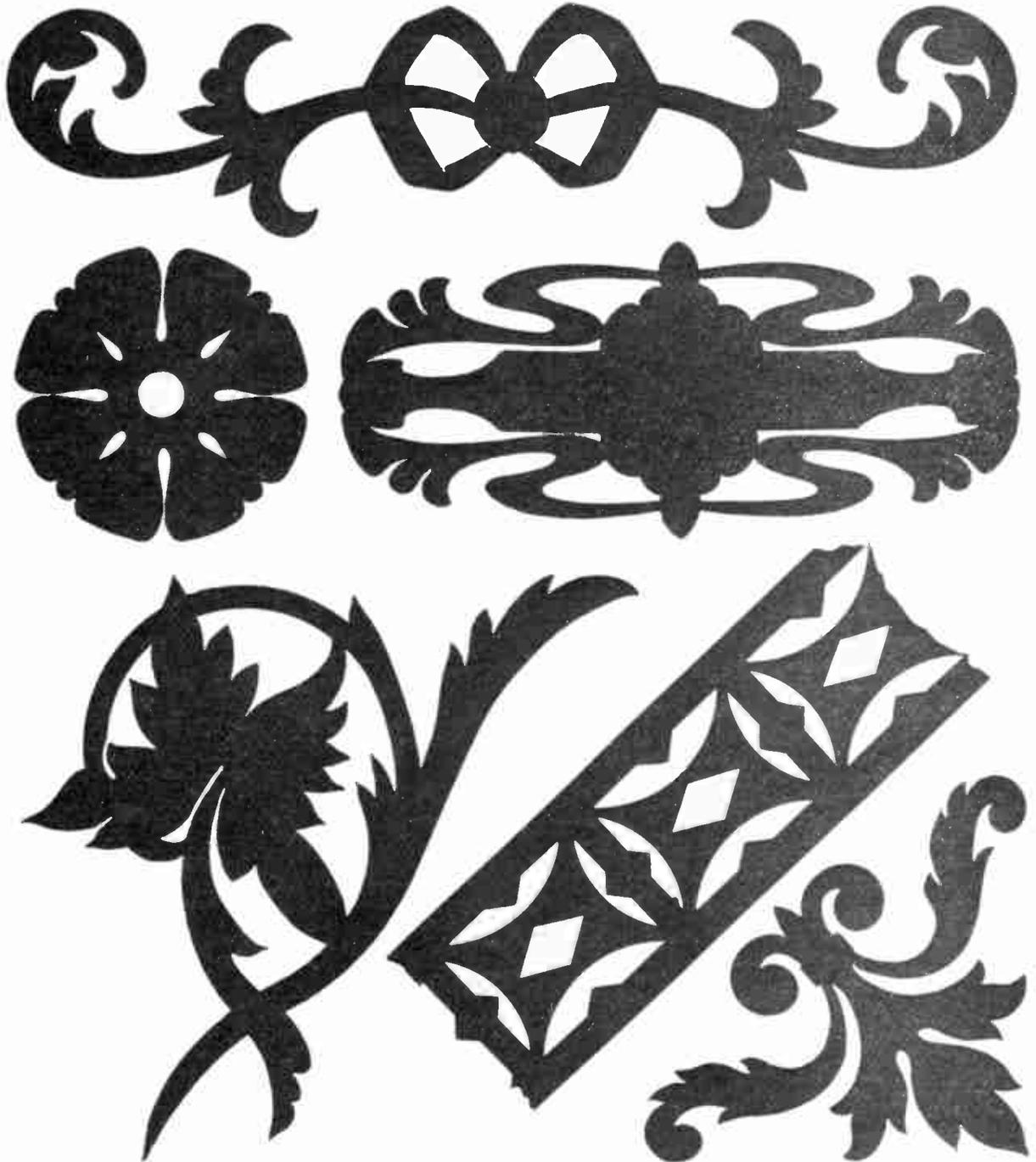
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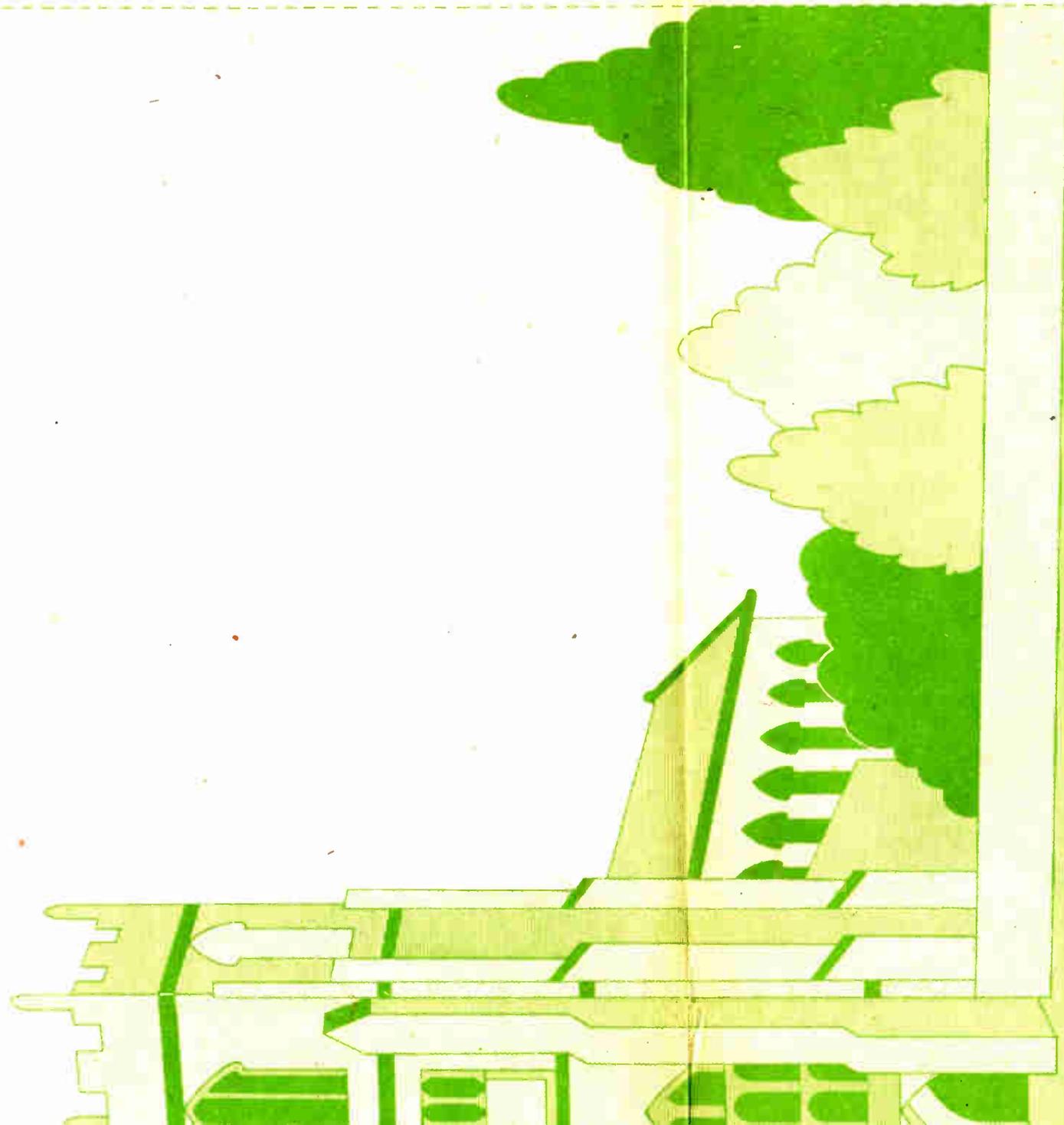
"THE VILLAGE CH"



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Glue it with

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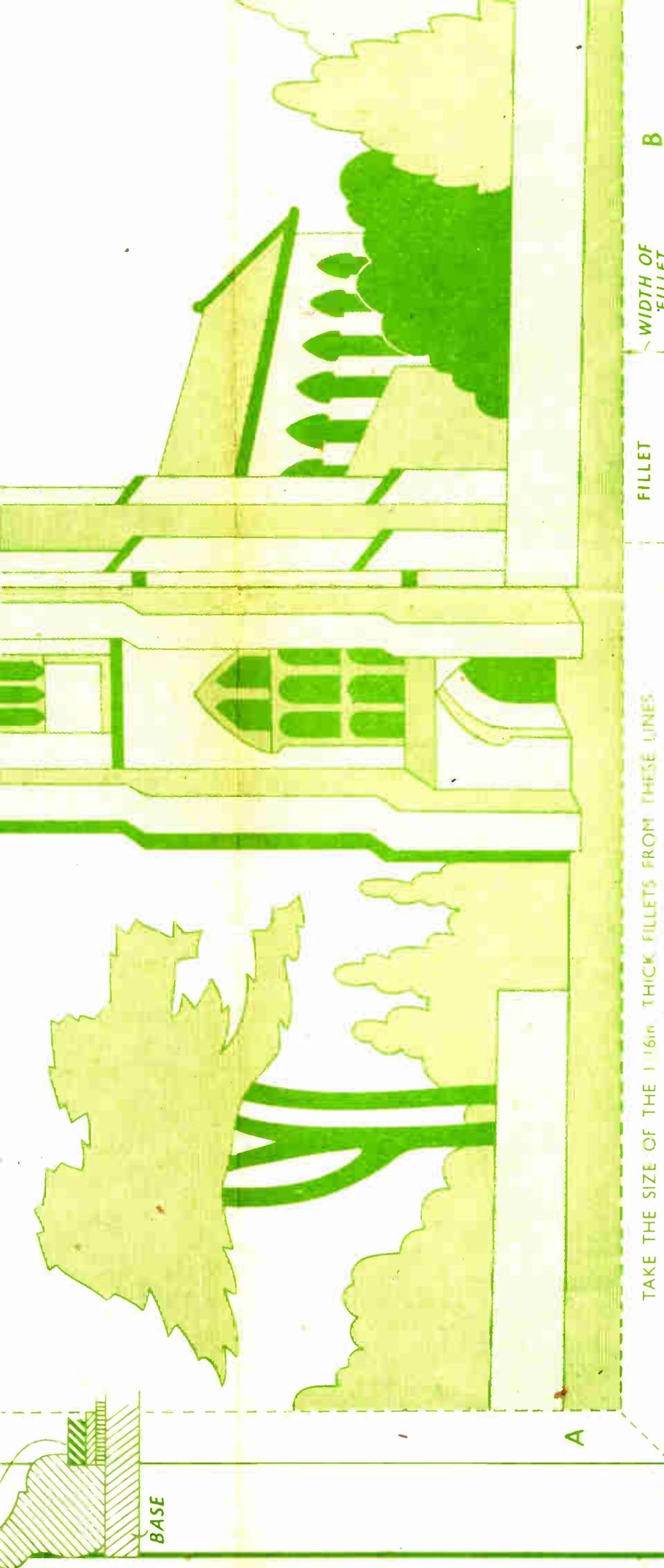
B

WIDTH OF
FILLET

FILLET

THE ARROW INDICATES
DIRECTION OF GRAIN
OF WOOD

ENTRE LINE



WIDTH OF FILLET
 FILLET
 B

TAKE THE SIZE OF THE 1/16in THICK FILLETS FROM THESE LINES.

BASE. CUT ONE 1/4in
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 (CUT TO OUTLINE)



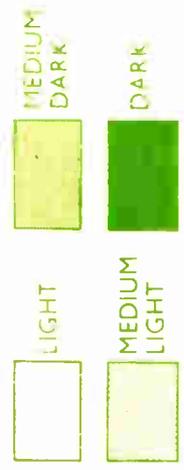
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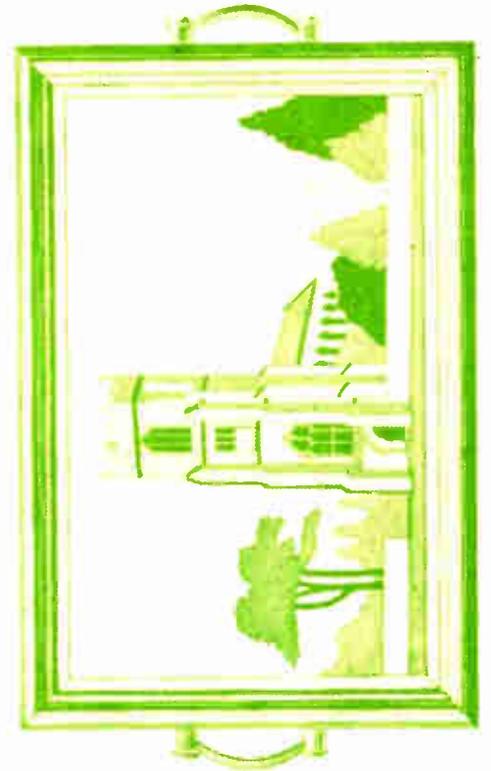


DESIGN

No. 3102

INLAID TEA-TRAY

"THE VILLAGE CHURCH"



B

WIDTH OF
FILLET

FILLET

Materials required for this design

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