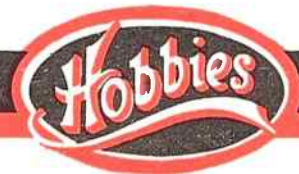


HOBBIES WEEKLY

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DECEMBER 22nd 1954

VOL. 119

NUMBER 3086



A Wedding Anniversary PHOTOGRAPH FRAME

★ This
week's
FREE DESIGN

THE suggestion for this photograph frame came from one of Hobbies' older customers—a man who, despite advancing years, is still an ardent fretworker. He had just celebrated his golden wedding, and the design was prepared specially for him. There will be several other older readers who will, doubtless find the design of use.

Choice of Wording

To give younger married fretworkers a chance we have made it possible to substitute 'Silver' for 'Golden' (25 years against 50 years), and for the few on the other end of the scale we have included 'Diamond', for 60 years marriage.

Those of us who have a long time to go to reach even silver wedding status—not to mention those who are not even married—may still find the design of use. Most of us have relatives or friends who would appreciate a memento of their anniversaries, or the frame could even be made without a fretted overlay at all—cutting, as it were, two solid base pieces.

The frame takes a cabinet-size picture, and we would suggest a head and shoulders portrait of the couple concerned. A larger photograph could possibly be trimmed to fit, provided the two subjects are still included centrally in the picture and, of course, a smaller picture, such as post card size, could be

utilised if first mounted on a white card background.

The kit for the complete photograph frame includes all necessary wood, and a piece of transparent material.

As an alternative to the normal fretted overlay, marquetry enthusiasts might like to inlay the pattern and the wording. No instructions for this are necessary, as the marquetry worker will have all the detail he needs in the patterns on the design sheet.

Not Difficult

Construction is straightforward. First trace the patterns to the wood, having decided, of course, which overlay is required. If 'Golden', the worker should note that the word, shown separately on the design sheet, takes the place of the word 'Silver' on the overlay shown at the bottom of the design sheet.

Cut out the main backing piece (1), and then drill a hole in one corner of the outline of piece (2), insert the sawblade and cut the piece out. This gives you a

● Continued on page 186

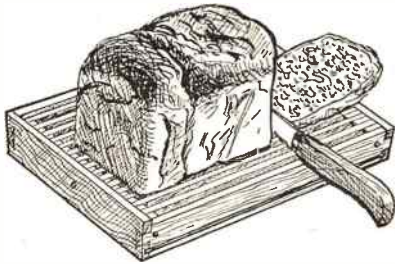
All correspondence should be addressed to The Editor, Hobbies Weekly, Dereham, Norfolk

For Modellers, Fretworkers
and Home Craftsmen



A Breadboard with a Difference

By R. Coleman



the slots may be cleared by the simple means of sliding out a $\frac{3}{16}$ in. thick panel of plywood from the bottom; all the

reduced for one-third of its length to the same width as sides (C) and (D). Dovetailing may be replaced by two fine woodscrews at each corner for a quicker job.

Grooves $\frac{1}{16}$ in. by $\frac{3}{16}$ in. wide should be

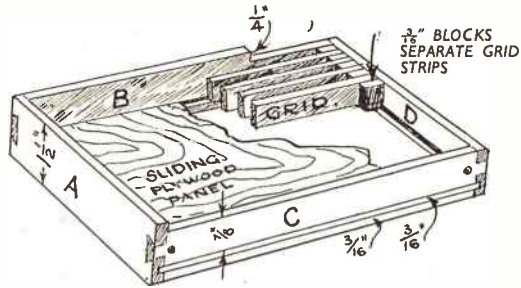


Fig. 1 -

Broken view of frame, grid and sliding panel

HERE are diagrams and instructions for the making of an unusual breadboard. After slicing the bread, the board should be tilted on to its rear edge and left-hand corner and given a slight tap, when all the crumbs will at once conveniently disappear! There will then be no unsightly crumbs spreading over the dresser top, or tablecloth, to fall upon

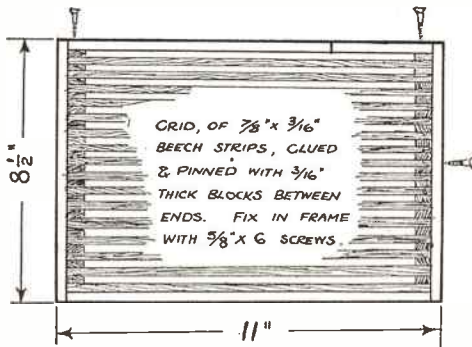


Fig. 2—Plan view of the board

worked in sides (A), (B) and (D) to take the plywood sliding panel. After cleaning up with glasspaper, the four frame sides may now be glued together, or glued and screwed.

The grid consists of a number of $\frac{3}{16}$ in. thick, $\frac{3}{4}$ in. wide strips of beechwood, length just to fit inside the outer frame. Glasspaper the strips smooth and join all together at the ends to form the grid, with glue and panel pins, placing small blocks of $\frac{1}{16}$ in. thick beechwood between to make the slots. It is helpful to place in sash cramps across the ends while the glue is setting.

Trim off the ends and smooth off any roughness, glue, etc., and fit the grid into the outer frame with small countersink screws as at Fig. 2.

The bottom sliding plywood panel, $\frac{3}{16}$ in. thick, should be cut and smoothed all over with glasspaper to slide within the grooves cut in the three sides of the outer frame. Fit the thin strip under the outer edge (Fig. 3), and your crumbless breadboard is ready for use—if you prefer a natural finish.

Otherwise it is suggested that the outer frame and underside of the sliding panel be lightly stained with an oil stain and afterwards wax polished. A pleasing effect can be obtained by making the outer frame of a contrasting hardwood, walnut, oak, teak, or mahogany, in combination with a darker shade of oil stain.

After being in use a considerable time, the top of the grid will become worn with breadknife cuts. Just extract the retaining woodscrews and turn the grid upside down for a new lease of life.

crumbs may be saved for baking and other cooking purposes.

Construction

There is nothing difficult in the construction. The board consists of three main portions: the outer frame; the slotted grid; the sliding plywood panel. Suggested dimensions for the board are given in Figs. 1 and 2, but these may be varied to suit individual requirements. A start should be made with the outer frame, which is best dovetailed at the corners from $\frac{3}{4}$ in. thick strips of beechwood. Sides (A) and (B) should be $1\frac{1}{2}$ ins. wide, and the other two sides a $\frac{1}{4}$ in. less, i.e., $1\frac{1}{4}$ ins. wide. Side (C), after dovetailing, should be reduced to $\frac{7}{8}$ in. wide, the thin strip cut off being planed down to $\frac{3}{16}$ in. by $\frac{3}{16}$ in. and afterwards glued and pinned to the under front edge of the bottom plywood panel—see Fig. 3. Note that side (B) is

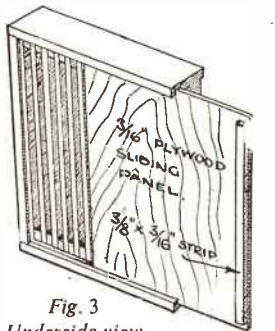


Fig. 3

Underside view of board, with panel partly removed

the carpet and produce more work in sweeping up.

Actually, the crumbs disappear into a number of deep slots which span the length of the board. At suitable intervals

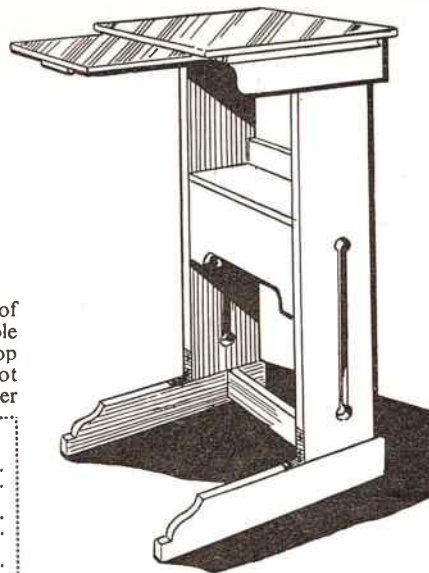
A Bedside Table with Extending Top

by W. J. Ellson

THE bedside table illustrated is provided with a draw-out top, capable of extending well over the bed for the benefit of invalids, permanent or temporary. Serving a useful purpose at all times, it is invaluable in cases of illness, which, unfortunately, occur in most families. A small shelf is also provided for the accommodation of books and other items.

The material suggested for making is good quality deal, with plywood for the top and draw-out extension. Thicknesses and general dimensions, where not

which tend to lighten the solidity of them, are easily sawn out, a 1in. hole being bored through the wood at top and bottom, and the connecting slot cut with a keyhole saw. In the lower



CUTTING LIST

Uprights (2)	2ft. 3ins. by 6ins. by $\frac{3}{8}$ in.
Top horizontal (2)	1ft. 1in. by 3ins. by $\frac{3}{8}$ in.
Bottom horizontal	(2) 1ft. 6ins. by 3ins. by $\frac{3}{8}$ in.
Table top	1ft. 2ins. by 16 $\frac{1}{2}$ ins. by $\frac{1}{2}$ in. plywood
'Draw-out'	1ft. 6ins. by 12ins. by $\frac{1}{2}$ in. plywood
Bottom crossbar	1ft. by 2 $\frac{1}{2}$ ins. by $\frac{3}{4}$ in.
Middle crossbar (2)	1ft. by 6ins. by $\frac{3}{4}$ in.
Shelf	1ft. by 5 $\frac{1}{2}$ ins. by $\frac{1}{2}$ in.

clear and not likely to affect the stability of the table.

To the outsides of the top horizontal members are screwed $\frac{3}{4}$ in. square wood fillets, shown at (C). To these the table top will subsequently be fixed. The holes for the screws, holding the top in position, should be bored and counter-

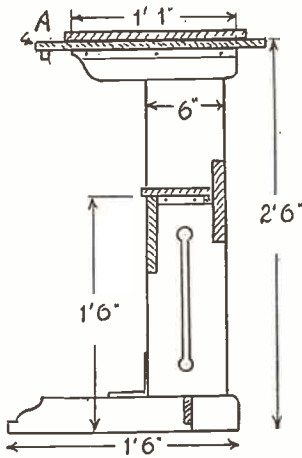


Fig. 1

mentioned in the text, are given in the cutting list appended. The height, it may be stated, will suit most bedsteads, not including a boxspring mattress, but it will be as well to measure the height of the bed first, and bearing in mind the fact that the top of the table should come at least 6ins. above it, increase the given height proportionately, if really necessary.

A side vertical section is given in Fig. 1, and a combined front and rear view in Fig. 2, showing half of each. The sides of the table consist of vertical members, jointed to horizontal floor and top members. These are tenoned together, the tenons being measured off as at Fig. 3, and shouldered down to $\frac{3}{4}$ in. thickness. Note the uprights are spaced just 1in. from the ends of the floor members. Close-fitting and well-glued joints are necessary here. The cut-outs in the lower halves of the uprights,

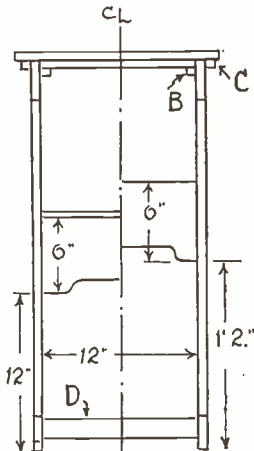


Fig. 2

angles between uprights and floor members screw 4ins. steel brackets.

These sides are now joined by the crossbars shown in Fig. 2. It will be noted here that the front crossbar is a little lower than the rear one, the greater height of the latter acting as a back to the shelf. The shelf can be cut from stout plywood or $\frac{3}{4}$ in. solid wood, as preferred. It is nailed to the top edge of the front crossbar and to wood fillets, screwed to the sides of the table and rear crossbar. Fig. 1 shows these details. At the bottom, a crossbar (D) is nailed across between the floor members. This bar is 2 $\frac{1}{2}$ ins. wide, and is fitted across $\frac{1}{2}$ in. above floor level, so that it stands

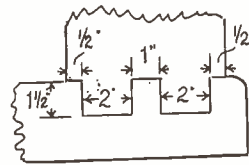


Fig. 3

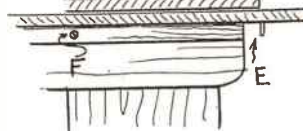


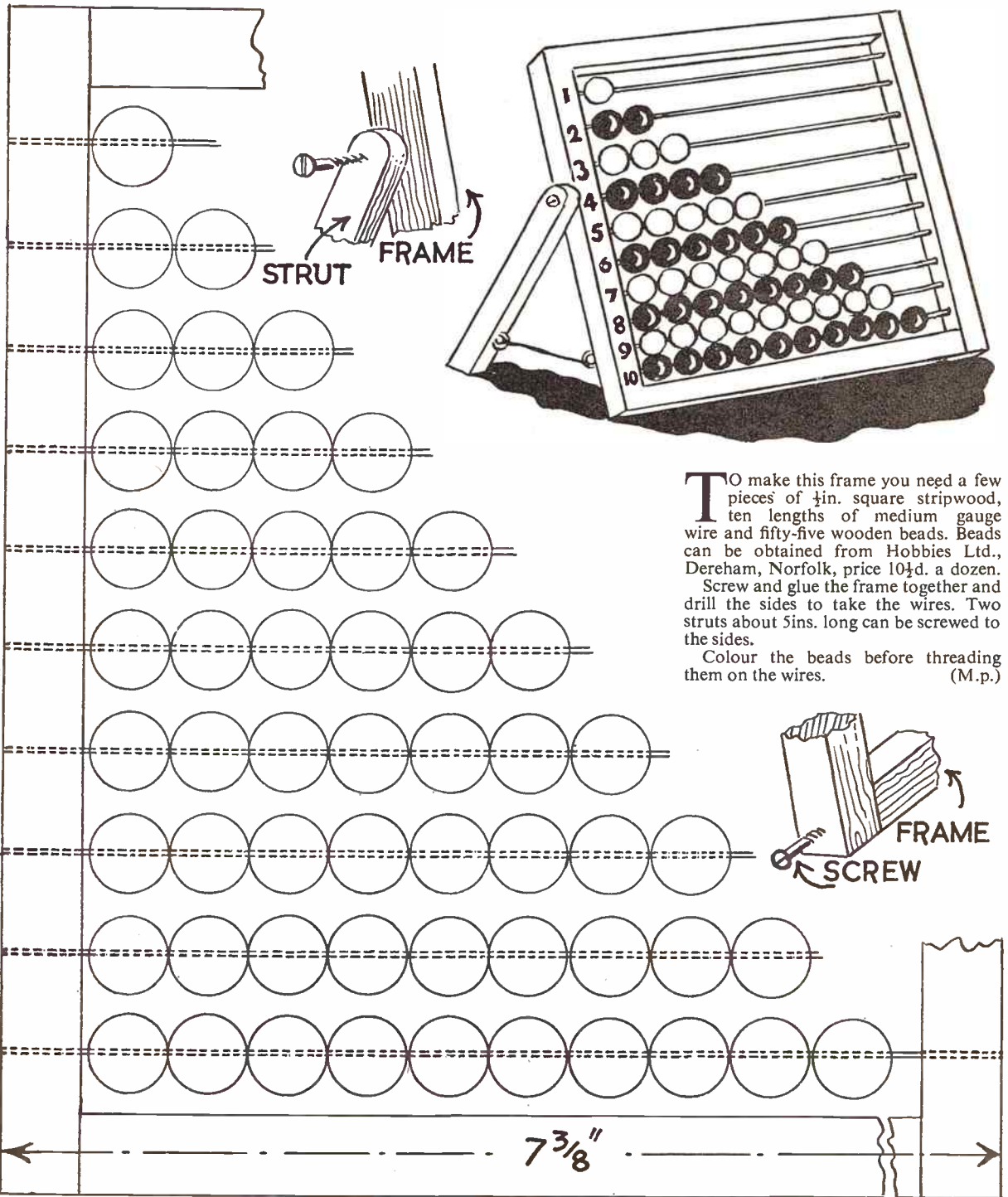
Fig. 4

sunk before the fillets are fixed on, as once fixed, the boring would prove rather awkward. The top can now be cut. It should overlap the fillets and back and front of the top members by about $\frac{1}{2}$ in. Leave the actual screwing down of the top for the moment, and cut the draw-out extension. This is shown at (A) in Fig. 1.

As shown in the drawings the 'draw-out' is fitted directly beneath the table top, and runs on $\frac{3}{4}$ in. square fillets screwed beneath it to the sides of the table, as shown at (B) Fig. 2. As it is essential for this draw-out extension to slide evenly, the space between the

● Continued on page 181

A CHILD'S COUNTING FRAME

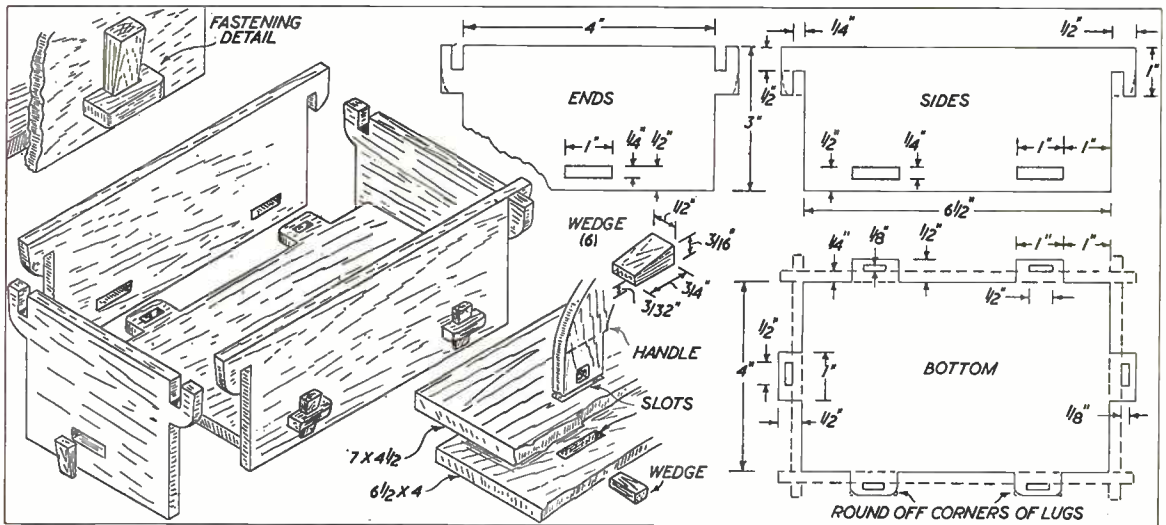


TO make this frame you need a few pieces of $\frac{1}{4}$ in. square stripwood, ten lengths of medium gauge wire and fifty-five wooden beads. Beads can be obtained from Hobbies Ltd., Dereham, Norfolk, price 10½d. a dozen.

Screw and glue the frame together and drill the sides to take the wires. Two struts about 5ins. long can be screwed to the sides.

Colour the beads before threading them on the wires. (M.p.)

Interlocking Keyed Construction



THE design illustrated is suitable for a cigarette box, trinket box, etc., and features non-glued assembly. The same principles of construction can be extended to larger sizes and different shapes. With larger assemblies, however, it may be advisable to make the lugs and end latches as separate pieces to avoid end grain, pinning and gluing these in place.

Close-grained Wood

Patterns for the sides, ends and bottom are detailed quarter size, together with all relevant dimensions. All parts are cut from 1/4 in. thick stock, preferably from mahogany or similar close-grained wood with a pleasing appearance. Hard woods give a stronger assembly but are more difficult to work. Grain should run from end to end parallel to the longest dimensions of each piece.

The lugs and end latches must be cut accurately to shape, also the slots in sides and ends which take the lugs. Assembly of the pieces should result in a tight push fit, giving rigidity even without the use of the locking keys. Do not make the various joints too tight, however, as there is a danger of splitting the wood if strained. It is also necessary to 'spring' the last side (or end) slightly in making up the box in order to engage the lugs.

The corners of the projecting lugs, and also the edges of the latches, should be rounded off smooth. This is best done after assembling the pieces as they

are then better supported. The six wooden wedges which complete the assembly are driven in quite firmly. A rough surface on these is recommended to provide a better grip.

If the box is to be fitted with a lid, this also can be of the self-locking assembly type. The lid is formed from two panels of 1/4 in. thick material, the smaller one of which just fits inside the box. A handle, also cut from 1/4 in. material, has ends shaped to fit through identical slots in both lid members and can be keyed in place with small wedges,

as shown on the main drawing.

Although the assembly is quite rigid and secure, provided the components are made accurately, there is no reason, of course, why joints should not be glued to render the job permanent. A natural wood (unpolished) finish is best for a project of this type, although much will depend on the appearance of the wood selected for the job. Dark oak or similar stain can be applied over less attractive wood and the box 'dull-polished' with beeswax.

(R.H.W.)

● Continued from page 179

Bedside Table

sides at the top must be parallel. To better ensure this it will be wise to screw the table top on with the 'draw-out' in its actual position. Place the top upside down on the bench and position the table itself on it, also reversed, of course. Push the draw-out in between the sides, then screw the top on through the side fillets (C). About four screws will suffice each side, and see that the end screws are as close to the front and rear ends of the top as possible.

Without moving the 'draw-out', screw the fillets (B) underneath it to the sides. Now lift the whole right side up and try the movement of the draw-out extension. Make sure it can be pulled out or pushed in reasonably easy, as if it sticks, or is hard to move, a person in the bed may push the whole table

nearly over in trying to close it up. A good glasspapering of the edges, making them slightly curved, will be helpful in gaining a smooth sliding action.

The draw-out extension must be prevented from emerging too far, so a simple form of stop should be fixed. This is shown in Fig. 4, and consists of a metal pin (E) (which can be a brass screw with its head filed off) and a screw driven in the fillet (B). Position the pin for it to strike against the screw (F) when the draw-out is extended to a safe extremity. Now glasspaper the whole article, and stain and varnish as desired. It might be as well, to facilitate an easy draw, if a strip of wood some 4ins. long were glued under the 'draw-out' near its forward end, as shown in Fig. 1.

Make a Toboggan and enjoy

A THRILLING WINTER SPORT

ALTHOUGH the weather men may depress us with their forecast of a severe winter, for those of us who possess a toboggan the hard snows and biting frosts will actually be something to look forward to.

If you intend to make a toboggan (and it's ridiculously easy when you know how) choose a strong light wood about $\frac{3}{8}$ in. thick. A straight-grained ash is very suitable.

The sides of your sled ought to be made together so that they will be exactly the same. A convenient size to handle is 3ft. 6ins. by 5ins., and do be sure to smooth all four surfaces before starting the job of shaping the edges.

The curve of the prows should begin on the bottom edge, 6ins. from the front. You could round the bottom rear corner of your toboggan to improve its appearance, but it is not absolutely essential.

The next step is to cut the notches along the top which are to receive the cross-pieces. These are $\frac{3}{8}$ in. deep and 2 $\frac{1}{2}$ ins. wide (Fig. 2).

The large holes in the sides (Fig. 1) are not only decorative but, more important, they help considerably to lessen the weight. Their size depends largely on the strength of the wood. Do

be careful not to make them too large or you will weaken the structure and probably discover halfway down an icy slope that your toboggan is no longer beneath you.

The top edge of the front hole will also serve as a useful handgrip so that, at least, should be rounded and well

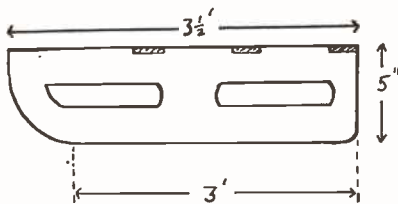


Fig. 1

smoothed off with glasspaper. Do not make the small round hole in the front corner at this stage, as it only goes part of the way through each side.

The three cross-pieces 15ins. long and 2 $\frac{1}{2}$ ins. wide are prepared from the same $\frac{3}{8}$ in. wood, but before screwing them to the runners procure a round iron rod about $\frac{1}{2}$ in. in diameter—an old iron bedstead on a scrap heap may yield the very thing—and bore a hole of the same diameter halfway through each

side, so that the bar will be made safe and secure. Then fasten on the cross-pieces and plane the top of the joints to ensure that everything is flush, smooth and rigid.

All that remains now is for the lengthways spars to be added and these are easily made from strong three-ply

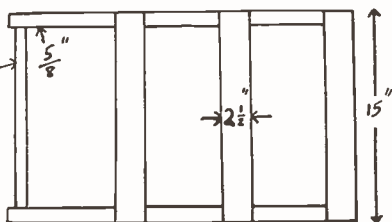


Fig. 2

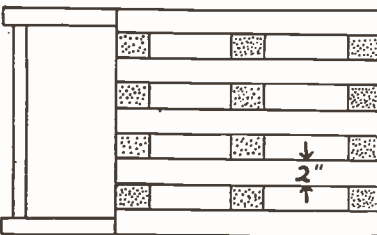


Fig. 3

Some Books to Read

The 'Practical Mechanics' How To Make It Book

edited by F. J. Camm

THIS book is for the man who likes to make things for himself. It has been compiled from the columns of *Practical Mechanics*, and the selection has been decided by popular demand. The contents include a tape recorder, an electronic organ, an electric washing machine, a hand loom, a potter's wheel, a Spanish guitar, and many other projects.

Published by George Newnes Ltd., Tower House, Southampton Street, Strand, London, W.C.2—Price 12/6.

Lettering for Craftsmen

by Peter Strevens

THIS lettering book has been designed not only for professional decorators, craftworkers and designers, but also for students qualifying for examinations in lettering, typography, decorating, sign painting and letter

cutting. The author studies in detail two brush-drawn alphabets—Roman and Sans Serif—and also deals with the first principle of letter construction, the use of the brush, and the spacing and arrangement of letters.

Published by Sir Isaac Pitman & Sons Ltd., 39/41 Parker Street, Kingsway, London, W.C.2—Price 10/6.

Do Your Own Spray Painting

by A. St. J. Masters

SPRAY painting has become accepted as the modern method of applying paints, enamels, stains and varnishes. For the painting of a thousand and one household articles, it is without doubt the best way of obtaining a first-class result if certain basic working rules are observed. This book sets out to show the right way of getting these results economically, efficiently and with the maximum of pleasure.

Published by George Newnes Ltd., Tower House, Southampton Street, Strand, London, W.C.2—Price 7/6.

2ft. 7ins. long and 2ins. wide. As you can see in the illustration there are five of them, and they must be made very smooth and completely free from any sharp corners which could easily tear your clothes when travelling at speed. See Fig. 3.

And that's all there is to it, except to suggest to ambitious folk who hope to break the sound barrier that the toboggan should make a fair turn-of-speed if the runners are shod with narrow strips of hoop iron.

Be sure to run the metal right up to the front and part of the way up the back of the blades to prevent any rough ends being left in awkward places.

There are three methods of riding on it: (1) lying full length on your stomach, with your head to the front, and keeping your position by gripping the handrails cut in the sides; (2) sitting astride gripping some 'reins' attached to the front bar, and with legs jutting forward on either side of the curled prows; (3) lying on one side with the lower hand holding the front bar and the other gripping one of the spars. The under leg is curled beneath the body, the other projecting out behind the sled. (T.P.F.)

Wiping and Making Lead Pipe Joints

MOST bursts and fractures in the cold-water supply lead pipes occur during the winter months upon the incidence of a severe frost, especially if the pipes are exposed and unprotected. But bursts are not unknown during warmer weather when local fatigue and crystallisation of the metal sometimes occur and eventually lead to a breakdown in the structure of the metal.

A little elementary knowledge of how to deal and repair such an event is extremely useful, as during the winter months the services of plumbers are

usually in universal demand, and the waiting list is apt to be a long one.

In the event of a burst pipe, the first thing to do is to turn off the mains supply or the cistern tap, depending, of course, which pipe is affected. The area immediately around the burst will be found to be somewhat enlarged and distended due to the expansion of the ice within the pipe. This must be gently tapped with a hammer to its former dimensions, closing the burst at the same time.

With a shave hook, scrape the pipe clean all around the damaged part and also extending for at least 1in. above and below the burst, then apply a paste flux or mutton fat immediately to prevent oxidation of the metal occurring through contact with the air.

A plumber's palm to wipe the joint is next required. This usually consists of an approximately 6ins. square of moleskin impregnated with paste flux or mutton fat, or alternatively a similar size piece of closely woven felt will do, treated with flux as described above, but the moleskin is to be preferred.

The next requisite is a stick of plumber's solder. This is essential for the job, as it has a melting point below that of the lead piping and remains in a plastic condition longer than ordinary

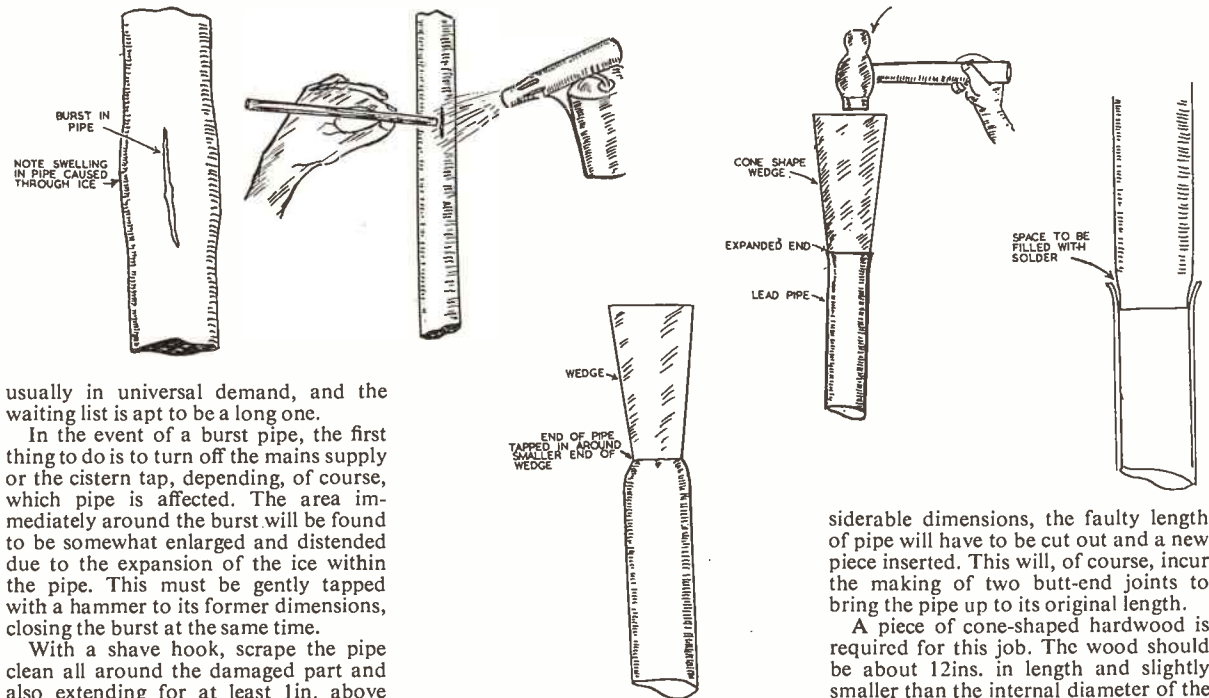
By E. S. Brown

tinman's solder and so can be worked into a joint with the aid of the palm.

To make the joint, a blowlamp is applied to the repair at the same time dipping the stick of solder into the flux, then rubbing it along the pipe, meanwhile playing the blowlamp upon both. The solder will quickly melt and should be rubbed around the repair to tin same. When the tinning is complete the

joint worked up in the familiar bulbous shape. Although a certain dexterity in manipulation is required, the job is not at all difficult. The two ends of the joint should be wiped first, as these having the least metal will tend to cool fairly quickly, then afterwards the thicker portion in the centre. The great thing is to wipe the joint as quickly as possible before the metal solidifies. On a fairly large joint it is advisable to occasionally flash the blowlamp on the repair during the wiping process to keep the solder in a plastic condition.

Very often, where a burst is of con-



solder should be carefully built up with the blowlamp, applying a heavier deposit in the centre of the repair. Do not keep the blowlamp too long in one position, otherwise there is a danger that the lead pipe will melt in the local heat. The end of the solder should also be frequently dipped into the flux to prevent oxidation and to ensure perfect adhesion between the solder and pipe.

When sufficient solder has been deposited, the blowlamp should be quickly flashed on and off around the repair to ensure that the metal is in a plastic and workable condition, then the palm placed across the fingers and the

considerable dimensions, the faulty length of pipe will have to be cut out and a new piece inserted. This will, of course, incur the making of two butt-end joints to bring the pipe up to its original length.

A piece of cone-shaped hardwood is required for this job. The wood should be about 12ins. in length and slightly smaller than the internal diameter of the lead pipe at its smaller end and slowly increasing in diameter to its larger end.

The cone is placed inside one section of lead pipe and is firmly tapped with a hammer until the end of the pipe is expanded approximately $\frac{1}{4}$ in. all round. The cone is then removed and is placed in the jointing length of pipe which is then slightly closed by tapping all around with a hammer. The mating portions of the two pipes should be brought together where one should lie snugly within the other, allowing approximately $\frac{1}{4}$ in. clearance around the upper part of the two pipes. The

● Continued on page 191

Masking Prints and Enlargements

by F. G. Rayer

WITH winter, the amateur photographer's attention usually turns increasingly towards the making of contact prints and enlargements from snaps taken during brighter days. On the grounds of economy and speed alone, print-making at home is worth while. Additional prints for friends, etc., can be

negative about $2\frac{1}{2}$ ins. by $3\frac{1}{2}$ ins. So that a white border may be left round the print, the paper for such negatives is usually $2\frac{1}{2}$ ins. by $3\frac{1}{2}$ ins. The glass and

ever, to have the frame the correct size for negative and paper, as these can then be dropped straight into the frame, in the proper position.

The rebate along the inner sides of the strips forming the frame serve to hold the glass, and provide a white edge to the print, and should be about $\frac{1}{8}$ in. wide. The back is cut from fairly thick wood— $\frac{3}{8}$ in. to $\frac{1}{2}$ in. thick is satisfactory.



A 'frame' can be made by holding the paper with four elastic bands

turned out with very little difficulty, and during winter evenings almost any room will be sufficiently dark for work of this kind.

Variety in the method of masking a print or enlargement can add interest to a collection of photographs, and several useful devices can readily be made up to assist in print-making.

For Contact Printing

When contact prints are made it is essential that the negative and printing paper be held tightly together, or detail will be lost. For this purpose a printing frame is usually employed, and this can be made up as shown in Fig. 1. Any hardwood is satisfactory. If it is to be used for one size of negative only, then the frame can be made of suitable dimensions for this. For example, the popular type of camera providing eight exposures on 120 or 620 film gives a

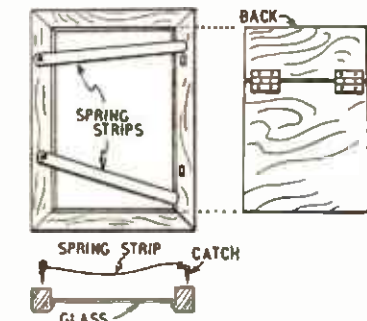


Fig. 1—A frame for contact printing

inside of the frame can thus be this size. If various sizes are to be printed, then the frame can be made for the largest and masks used when smaller prints are required. It is more convenient, how-

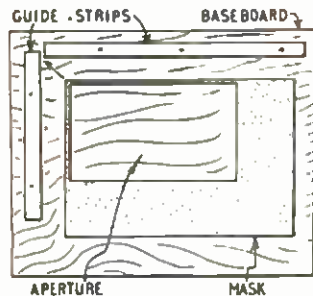


Fig. 2—A simple enlarging mask

CUT OUT APERTURE

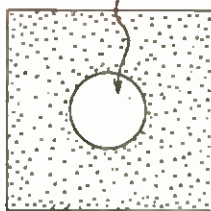


Fig. 3—Mask for 'fading edge' prints

It is cut in half and hinged. This allows smaller prints to be adjusted by lifting up one half only. It also allows one half to be opened, to look at the print, when P.O.P. is used. Spring strips, pivoted on a screw and turned under a screw-eye or similar catch, hold the back in place.

Other Methods for Prints

To give variety, other methods of framing can be used. A simple method is to choose a piece of paper slightly smaller than the negative, and hold negative and paper together with a sheet of glass. This leaves no border at all, the picture continuing right up to the edge of the paper.

A further method is to secure the sheet of glass to a piece of wood of similar size with wide elastic bands, the bands being so positioned that they make a white line near the edge of the print. Four bands will give a cross effect.

Circular or other masks may be used, the former being best for portraits. For variety, a few prints may be made in the usual way, then have the centre picture area covered by any opaque object. The visible edges of the paper can then be fogged by means of the printing light. This gives a black edge to the print.

For Enlargements

The usual type of contact-printing frame is not used with enlargements, as there is no need to hold negative and paper in contact. Some enlarging frames have adjustable side-members, to give a white border and hold the paper flat, but these are not easy to make.

An enlarging frame of very simple type, and giving pictures of uniform size, is shown in Fig. 2. The baseboard should be large enough for the largest picture to be made, and has two thin strips of wood fixed to it as shown. In use, the bromide paper is pushed against these strips; that is, upwards and to the left. The mask is then placed on top of the paper, and similarly pushed against the strips. If the aperture is of the correct size, this will give a white border of uniform width right round the enlargement. (The bottom and right-hand parts of the mask are left wide for strength only.)

A number of masks may be made for the most-used sizes, those most popular being as follows:

Paper	Paper Size	Size of Mask Aperture
Postcard	3½ × 5½ ins.	3¼ × 5¼ ins.
Half-Plate	4 × 6½ ins.	4¼ × 6¼ ins.
Whole-Plate	6½ × 8½ ins.	6¼ × 8¼ ins.

Such masks will give a white border ¼ in. wide all round, and the top and left-hand parts of the mask should be ¼ in. wide. The masks may be made in several ways. For the metalworker, aluminium of about 14 gauge is best, and can be sawn and filed true with ease. Plywood is also satisfactory. Very good masks can also be made from really stout cardboard, cut with a razor blade drawn along a steel rule, but these

do not have the strength of the metal masks.

To compose the picture, a piece of white paper is placed under the appropriate mask, and the baseboard moved about on the enlarger baseboard until the best appearance is found.

Special Effects

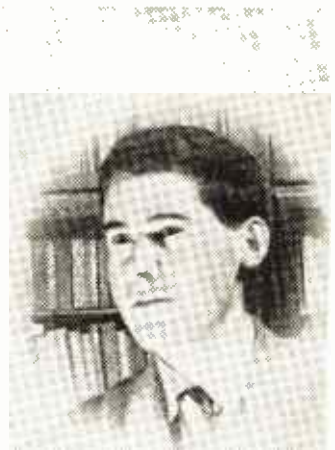
Apart from the methods already dealt with, other effects can be obtained with ease, in both contact printing and enlarging. One of the most popular is the 'fading edge' effect, where the



A black border obtained by fogging the edges of the print

picture gradually becomes weaker, fading away to clear paper. This can easily be achieved by cutting a mask from card, with a central opening, as shown in Fig. 3. The card should be large enough to cover the whole of the printing frame or bromide paper with ease.

In use, the mask is held between the printing light and frame, or enlarging lens and bromide paper, and kept on the move during the whole time of the exposure. No particular skill is required. The centre of the picture, directly under the opening, will receive the full ex-



'Fading edges' for portrait

posure, and thus come out dark, but the exposure will have been less and less towards the edges, so that the image fades away to nothing.

An examination of the photographs will show the kind of effects which are obtained, and others will suggest themselves. In addition to the various paper sizes mentioned, printing paper 1½ ins. by 2½ ins. and 2½ ins. by 2½ ins. may be obtained, for VP, 16-on, and 12 shots on 120 and 620 film. Prints this size can be made in a 2½ ins. by 3½ ins. frame by cutting masks from thin card or red celluloid, and placing these against the back of the glass in the printing frame.

As a guide to the photographer who has not yet made prints at home, paper up to 2½ ins. by 2½ ins. is about 1/4 per 25 sheets, that for 2½ ins. by 3½ ins. being about 1/8 per 25 sheets, in the usual grades. The low cost of contact printing will thus be very clear.

The Editor and Staff of 'Hobbies Weekly'
wish all readers

**A VERY HAPPY CHRISTMAS
AND PROSPEROUS NEW YEAR**

Pleasure and Profit from Mice

ALITTLE over sixty years ago, tame mice were kept only by children, research laboratories, and a few gentlemen regarded by most people as very eccentric.

It was the last group which was responsible for founding the National Mouse Club in 1895, and from a humble beginning gave birth to one of the most popular hobbies connected with small livestock fanciers.

Skill Required

Many people today still regard mice breeders with a superior air, but there is as much skill in breeding a champion mouse, as in producing a prize-winning Hereford bull or a champion Afghan hound.

Mouse fanciers do not enjoy the same publicity or support as rabbit breeders, but, fundamentally, there is little difference between the two.

The National Mouse Club holds several shows a year, and there are mouse clubs in all parts of the country, although Yorkshire still seems to be the centre of the hobby.

The Perfect Mouse, like the perfect budgerigar, has never yet been seen. Most fanciers do not believe, and indeed, do not hope, that a perfect specimen will be produced. For while there is room for improvement, there

is more interest in the art of breeding.

However, breeders constantly have before them a mental picture of what they are striving to achieve. Their ideal differs as much from the wild mouse as does a pit pony from a Derby winner.

Fancy mice, as they are called, can be almost any colour. Some of the most popular varieties are sable, chocolate, red, champagne, black-eyed white, pink-eyed white, blue, black, tan, fawn, cream, silver, grey, pearl, yellow, and combinations of all these colours.

The pink-eyed white is the most common. It is actually an albino, or a mouse with no visible colouring.

It would be wrong to say it has no colour at all, for every albino possesses some pigment which it passes to its young. Therefore, although it is not one of the most popular mice for exhibition purposes, it is useful for breeding.

Laws of Heredity

The theories of Gregor Mendel, the Abbot of Brunn, on the general laws of heredity are often adopted by mouse breeders in their efforts to achieve perfect colouring or shape.

To breed a mouse of any one colour may often mean selective breeding through three or four generations of mice before perfection, or near-perfection, is reached.

Consequently, each mouse has a long pedigree which is studied religiously by the serious breeder, and invariably determines the price when mice are sold.

A champion mouse may be worth anything up to £10, or perhaps more, although first-class mice can frequently be obtained for much less. The best way to breed a champion is to weed out the stock of poorer specimens, and carefully interbreed the quality mice.

Because of this, possibly not one in a hundred mice is ever entered for a show. Competition is intense, and interest has never been keener.

Special Cages

When mice are 'shown' they must be displayed in 'Maxey' cages which are painted red on the inside and green outside. They are of a fixed pattern, and are named after the late Walter Maxey, one of the stalwarts of the mouse fancy, who died a few years ago shortly after his eightieth birthday.

He designed the cage a long time ago, and it has since been recognised universally as the only show cage.

Many people breed mice not for exhibition, but just for the delight of producing the numerous colours and types. Others breed them specifically for sale—and do quite well out of it.

(J.C.S.)

● **Continued from page 177**

Photograph Frame

solid rectangular piece (2), with a surrounding frame (1).

Before cutting out piece (2), check the size of the rectangle with the transparent material supplied. This latter is likely to vary slightly in size, and by checking before cutting, any difference between the size of the material and the rectangle can be allowed for.

Next cut the overlay pieces (3) and (4), and glue them in position on piece (1). It will be noticed that the extra widths of pieces (3) and (4) provide a rebate for piece (1). This rebate is required to hold the transparent material, chosen photograph, and backing piece (2), which is put back in the final stage of assembly.

Now cut the base piece (8) and the chosen overlay. Piece (8) is cut to outline only. Glue the two together as shown in the sketch on the design sheet. In this illustration, incidentally, the interior frets of the overlay are not shown.

The supports are made from the pieces (5) and (6) (two of each), which are glued together in pairs, with the piece (5) on the inside in each case. Each complete support is then glued into the slots in the base piece, and can, if thought necessary, be pinned from underneath for added strength.

COMPLETE KIT FOR 6/-

For making this photograph frame, you can obtain a complete kit (No. 3086) from any Hobbies branch, or post free from Hobbies Ltd., Dereham, Norfolk, price 6/-.

Main construction concluded, the work, including the frame itself, should be given a suitable finish. It can be merely wax polished, or stained and polished, or finished in enamels. If the overlay has been made in the style of a

marquetry inlay, as mentioned earlier, only wax polish should be used for the finish. Contrasting woods will, of course, have been used for the wording and design, so that they will differ from the main woodwork.

Assuming the overlay has been cut in the orthodox way, an alternative finish—and one that prevents an accumulation of dust—is to fill the interior frets with sealing wax. This material can be bought in a variety of colours, and is easily run into the frets when heated.

The frets having been filled, glass-paper the whole surface quite smooth and polish in the usual way. If a stain is used, avoid a dark colour, as it will spoil the natural brilliance of the colour chosen for the wax filling.

When you are satisfied with the finish of the article, place the transparent material, photograph and backing piece into the front. Paste a piece of brown paper over the back of the whole assembly to keep it intact. Now slide the photograph frame into the slots of the support, and the job is finished. It is not necessary for the frame to be permanently fixed in the slots.

Useful Waterproofing Formulas

METHODS of waterproofing are various and new ones come along with the discovery of new chemicals. Some commercial methods demand special machinery and so are impracticable for home use. Others are so simple that they are well suited for the handyman to apply.

If you mix soap and alum solutions you will find a waxy precipitate forms. This is an aluminium soap and because of its waxy nature is water repellent. By steeping cloth in soap and then in alum, the aluminium soap is deposited in the cloth fibres, making the cloth itself water repellent. This principle is extensively used to waterproof light fabrics. Normally it is combined with lead salts and Japan wax.

First dissolve $6\frac{1}{2}$ ounces of alum in 2 quarts of hot water. In another 2 quarts of hot water dissolve 8 ounces of lead acetate. Mix the two solutions. A white precipitate of lead sulphate forms. Let the lead sulphate settle well and decant off the clear upper liquid. For the sake of clearness we will call this solution A.

Next dissolve 4 ounces of ordinary bar soap in 1 gallon of boiling water. Keeping the solution at the boil, gradually add $1\frac{1}{2}$ ounces of Japan wax, stirring well, so that an emulsion is formed. Enter the cloth into this emulsion, turning it about so that every part is soaked. Pass it through a wringer as evenly as possible and enter it while still moist into solution A. Turn it about well, lift and pass again through a wringer. It may then be allowed to dry. Any coarse particles which may adhere to the cloth surface should be brushed off. Finally rinse and dry.

A similar process which avoids the preparation of the aluminium-lead bath brings in the use of zinc sulphate, a zinc soap being formed in the fibre.

In 1 gallon of boiling water dissolve 10 ounces of bar soap and $1\frac{1}{2}$ pounds of dextrine. Enter the cloth into the hot solution and turn it about to wet all parts. Lift and hang to drain. When it stops dripping, but is still wet, pass it into a solution of 6 ounces of zinc sulphate in $4\frac{1}{2}$ pints of water. After thorough turning in this last solution lift the cloth, hang it to dry and then brush off any coarse adhering particles. Rinse and dry again.

Both the above methods are suitable for tent fabrics as well as for cotton rain-wear.

A stock waterproofing composition is useful to have handy for re-proofing such articles as garden shelters. This is brushed on to the fabric and left to dry.

The application should be done in the open air, for the solvent it contains is inflammable.

The formula of the composition is:

Petroleum jelly	..	$1\frac{1}{2}$ ounces
Aluminium palmitate	..	$\frac{1}{2}$ ounce
Beeswax	..	$2\frac{1}{2}$ ounces
Soft paraffin wax	..	$5\frac{1}{2}$ ounces
White spirit (turpentine substitute)	..	40 ounces

To make up the composition, heat the petroleum jelly to about 55 degrees Centigrade (or 130 degrees Fahrenheit) and add the aluminium palmitate. Stir until a smooth mixture results. Add the beeswax and paraffin wax, raise the temperature to between 120 and 130 degrees Centigrade (or 250 and 270 degrees Fahrenheit) and stir until a smooth mass is obtained.

The solvent (white spirit) is added last. As this is inflammable, turn out the flame. Let the temperature drop to about 105 degrees Centigrade (or 220 degrees Fahrenheit), then stir in the white spirit thoroughly. This composition not only acts as a water-repellent but as a preservative.

Owing to the high cost of garages and sheds these days, waterproof covers are much used to protect cars and cycles when not in use. To cut down costs still further these covers can be made reasonably cheaply from plain canvas. A suitable formula is:

Boiled linseed oil	..	2 quarts
Lampblack	..	1 pound
Japan drier	..	$\frac{1}{2}$ pint

This gives a black tarpaulin. Grind the lampblack with enough of the oil to give a smooth cream and then work it into the main bulk of oil. Lastly stir in the drier.

To apply it, stretch out the canvas and brush or spray one side until thoroughly saturated. It is important to keep the lampblack well suspended in the liquid by stirring or shaking frequently. Leave the canvas stretched out. Drying time is about three weeks. One coat of the mixture is usually found to give complete waterproofing.

A knowledge of how to waterproof wood is occasionally useful. A well-proved formula contains:

Paraffin wax	..	1.15 grams
Gum dammar	..	3.4 grams
Crepe rubber	..	0.35 gram
Benzene	..	42 c.c.
Carbon tetrachloride	..	330 c.c.

Cut the rubber small and let it digest in the benzene (inflammable) until dissolved. Then add the Dammar and wax and let these dissolve. Standing the solution vessel in warm water (temperature not above 70 degrees Centi-

grade) helps solution. Lastly dilute the whole with the carbon tetrachloride. The solution is brushed well into the wood in the open air and allowed to dry.

Damp absorption by cement is a fairly common trouble. Good waterproofing of both cement and concrete can be achieved by brushing or spraying with the following preparation:

Solvent naphtha	..	$2\frac{1}{2}$ pints
Aluminium stearate	$4\frac{1}{2}$ ounces	
Glacial acetic acid	$\frac{1}{2}$ fluid ounce	

To dissolve the aluminium stearate the naphtha has to be brought to a temperature of about 80 degrees Centigrade (or 175 degrees Fahrenheit). As naphtha is inflammable this must be done in flame-free conditions. An easy way in the home is to bring a good quantity of water to rather higher than 80 degrees Centigrade in the domestic copper, extinguish the fire and then to place in the water an open-topped can containing the naphtha. When the naphtha is hot, add the aluminium stearate and stir thoroughly until it is dissolved. Then stir in the acetic acid. This solution keeps well and its penetration into the cement is notably good.

For landworkers and hikers waterproof boots and shoes are essential. Here is a formula which is easy to make and apply:

Paraffin wax	..	2 ounces
Petroleum jelly	..	2 ounces
Lanolin	..	4 ounces

Melt the wax at as low a heat as possible, add the other ingredients and keep up the heat until an even liquid results. The mixture is applied warm to the leather (which should be dry).

Paper can be waterproofed by brushing on the following solution:

Water	..	5 fluid ounces
Bleached shellac	..	$2\frac{1}{2}$ ounces
Borax	..	$\frac{1}{2}$ ounce

Bring the water practically to the boil and keep it at that temperature. Dissolve the borax in it. Add the shellac and stir continuously until it, too, has dissolved.

Blueprints come in for a deal of rough handling, and if they have to be used in the open air it is as well to protect them against the effects of being caught in a shower. To make up the waterproofer take:

Pale rosin	..	$\frac{1}{2}$ ounce
Paraffin wax	..	$\frac{1}{2}$ ounce
Turpentine	..	2 fluid ounces

Warm the turpentine by standing the vessel containing it in hot water. Add the wax and rosin and stir until dissolved. For use, damp a soft cloth with the mixture and rub the surface of the blueprint with it. This also gives a pleasant sheen and increases legibility.

Some Notes About Winter Cycling

THE weather during the winter months is seldom ideal for pleasure cycling. All the same, we do get many nice days when fine dry weather with sunshine tempts the cyclist to set out at week-ends on a short run or a 'potted tour' lasting over the Sunday period. Someone may say: 'Well, the weather, even at this time of year, cannot be much worse for cycling pleasures than during the so-called "summer" of 1954!' True enough, and it may well be that we shall enjoy a few spells of mild and dry conditions. Nature so often makes compensations.

In any case, provided that the rider is well protected against the elements there is no reason why he should not undertake trips into the countryside, unless conditions overhead and under-wheel are truly wretched. For instance, it is foolish to attempt a run when roads are frozen over and are like glass, or when several inches of snow impede one's progress. Following a thaw, when the roads and lanes have been snow- and icebound for some days, the wise cyclist stays put until roads are 'ridable' again.

There are some cyclists who ride several miles to work every day in winter and rarely miss a day's toil at shop or office or factory, whatever the weather. But for purely pleasure cycling we should be able to pick and choose our time, so far as weather is concerned. Fortunately, there are frequent spells when the air is dry and crisp, sunshine lights up the naked wayside trees, the road surfaces are firm and clean, and there is little wind.

Keep Out the Cold

To enjoy winter cycling it is essential to be well and warmly clad. Good woollen underclothing is the first consideration. In a few words, here's what an Old Hand says: 'Be suitably clad and equipped. Plus-fours, a polo-neck jersey and gauntlet mitts help one to keep warm, and with the addition of a roomy cape, sou'-wester, and leggings one can contemplate a snowstorm with equanimity. On extremely cold days an occasional spell of walking up-hill will restore the circulation.'

Some cyclists insist on wearing shorts in winter. Such wear may be all right in the case of some individuals, but not for all cyclists. 'What is one man's meat is another man's poison' may be quoted with regard to cycling as to most other things. Use your common sense and discretion.

Hands and feet get colder than other parts of the body, being more exposed.

Therefore, winter cycling shoes must be strong and weatherproof. Thick woollen socks should be worn in cold weather. When buying winter cycling shoes, it is as well to allow for the extra thickness of the socks worn at this period. 'Give the skin breathing room, together with some insulation from the cold, and the outer garments can be adjusted according to the individual need for extra warmth, comfort, and appearance', is good advice from an expert.

Some young and hardy fellows are content to ride bare-headed, even in rain and cold winds. It's all a matter of individual taste and comfort. Some cyclists wear a soft tweed hat or a suitable cap to keep out the cold. In rain a sou'-wester or an oilskin hat is useful.

A really good cape is essential if you are to face up to all kinds of weather—rain, sleet, snow, drizzle—with confidence. There is something, too, that may be said in favour of waterproof leggings which can be easily slipped on and off as needs be.

It is as well to be prepared for all eventualities in winter. The etceteras of clothing items can easily be folded or rolled into a compact bundle and stowed away in a bag carried on the rear of the bicycle, or in panniers.

Lighting

As your winter cycle trips may well keep you a wheel until after dark, make absolutely sure that your lighting outfit is in good order. If the lamp is of an electric type that requires a battery, then it is wise to carry a spare one in the saddle-bag.

Make a special point of seeing that your lamps, front and rear, are of a reliable pattern; and before setting out on a day's ride or on a 'potted tour' at Christmas, test them and the whole lighting circuit thoroughly. You will then be prepared if you have to finish up after lighting-up time.

The wiring circuit of the lighting system is of much importance. Remember that wires should be kept clean where they are attached to the terminals, and also kept free from corrosion. All screws attaching clips to frame of cycle should be kept tight. As to the dynamo—when you have that type of lighting—don't tamper with it at all, unless you really know something about it.

Watch the lamp brackets—a loose bracket may be a danger. Keep them firmly fixed. For your own safety, as well as to comply with the law, see that your rear lamp is always in perfect order

and is switched on at lighting-up time.

Take care of your bicycle in winter—it will pay you to do so. Keep it well oiled when using it daily, especially in wet weather.

For regular daily cycling at this time of year a gear case is the best protection for the chain; otherwise give it an application of graphite grease, but don't overdo it. Wipe off all surplus, for a thin film of the grease will be sufficient. Keep all the bearings nicely adjusted, and pack them with a light grease or keep well oiled. A packing with a light grease like vaseline in all the bearings will preserve them from rust and yet permit free running. Keep the free-wheel properly lubricated.

Attention should be given to small parts such as brake and mudguard fittings. Maintain these in clean condition, and do not allow caked mud splashes to remain to clog working parts. Bright parts of the machine may be thinly coated with vaseline if the cycle is 'laid up' for a time.

When lubricating or greasing your machine avoid letting vaseline or other grease come into contact with brake blocks or rims.

Many Youth Hostels remain open during winter except for one night a week; but others are closed. It is best to consult the Y.H.A. handbook before you set out.

Wayside cafés are often closed on Sundays at this period of the year and it is as well to take along a noontide snack and a warm drink in a flask, in case of need. (A.S.)

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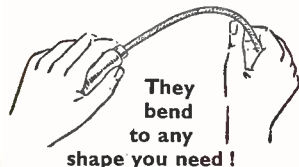
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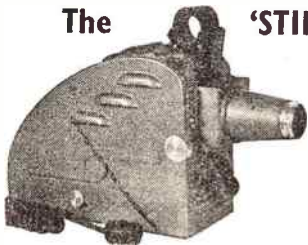
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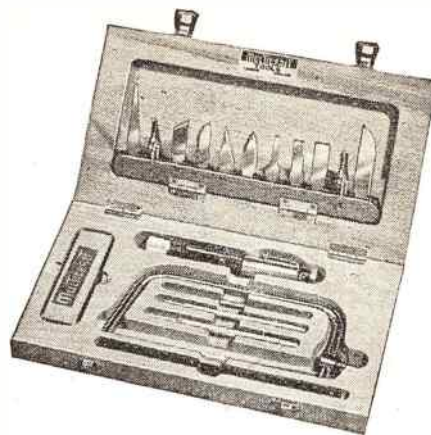
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Paint for Bird-cage

CAN you tell me what paint to use for a bird-cage? (A.T.—Gillingham)

ANY paint which may contain lead is poisonous to birds. For painting such a cage as you propose to make of wood with wired front, you should use a leadless white enamel for the interior. The outside of the cage can be finished according to your fancy. When painting the wires with leadless paint, it is well to make sure that no blobs are left on the wires, which the birds might nip off. Good brands of non-poisonous enamel which is free from a lead base can be obtained from all good seed and accessory stores. Kalium Brand cage paint, which can be had in five colours, contains no lead or other harmful constituents. Obtainable from Kalium Products, 9 Hills Yard, Redditch, Worcs., 3/6 per tin post free direct.

* * *

Repolishing a Radiogram

I HAVE a radiogram which is veneered and is badly scratched. What is the best method of removing the old polish and redoing it? (H.P.—Eccles).

THE old polish could be removed with a rag, well soaked with methylated spirit, but it is rather a tedious business. A proprietary brand of varnish remover would do the job much more quickly. Rub down lightly with fine glasspaper, then repolish. If inexperienced in polishing, we recommend the 'Speed and Eez' outfit as being easier to apply than the usual french polish, and needing no spiriting off—the trickiest job of all. Alternatively you could spray over with cellulose varnish or employ the brush-on quality, provided you flow it on with a full brush and do not go over the same spot twice.

* * *

No Chemical Method

COULD you please tell me if it is possible to make the writing show up on a piece of paper which has been burnt, and if so, how? (P.C.—Wolverley).

CHEMICAL methods are impracticable with your problem. Reliance is placed on a physical method—the mercury-vapour lamp. When placed in the dark chamber of such a lamp, many substances fluoresce, while others do

not. The contrast makes it possible to detect substances invisible in ordinary light. Very minute amounts of a substance can be detected in this way, provided it has the property of fluorescence in these conditions. With inks, much depends on their composition. Formerly, inks were made all on the same basis. Of recent years new types have come on the market and only trial will show if the mercury-vapour lamp is effective. Whether you will wish to follow this up we do not know, but if you do, the purchase of the expensive apparatus can be avoided. Many of the bigger stamp dealers now have mercury-vapour lamps for ascertaining if postmarks have been removed from stamps. As they examine customers' stamps for a reasonable fee, someone or other may be willing to help.

* * *

Black Spots on Films

PLEASE tell me how I could prevent scratches and black spots appearing on films during dish development. I believe there is an anti-scratch solution which will do this, and if so please inform me of the formula. Also can you tell me of a formula for a fine-grain developer making enlargements possible? (M.C.—Bath).

BLACK spots on the film are most likely caused by grains of chemical from faulty mixing. If the emulsion side

is kept uppermost, and the dish fairly deep, scratching should not arise unless the dish is rough. Anti-scratch solutions are available from photographic dealers, but are intended for use after development, etc., to protect negatives during printing and enlargements. Ensure that rough edges, etc., in the camera do not cause the scratches, or that they are not made by winding the spool tight in the hand after removing from the camera. The grain in a negative only shows after considerable enlargement, and poor enlargements are more likely to arise from wrong focusing, too slow shutter speed for moving objects, or dirty or poor lens. In view of the complicated formula of most developers, it is best and cheapest to obtain these ready mixed, in liquid or powder form, to which water is added. A manufacturer such as Johnsons of Hendon would send you a list of developers.

* * *

Glass Doors for Bookcase

CAN you advise where I may obtain glass doors for bookcases—in particular the sliding type? (G.M.—Blackburn).

ASSUMING you refer to plate glass sliding doors for your bookcase, you could order them from Britannia Glasscraft Ltd., 275 Old Street, London, E.C.1. If you can purchase from a local ironmonger or glass merchant, the necessary plate glass, cut to size and bored for the handle, there would really be no difficulty about the rest, as the edges can be ground smooth, rubbing them on a hardboard sprinkled with carborundum powder and water. Time and money saved by avoiding having to pay for work and carriage would make it worth while.

● Continued from page 183

Making Lead Pipe Joints

jointing surfaces should be carefully scraped clean and flux immediately applied, then the two pipes tinned as previously explained. The two ends are then brought together, a further application of flux applied and the blowlamp brought to bear upon the joint. The solder is dipped in flux and is applied to the repair. As it melts it will run into the space between the two pipes thus filling same, and solder should be applied until the space is completely filled. During this job, both pipes should be kept in tight contact with

each other to prevent any molten solder from running down the interior of one pipe and so causing a partial or complete stoppage.

If one is working in an inaccessible position and cannot see all around the pipe to verify that a correct joint has been made, a small piece of mirror will prove invaluable in these instances. Also, lead being very malleable, it is possible to bend the pipe without harm into a better working position, afterwards bending back into its original position after the repair has been made.

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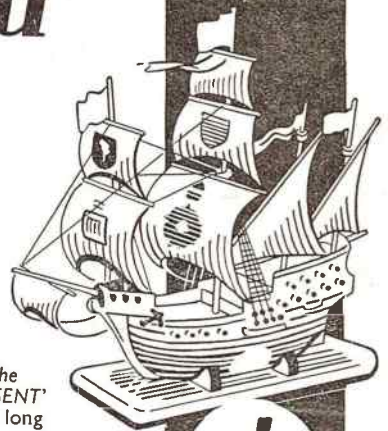
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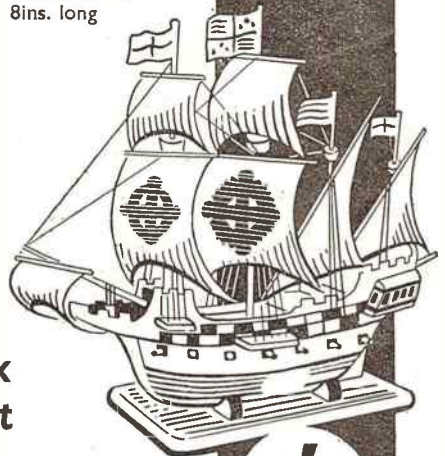
H.W.2



The
'REGENT'
7½ins. long

6/6

The
'BONAVENTURE'
8ins. long



5/11

Post
Today