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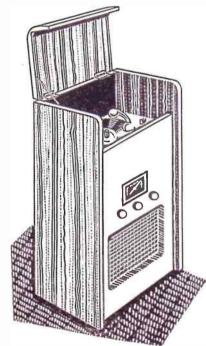


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In Contemporary Style MAKING A RADIOGRAM



As a number of readers have expressed interest in building a radiogram, details for the cabinet will be given here. The old type of cabinet is seldom seen these days, and that described has the advantages of

modern appearance and ease of construction. No difficult joints whatever are necessary, and this greatly reduces the time required, while also allowing the less experienced builder to produce a satisfactory article.

It is quite feasible to fit an existing radio or amplifier into such a cabinet, with a turntable, motor and pick-up. It is also relatively easy to build a suitable radio, and this will be described in other articles.

The completed cabinet is fairly compact, yet big enough to stand by itself and suit large or small rooms. With bulky cabinets of this type the cost of the timber tends to be rather high, but this is not so in the present instance. Wood is also saved by both bottom and back of the cabinet being open, and this improves sound reproduction by avoiding any resonance such as can arise in a acclosed cabinet.

The finished appearance will depend largely upon the quality of the timber, and the care with which it is sawn, planed and polished. When planks can

be obtained directly from a sawmill or large supplier, solid oak is not expensive, and can be finished off in dark or light tone, as desired. Care is necessary not to use unseasoned wood.

Softer woods are cheaper and easier to work, but will require varnishing, as a rule, as the surface may be too poor

First article in a series by

F. G. Rayer

for polishing. Such a cabinet can be perfectly satisfactory in appearance, though it can never reach quite the same standard as one showing natural grain in oak or other hardwood.

It will be seen that dimensions may easily be modified, if planks are to hand, but if the size is reduced it is necessary to check that enough space exists for the turntable and pick-up. An average record-player, such as the Garrard TA, requires a minimum space of 14ins. by 12½ins., with 2½ins. clearance above. It

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For Modellers, Fredayorkers and Home Craditionnen



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should also be noted that the dimensions given are not large enough for the average auto-changer, which needs a little more space above the turntable. It is however, easy to lower the motorboard, if this is necessary.

A cutting list is not provided, since all the major pieces can be seen from the diagrams. In addition to those shown some strips about \(\frac{1}{2}\)in. by \(\frac{1}{2}\)in. will be required to screw inside front and sides to strengthen the joints. If there is any possibility of the wood used warping, some stout battens about 2ins. by \(\frac{1}{2}\)in. by 14ins. long should be screwed to the cabinet sides. Three of these each side will do well. One should be immediately below the motorboard, one just under the shelf, and one near the bottom of the cabinet.

Bullding points

The major pieces require 18"x 2"x 2" to be sawn and planed exactly to size, with true, level edges. Sides, front and top will require a good deal of glasspapering, and an electric sander will speed up this work. The top and front edges of each side member are glossy black, care being taken that none of the colouring spreads beyond the edge on to the surface of the boards. French polishing and other means of securing a good finish have been dealt with in various past issues, and cannot be repeated here.

The whole cabinet is assembled by screwing from the inside, glue also being applied to meeting surfaces. The screwing is double, first by means of screws driven obliquely through front, etc., into the sides, then by having in. by jin. stripwood screwed to both pieces. These stripwood strengtheners are not shown in the cabinet diagram, in the interests of clarity.

To assemble, one side should be placed flat on the floor, its surface being protected by sacks or matting. The front is now fitted in place, stepped in ½in. Holes are drilled down at an angle for the screws which pass through the edge of the front

into the side. Countersunk screws are required, and the small drill should be followed with a larger one just sufficiently for the heads to lie below the wood surface. The screws need to be at about 3in. intervals throughout.

The shelf and motorboard are now fitted, the latter only temporarily. This will assure the front is square, and pieces

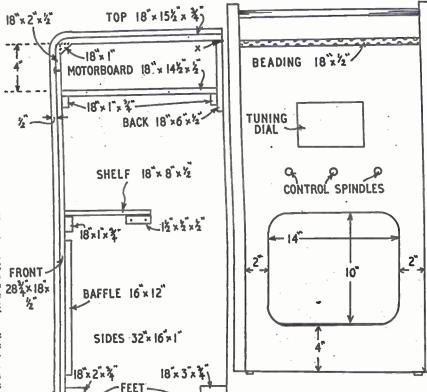
of glued stripwood, ready drilled, can be fitted, screws passing at right angles into both front and side.

The back and bottom members are similarly fitted, until the cabinet is completed except for the hinged top and baffle. When this has been done, the whole is lifted over upon the remaining side. By working inside the cabinet from the back, this side can be fitted on exactly as was the first. The positions of screws passing through the stripwood should be marked so that these screws do not foul those already driven in. Four rubber feet are screwed on when the glue has hardened.

When the receiver is built, this rests on the shelf, which is permanently fixed 10 ins. below the motorboard. The motorboard is not finally screwed in

top, and is fitted at (X), though two small hinges will suffice. The finished top has to be glasspapered until it will close down accurately into position, without binding at the edges. The 18in. by 2in. strip then rests on the cabinet front. This joint is covered by a narrow piece of moulding glued and pinned to the 18in. by 2in. piece. This improves appearance and allows the lid to be lifted by the fingers.

Apart from excluding dust, the lid reduces the sound of the pick-up running on the record, and it should always be closed for this reason, when playing records. In some radiograms of best type, felt strips are added to make the playing chamber more soundproof. This can be done, in the present design by gluing a strip of felt ½in. wide along



until it has been cut to suit the playermotor fitting.

The top and 18in. by 2in. front piece are joined by screwing a glued angle piece at the corner, as shown. When the glue has hardened, the corner is rounded by planing, and finished off with glasspaper.

A long hinge is most suitable for the

the edge of the 18in. by 2in. strip. It is also possible to reduce the width of the top slightly, and glue felt on the sides of this, so that it will just close into position. Another possibility is to fit two further pieces of wood, \(\frac{1}{2}\)in. thick, in such a position that the top closes down upon them, felt being glued on where the surfaces meet.

Most modern, light-weight pick-ups produce so little noise that these improvements may not be felt necessary. But if direct noise from the pick-up is found to spoil listening, the cabinet can be modified as explained to counteract this.

A thin cord or chain prevents the lid falling completely back.

Turntable fitting

Many units have motor, turntable and pick-up fitted on a metal baseplate. With these, it is only necessary to cut a suitable aperture in the motorboard, so that the motor, etc., can pass through.

When cost is important, motor and pick-up can be separate. Most makers supply a cardboard template, which will show the correct position for the pick-up in relation to the turntable spindle. If no such template is available, position the turntable in the centre of the motor-board, then fix the pick-up mounting in such a position that when the pick-up is swung right in, the needle comes to rest upon the centre of the turntable spindle.

With the separate motor and pick-up, a switch needs to be fitted to the motor-board, to control the motor. The small mains toggle type, which requires a indiameter hole, will be neatest and easiest to fix, and it is wired in one lead from the motor. Such separate assemblies

will also require that the pick-up rest be screwed to the motorboard, so that the pick-up can be placed upon it when not on a record. The pick-up should never be left resting on its needle, or dropped, as this is likely to cause damage.

Baffle and speaker

The opening in the cabinet front is shaped to give a good appearance, and the speaker cannot be fitted directly upon the inside of the front. Instead, it is screwed to a baffle which overlaps the front aperture by lin. all round. This baffle may be of \(\frac{1}{2} \) in. wood.

A piece of speaker-fret silk is stretched over the aperture, and glued to the cabinet front, inside. Drawing-pins will help to keep it taut until the glue has set, so that no wrinkles remain.

The baffle has a round aperture the same size as the speaker cone. This can easily be measured off from the actual speaker. If the unit is to be purchased, an 8in. model will do well, being of the usual permanent magnet type, for use with a transformer.

If the speaker is not of dustproof construction, it should be enclosed wholesale in a muslin bag. If this is not done, dust, etc., will eventually find its way to the magnetic gap, and cause

distortion by fouling the speech-coil as it vibrates. The speaker is acrewed to the baffle, and the latter screwed inside the cabinet. At least eight screws are necessary, as vibration between baffle and cabinet can cause irritating buzzing sounds.

Receiver fitting

The receiver, whether home-built or a ready-made chassis, fits on the shelf, control spindles protruding through the front. These holes may easily be correctly drilled if a spot of ink is placed on the end of each spindle, and the receiver is then pressed against the cabinet front from inside. If some spindles are longer than the others, holes for these are drilled, and the procedure repeated. The holes should give ample clearance, as the knobs will conceal

The tuning-scale aperture is then carefully marked out, and cut with a fine pad-saw. Most dials have a glass, held in place by a metál escutcheon, and this will give the whole a professional appearance.

Next week F. G. Rayer will describe the circuit.

Make a Coal Scuttle from a Barrel

AVE you tried to buy a wooden log or coal scuttle? You will find it expensive. Why not make a smart metal-bound one for a few shillings.

Go to your grocer and buy a vinegar barrel. This will cost you three to four shillings. At the ironmongers buy 2 yards of copper or brass band. The approximate selling price of this is 1/6d. a yard. Ask for an eighteen inch length of ‡in. brass rod. This should not cost you much more than a shilling. Finally, obtain a pair of brass 2in. mirror plates. These will cost merely a few pence.

Armed with these materials you are now ready to make a most useful and attractive article of furniture for the

First saw round the top of the barrel to shape, as shown in the illustration. The approximate depth of the lowest point of the cut is 9ins. from the base of the barrel. Trim the edge, taking off all roughness and glasspaper down until quite smooth.

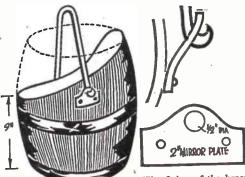
Now scrub clean the inside of the barrel, and whilst this is drying, scrape all the outside surface, finally glasspapering down until a smooth finish is obtained. This stage of the work must be

Having now obtained a clean and smooth finish, inside and out, the barrel

AVE you tried to buy a wooden should be varnished, waxed, or polished, according to taste.

Take the brass rod and carefully bend it to form the handle, as illustrated. Enlarge the top centre hole of each mirror plate to a diameter of \{\frac{1}{2}\text{in}\). by

top of each plate to take the end of the handle from the inside. The bending of the plate must be just sufficient to allow free movement of the handle. File round the end of the handle to obtain a smooth finish.



drilling and screw a plate on each side of the barrel to take the handle, as illustrated. With the plates in position, a test fixing of the handle must be made to determine the length of rod required, allowance being made for the hooked ends which are then made by carefully bending up with pliers.

With a flat tool carefully bend out the

The fixing of the brass bands should not present much difficulty. Measure off sufficient to give a small overlap and drill holes to take the small round headed brass screws which are needed to fix the band. If necessary, and to prevent the band slipping, drill and screw at two or three equidistant places round the band. Similarly, fix the remaining band around the base of the barrel. (L.B.P.)

CHECK THOSE CIRCUITS

ANY model railway owners are constantly seeking to attain running improvements but, unfortunately, these improvements are difficult to effect. That jerky locomotive remains jerky in spite of numerous adjustments and trains will slow down in distant parts of the layout. Yet, a little attention to that often overlooked side of the layout - the electrical system — will, in most cases, bring about the desired improvements in quite a surprising manner.

A locomotive cannot be expected to perform satisfactorily unless it receives a good power supply. Bad contacts somewhere in the circuit are nearly always the root cause of bad running. A model railway electrical circuit in its simplest form runs from the positive terminal of the power supply to the power rail, thence to the pick-up shoe on the locomotive, from there to one of the motor brushes, through the armature of the motor to the other brush, through the frame to the driving wheels, then back to the negative terminal of the power supply via the running rails.

It is easily seen that there are considerable places where bad contacts

CROSS:

Bet if rearranged it would be more proper (5).

He'll put you on canvas (6).

Lounge about (6).

Cause the very deuce to appear (5).

Freer perhaps (5).

Well son, it's obviously a good deal bigger (7).

17. Undiluted (4).
19. Descriptive of under-study (5, 2).

Hobbies Crossword No. 1

Note: Figures in parentheses after the clues denote the number of letters in the words required.)

may occur. Dirt and dust mixed with oil are the most usual causes of trouble. For this reason it is essential that a high standard of cleanliness be maintained.

By H. G. Forsythe

Locomotive mechanisms may be cleaned readily by giving them a bath in petrol, using a small brush to remove caked grease and dirt. Be very careful, however, not to run the engine until all traces of petrol have evaporated. Petrol fumes ignited by sparks at the brushes or rails can cause alarming and damaging fires. When cleaning the locomotive, special attention should be given to the running surfaces of the wheels and pick-up shoes. It is not a bad idea to clean wheels and pick-up shoes as a daily routine - or at least before

commencing running operations.
When lubricating locomotives, care should be taken to oil as sparingly as possible. Use only the finest sewing machine or watch oil. Too much oil will clog engine bearings and will find

Used by horseman with cold feet? (7)
 An exclamation — not encouraging (4).
 For me a less contagious fever (7).
 Biblical book (5).
 Circular motion (5).
 It's rum, that's a self-evident fact! (6).
 Drove the point home, as it were (6)
 Throw open '5).

This is the first of a series of crosswords to be published each month for amusement only. The solution will be given next week.

1. They account for a good deal of

Score (6).

its way all too readily onto the track.

A little attention to the wheels of rolling stock is also well worth while While these have, as a rule, little or no connection with the electrical side of operations, they are very often the chief source of dirt and grease which finds its way on to the track. Occasional cleaning of all wheel surfaces will help considerably to maintain the high standards of cleanliness necessary for satisfactory electrical continuity.

The track itself needs just as much careful attention as the locomotive. Tracks should always be kept scrupulously clean. Both running and power rails should be cleaned occasionally with fine emery paper ('OO') followed by a polish with a cloth damped with paraffin, then a dry cloth. Treatment with the paraffin cloth should also be a daily routine.

The electrical continuity of the track and all wires leading to it, is, of course, most important. Here rail joints are the chief bug-bear. With the temporary layout the greatest care should be taken of joints and contacts where rails are connected together. These should be examined periodically, cleaned and tightened up where any loosening or corrosion is observed.

Solder the joints

With the permanent layout, soldered joints should be used wherever possible. With the smaller gauges (OO, HO) the fishplates should be soldered directly to the rails they connect, and with the larger gauges, a wire bonded joint, similar to that used in full size practice should be employed. All leads and wires connected to track, power supply and controllers should be soldered at all connections and checked occasionally for faults.

Owners of larger layouts often find locomotives slowing down in the more distant sections of the track. This is due to potential drop brought about by the resistance of the track. The answer to this problem is to install feeder wires of reasonably heavy gauge to carry current direct to the more distant sections. Feeder wires, of course, should also be soldered to appropriate sections of the

No less important in this respect are the running rails. These should also be

to use metal brackets as shown in Figs. 6 and 7. The screws should be countersunk in both cases.

provided with feeder cables. Here, the feeder cables themselves may be bonded together, thus welding the running rails into one complete electrical unit.

Attention to these points will improve

running on most layouts to a very marked degree.

In the Workshop

Serviceable Woodwork Joints

HE seven joints illustrated here may be used for new projects or for repairing loose joints in existing furniture. The examples shown are simple enough for the amateur to tackle, requiring the use of tools usually found in the handyman's kit.

Fig. 1 shows the method of fixing or repairing a rail by means of dowels. Legs of chairs, small tables and stools are often secured by this method, providing there is sufficient thickness of wood to allow for the dowels.

The essential point in constructing this joint is accuracy in marking out. Test for accuracy by using dividers before commencing to bore the holes. Mark the centres with a punch before using the drill.

Groove in dowels

The dowels are cut slightly short and a groove made in the side of each one. This is to allow for the escape of air and excess glue. Coat the end of the rail and the face of the leg with glue before as-sembling and tap home the parts with a mallet. To prevent damage to the wood the blow may be cushioned by means of a waste piece.

The joint in Fig. 2 consists of a mortise and tenon, strengthened by a single dowel driven right through. It is useful when making or repairing a framework for a small door. Much of the cutting may be done with a tenon saw, the waste wood being removed by means of a chisel. Since the dowel goes right through

there is no need to groove in this case.

To assemble the joint, first coat with glue and cramp up the mortise and tenon. When dry, the hole for the dowel is drilled and the dowel tapped home. The ends should be planed or glasspapered flush.

A picture frame is strengthened by the method shown in Fig. 3. First glue and cramp the corner together, then with the corner still in the cramp make a saw-cut deep enough to take a piece of wood approximately 18 in. thick. Use a tenon saw for this purpose and make sure by trying it out on a waste piece of wood, that the sawcut will receive the piece of thin wood. Glue it in position and trim off the excess when dry.

Small table-tops may be strengthened by attention to the corners of the framework as shown in Figs. 4 and 5. In Fig. 4 a block is glued and screwed in the corner while in Fig. 5 a dowel is inserted across the mitred joint.

For a quick repair it is often possible

are required for this attractive little bracket. The shapes are shown full size on page 255, and all you have to do is to trace the patterns and

GROOVE

Fretwork Corner Bracket

carbon paper.



lacquer. There are several methods of flxing to the wall, but we recommend a single countersunk screw driven in under the shelf. Use a Rawlplug in the wall and you will be able to remove the bracket quite easily.

transfer them to wood by means of

Glue the three pieces together and

strengthen them by adding fretpins or countersunk screws. Leave the bracket

in the natural wood and finish off by

giving two or three coats of clear

**** The free design to be given with Hobbles Weekly next Wednesday * will be for a sturdy ironing board, * 12ins. wide. Just the thing for 4 mother.

money (5)

2. I fool around with a sheet of paper (5)

3. Once again, it's superlative (3).

5. On the rocks? This is just the same! 6. Accustomed (6). 7. Score (6).
9 Take for granted (7).
11. Boy's name (6).
13. Beseech (7).
15. Gathered by dreamers (4).
16. He'll give Rose a guinea (6).
8 Skilol (4).

16. He'll give Rose a guinen (6).
18. Skilful (4).
20. Has quite a number to usurry on (6).
21. I hit at one of the Society Islands (6).
24. He's a landed proprietor in Scotland (5)
25. Simple sort of chap, we're told (6).
27. Blackthorn (4).
30. Ther (3).

HINTS MAKE AN ENCYCLOPÆDIA

ELPFUL advice and useful hints are included in these columns every week. Many a tip is to be found in the corner of a page, following a principle article, or you may find them in the Replies to Readers' section where expert guidance is offered in solution of problems. Recipes and formulae are always appearing.

Usually, the main articles attract first attention, and it is only when we want a particular recipe that we remember seeing it in some issue, starting a frantic search through piles of back numbers. Filing in a box is helpful, but unfortunately, every single item in the paper cannot be listed in the contents panel, so each issue has to be examined. Here, we have the basis of an entirely new hobby which will prove of ever

increasing value as the collection accu-

mulates. Let us make our very own

encyclopaedia from the hints and sub-

jects of personal interest, using the same

workmanlike precision required for the

first, the most methodical way of collect-

ing these is to cut them out, sticking

them on small record cards. Each hint

must be mounted separately, and given

an appropriate title to permit alpha-

betical filing. Record cards, 3ins. by 5ins.

may be bought quite cheaply at any stationers. Make small tabs from

double paper-gumstrip for marking the alphabet. Obviously, you will require one card for each letter, and all titles beginning with the same letter are

placed behind the index guide card.

Note that these tabs must be spaced for

easy reference, and not stuck in the

same position on every index card.

Taking the smaller hints and tips

construction of a model.

Moreover, if cutting out a hint will interfere with the text of any article in the paper, it is quite an easy matter to write out the information on one of your small cards.

You will also need a box of some description to hold the cards. You may, perhaps, be able to beg a small box for the purpose and an empty shoe box will house many hundreds of cards.

Once you have made the collection, it is an easy matter to refer to the alphabetical file for the hint or tip you seek, and it will save much time and patience.

With the longer articles, with draw-

with the longer atteles, with drawings of gadgets, toys, or what you will, small record cards will not serve the purpose. We can use the same idea, however, making a loose-leaf indexed file. This can be made quite easily from foolscap size manilla folders measuring 13 jins. by 9ins., obtainable at the stationers. Seven of these folders

will be required, each one being cut into cards 6\(\frac{1}{2}\) ins. by 9ms., providing twenty-eight leaves, one for each letter of the alphabet and two for the covers. There are stock sizes of loose leaves available, and to fit the size quoted you would need pages measuring 8\(\frac{1}{2}\) ins. by 6\(\frac{1}{2}\) ins.

The cards will require some reinforcement against wear and tear, so a strip of paper-gumstrip is attached down one edge where the holes will be punched for binding the loose leaves together. On the right-hand edge, a tab is attached as on the smaller cards, prepared from a double piece of paper-gumstrip. Again, these tabs are lettered alphabetically and must be attached in appropriate positions on the cards, so that each letter can be clearly seen. Reference to the sketches will indicate the method to adopt. It only remains for the loose leaves to be inserted to complete the file. If the pages are bought ready cut and punched, the cards must be also punched to correspond. It is unnecessary to buy a large quantity of paper at first, since this can be acquired as your collection proceeds.

Fastening the pages together can be done in many ways. The simplest is a length of cord, tied in a bow at the top but there are several types of fasteners on sale at prices to meet every pocket. There are screw fasteners, like a thin bolt with a thin round nut, hollow screw fasteners, ring fasteners and some very cheap patent fasteners which will



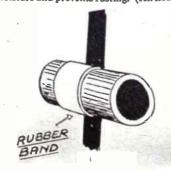
extend as the file grows. Your stationer will be able to assist you with these.

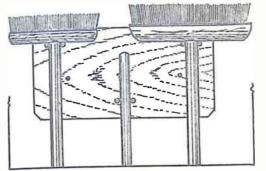
You will be surprised how quickly these files will grow, and how much you will come to refer to them. Tips and hints from all sources may be included from books, newspapers, magazines, or from some kind friend. The knowledge will always be ready to hand, and it is by these means that many successful books have been written.

Finally, the hobby can be extended to cover any type of interest, provided a suitable indexing arrangement is made. One section could be devoted to photography, another to chemistry or stamps, and so on. For those readers who are still students, it is worth while considering the possibility of making, say, history notes on record cards. When revision time comes along, all you have to do is to take out your little cards. They are very handy for the pocket and you could do some revision in the train or bus.

Rear Light 'Wrinkle'

VITH cycle rear-lamps, where half the case rotates to put the light on or off, rusting of the thread can be a real nuisance — and rain gets in very easily. The trouble, however, can be overcome by cutting a slice from an old inner tube and fitting it over the joint. The tubing is just the right size to hold nicely in position, but not so tight as to prevent the movable half from turning. The rubber keeps out moisture and prevents rusting. (H.A.R.)





BROOM AND MOP RACK

Make this useful kitchen fitment says W.J.E.

THIS useful kitchen article is just the thing to hold brooms, and if required, the household mop. Screwed to the wall it is out of the way, and keeps these domestic cleaning articles to hand when needed.

Dealing with the mop first, many

Dealing with the mop first, many readers, doubtless, use the common kitchen pattern, and this can be held in the rack mop head downwards, a pail or similar vessel being situated beneath for the head to rest in. For some households, however, the usual type of mop has too

Strips of rag are cut to an approximate length of 15ins., and have a slot about 1in. long cut in their centres to slip over the broom handle. Squares of material can be also utilised, slotted at their centres, and cut into strips, the cuts finishing some 2ins. short of the slots. Push these over the handle and press down until they fall over the disc, as shown at Fig. 2 (A).

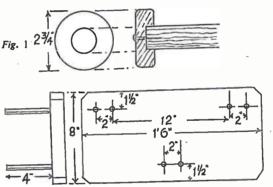
as shown at Fig. 2 (A).

About lyd. of strong string or cord will now be required. Double this and tie at roughly the centre, as at (B).

Now glue the pegs in their respective holes.

When fixing the rack to the wall be sure the height is such as to allow the broom handles to hang clear of the floor, and the handle of the mop to reach the lower pegs, while its head remains in the pail, which will presumably be on the kitchen floor. Should a mop not be required in the household, the lower two pegs are so positioned as to accommodate a third broom. It may also be mentioned that there will still be room for a couple of screw hooks, one either side of the lower pegs, on which hand brooms could be suspended if required.

The finish of the rack is entirely a matter of choice. Often such racks are left plain, but plain wood quickly soils and spoils the appearance of the article. A coat or two of varnish would be





generous a head, and something smaller, which can be manipulated round the legs of heavy furniture, may be welcome. A simply made affair, the head of which can be composed of any pieces or strips of unwanted materials, is described below.

For the handle an ordinary broomstick can be employed. To one end of this a disc of thick hardwood is firmly fixed with a screw. Cut the disc to size given in Fig. 1, and in its centre, bore a hole halfway through to fit the handle. Glue the handle in and drive a screw, round-headed for choice, through disc into handle. Rasp off the edges of the disc, and glasspaper smooth. As the disc will have to submit to water, it will be wise to either creosote it, or coat it with two or three coats of enamel, or waterproof lacquer or varnish.

Draw the loose ends round the material, just below the disc and tie again, then draw the ends of the string over the disc, and tie round the handle as at (C). Cut the loop left and tie this also round the handle opposite the first one. Trim the ends of the mop roughly level before using.

For the rack a length of lin. deal board will be needed. Cut to dimensions given in Fig. 1, and where indicated, bore holes for the pegs between which the broom handles will sit. Wood dowelling \(\frac{1}{2}\)in. diameter will serve for these pegs, six of which are needed. Cut these to length given, plus lin. over for entering the board. Clean up the board with glasspaper and cut off the corner angles. For fixing the board to the kitchen or scullery wall, bore a pair of holes suitable to the screws employed.

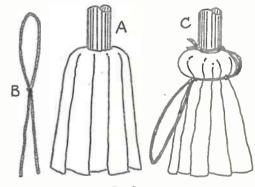


Fig. 2

helpful, or better still, two coats of white enamel, so that the rack could then be easily cleaned with soap and water.

BOTTLES AND CORKS

O prevent corks from being lost or placed in a wrong bottle, tie them to their respective containers with pieces of string.

To protect a label from damp, varnish the bottle, allow the varnish to become tacky and press the label down on to it, then brush the label over with the varnish, which should extend in beyond it all round.

(R.L.C.)

244

CATGUT BAROMETER

THIS model is a simple glued-up assembly which can be made in obeche or similar wood. The parts are cut from standard 3in, wide sheet

Both the top and bottom are 6in. by 3in. pieces cut from kin. sheet, the top having a fretted-out slot as shown in Fig. 1. The ends are cut from 1 in. sheet, the holes being drilled first as in Fig. 2. The sides are from fin. sheet. The large hole in end (A) should be opened out with a round file (or glasspaper wrapped around a pencil) to fit a small cork of the

6XSXXI

these are only air holes for 'breathing'.

The cabinet parts are assembled, less the top, as shown in Fig. 3, all joints being strongly glued. They can be pinned as well, but this should not be

The movement is made by marking out a 21in. diameter disc on 1in. sheet as in Fig. 4, cutting out and separating into two pieces as in Fig. 5. The larger of these pieces is the suspended movement and the smaller is saved to fit later

ADJUSTMENT

MOVING SEGMENT

On left —

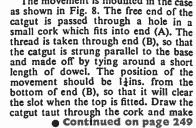
assembly of

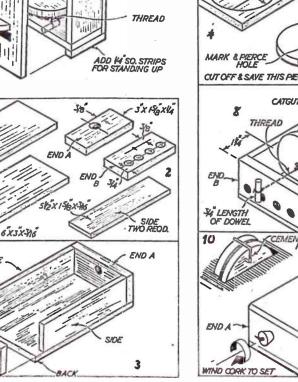
the parts

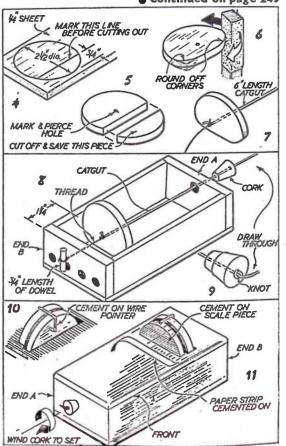
size used in medicine bottles. The size of the holes in end (B) does not matter, as movement piece should be well rounded with glasspaper as in Fig. 6.

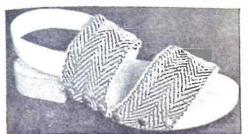
A 6in. length of catgut is knotted at one end. Tie to this end a length of strong thread. Then pass the catgut through the hole in the movement piece. draw the knot tight against the wood and cement in place, see Fig. 7.

The movement is mounted in the case as shown in Fig. 8. The free end of the catgut is passed through a hole in a small cork which fits into end (A). The thread is taken through end (B), so that the catgut is strung parallel to the base and made off by tying around a short length of dowel. The position of the movement should be 1½ins. from the bottom of end (B), so that it will clear the slot when the top is fitted. Draw the









Comfortable to wear

SERVICEABLE WOOD CLOGS

Described by K. Blackburn

N interesting project for a couple of spare evenings, is the making of a pair of these clog-type sandals, providing an ideal form of footwear for leisure hours at very small cost. They are particularly suitable for children. Off-cuts of birch were used to make the ones illustrated, and this wood is the best for the job, but other types of hardwood can be used with satisfactory

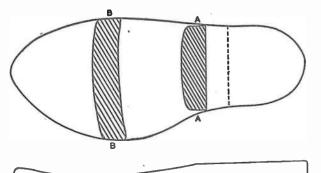
Draw round the foot on to a piece of thin cardboard, and cut out the shape section is shown at (A) in Fig. 1. When this slope is finished, work the shape at the front.

Make a saw-cut \$\frac{1}{2}\$ in, deep across the top of the wood where the curve reaches its lowest point, and chisel towards the saw-cut from both sides. Finish to the correct shape with the chisel reversed. The clogs will be more comfortable if the top curve is hollowed slightly. (B, Fig. 1.) A cabinet scraper can be used for this purpose; the pressure of the thumbs bending the scraper slightly will

make the necessary hollow. The scraper will give a smooth finish to the wood. Glasspaper the finished sole

thoroughly, rounding off all sharp edges. Remember that, when marking out the second sole, the cardboard template must be reversed. The completed sole is seen in Fig. 2.

Tack the front piece of webbing in position on one side, and try it over the foot before fixing the other side. Short lengths of elastic are sewn to the inner ends of the back pieces of webbing to allow for greater freedom of movement. Finally, stitch a length of elastic to the second piece of webbing to pass round the heel.



LIST OF MATERIALS

Hardwood, lin. thick, to make soles 1 yd. uphoisterer's webbing 1 yd. elastic (lin. wide)



Fig. 2

so that it can be transferred to the wood

Plane one side of the wood flat, and draw round the outline on this side. Saw round with a bow-saw, leaving a little waste for trimming. This is done with a spokeshave. Make sure that the edge is kept square with the planed surface.

Draw a line across the bottom of the wood to show where the heel starts, and saw along the line to a depth of in. Cramp the wood to the bench and use the widest chisel you have to cut the slope. Reverse the chisel so that the sharpened side is downwards to finish off the hollow part of the curve. These slopes should be taken a little past the saw-cut at the sides, making a slightly rounded section. The reason for this is that it is very difficult to chisel a flat surface without scoring the wood with the corners of the chisel. The required

Continued from page 248

Catgut Barometer

off with a knot — see Fig. 9. Tension can be adjusted by pushing the cork in or pulling it out slightly.

The top can now be glued in place, making sure that the movement clears the slot. A pointer bent from thin wire (e.g., a paper clip) is glued to the movement and the scale quadrant (i.e., the piece saved from stage 5) is glued to the top close up to the edge of the slot, as shown in Fig. 10. A paper strip is cemented around the quadrant on to which can be marked a suitable scale. The assembled

model should appear as in Fig. 11.

The barometer is actually designed to stand upright, so lin. square feet should be glued to end (B). The cork provides adjustment, since twisting the cork will rotate the movement in the same direction. Start with the movement adjusted for a 'central' position (pointer at centre of scale). Place the instrument on a mantelpiece over a warm fire and leave for a while. The pointer should leave for a while. The pointer should move right round to one side. This is the 'fine' side of the scale. Repeat by standing the instrument outside on a damp night, or in any damp atmosphere, and check that the pointer rotates to the opposite end of the scale - 'wet'. Then simply readjust to conform to the actual weather at the time — for instance, on a fine sunny day, twist the cork to set the pointer to 'fine', when the barometer should follow any subsequent weather changes.



THIS week we will discuss commemorative stamps. Now this subject is so vast that one could fill a book on it, so we shall be able to touch only the fringe of it, leaving quite a lot for the reader to think about.

The first thing to consider is - What is a commemorative stamp? Here is the crux of the whole matter and the point about which there must be quite a variety of opinion. There are really two grades of commemorative stamps, (i) those which are issued to remind the world of some important event and (ii) those stamps that are issued solely to bring in some more money, the country issuing the stamps carefully digging up some obscure event just to satisfy their conscience and give a title to the set.

A help to Collectors

A bona fide postage stamp is a piece of paper stuck on to a letter or packet indicating the sender has paid the fee for the service of carrying and delivering the letter or packet. Now a country knows fairly accurately how many letters, cards, parcels, etc., will be posted during a certain period. There will, of course, be times when many more than usual will be posted, such as Christmas, New Year and so on, but even these can be estimated. If, then, a country prints far more stamps than it is likely to use, the extra stamps will not have been printed for postal services but for some other purpose and the only sensible conclusion is they were printed to sell to collectors. Well up to a point this is understandable, and don't forget that the hobby depends upon it, because if it were not so, any collector sticking an unused stamp in his album would be depriving a citizen of the facility to post a letter. Unfortunately, there are some countries which are continually issuing a new set of stamps and printing vast quantities in excess of their legitimate requirements. They must have some excuse for these, and consequently they find the most trivial event to commemorate. There is a still more objectionable proceeding and that is the issue of a very small number of stamps, only supplying these from a few post offices. This means that only a few people can purchase them direct; others if they want them have to go to those who live in the favoured area, and there arises the chance to inflate the price.

As an example of a rather unnecessary commemorative stamp take the specimen, illustrated, that comes from Brazil. This was issued in 1937 to commemorate the ninth Brazilian Esperanto Congress. No other recognised anniversary was commemorated, not even the tenth or the twenty-first. Again, from the same country, in 1933, they issued a stamp in connection with the 441st anniversary of Columbus's departure from Palos, yet in 1942 the 450th anniversary, they took no notice



By L. P. V. Veale

than the unused, this fact shows that the high priced stamps was not much used When this set came out there was quite a lot of talk in the philatelic press about banning the set altogether. It was suggested that it should not appear in the catalogue. Now the demand for these stamps is such that they have risen in value very much.

Take a piece of paper and a pencil and write down all the different kinds of commemorative stamps that come to your mind; different kinds, not different stamps, because if you wrote down the latter you would have a very long task. If you have thought at all then you will have come to the conclusion that these commemorative stamps can be very



To commemorate the 9th Brazilian Esperanto Congress

U.S.A. Electric Light's Golden Jubilee 1879-1929

The 1933 'Wilberforce' issue of Sierra Leone

of it. To us, surely, this would seem a far more important anniversary.

Then there is another type of commemorative issue and in this case it was this country that gave cause for a certain amount of misgiving among the collectors. The type referred to is the issue of a stamp of such high value that in order to procure it a collector must dip quite deeply into his pocket, yet the occasions when the stamp will be postally used are few and far between. The issue in question is, of course, the 1948 Royal Silver Wedding. For each region there was a low value stamp such as would be used on a letter, that was a very welcome addition to the album, but only one other stamp was issued from each region and that value was in the region of £1. The Falkland Islands Dependencies had a 21d. and a 1/stamp, seven others had 5/- as the highest value and the others were right above that. You will see if you look at the catalogue that the used specimens are in nearly every case priced higher

useful indeed, for a very great number of them were issued to commemorate some important event such as the birth or death of a famous explorer or inventor, and consequently you, as a stamp collector, will have brought to your notice something which the noncollector misses. As an example, look at the Sierra Leone stamp, the one illustrated showing a native throwing off his shackles with the dates 1833-1933 what an excellent design with which to commemorate the abolition of slavery! The 3d. value of this set shows a picture of a native carrying a fruit basket, but it has the words 'Centenary of the abolition of slavery and of the death of William Wilberforce'. The date 1833 and the name should both be

Another commemorative worth remembering is the U.S.A. stamp of 1929 which is also illustrated, and on which you see the dates 1879 1929 and a picture of Edison's first lamp and the words 'Electric lights golden jubilee'.



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YOUR Problem

Rust in Iron Tank

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YOU should empty the tank and dry.
Remove rust with a vigorous
rubbing with a wire brush and dust out. Now apply two coats of lime white, prepared thus:-slack quicklime with water to form a thick cream, add a little glue dissolved in hot water, and + pint linseed oil to each gallon of the wash. Thoroughly mix and rub well into cracks and crevices. When dry, apply a second coat and let that dry, too, before filling the tank with water.

Rabbit Society Officials OULD your tell me the address of a Rabbit Society which would be the equivalent of The Kennel Club for dogs. and also the addresses of some Angora

Rabbit Societies? (J.D.—Bridgend).

THERE are numerous societies and clubs up and down the country. It would be advisable for you to write for full information concerning them to the Secretary, British Rabbit Council, 273 Farnborough Rd., Farnborough, Hants. As to the addresses of Angora Rabbit Societies, the following will, doubtless, be what you require:—British Angora Rabbit Society, Secretary, Mrs. B. A. Pratley, 43 Willow Crescent, Willowbank, Denham, Bucks., or Universal Angora Rabbit Club, J. Holmes, Esq., The Lodge, Cooks Lane, Marston Green, Birmingham.

Removing Enamel from Cellulose

I WISH to remove some enamel which has been painted over the cellulose on a car bonnet. Some of the paint has flaked off and the cellulose underneath looks in pretty good condition. Can you suggest anything that will remove the paint without harming the cellulose? Both paint and cellulose are black. (C.H.-E.C.1).

TT is rather a delicate operation Lwithout damaging the cellulose beneath, as most solvents will remove both. Try turpentine or ammonia on a rag and rub gently until the varnish softens and can be scraped away with a chiselshaped piece of wood to avoid scratching. If the cellulose beneath shows signs

of being softened, wash away with plenty of clean water. It may prove a rather tedious job and it would be wise to test matters first on a small and inconspicuous part of the bonnet.

Brick Coal Bunker

T HAVE about 400 bricks to build up as I part of a coal bunker. How much cement and sand would I need, please, and is it necessary to add lime to the mixture? What are the proportions of sand and cement for a smooth finish for odd jobs around the house - c.g. mending cracks in crazy paving, repairing sides of drain and filling in round sash windows outside? (R.W. — Long Crendon).

GOOD mixture both for mortaring A GOOD mixture both for incommendation the coal bunker, and filling cracks is:-I part cement to 2 parts damp builders sand; no lime necessary. Quantities for the coal bunker, allowing a thickness of lin. mortar, are 2 cwts. cement and 5 cubic feet sand.

Renovating Book Covers SHOULD be grateful if you could advise me how to renovate a set of old text books which have budly faded covers. The covers appear to be covered with linen and are embossed and titled in what appears to be gold foil. (E.D.-Ware). THE books are probably bound with

bookbinder's cloth. This can be renovated with the following, rubbed on gently with a sponge. Beat up the white of an egg into a froth, and allow to stand overnight. In the morning pour off the clear liquid and use as above. If the cloth is faded it cannot be dyed without danger to the cover, but a coat of thin shellac varnish, after the above treatment will freshen up a lot.

Wallpaper Remover

J SHALL be glad to know if there is any way to remove wallpaper which has been painted over. (H.J.—Southampton). THE paint can be removed by brushing on the following made-up solution of 2 lbs. washing soda in 3 gallons water, thickened with lime, dissolved in hot water. The paper will disappear as well, or at least most of it. Use a fibre brush, not a bristle one, and when the plaster is clean of paper, wash over with a diluted caustic soda. The

When laying Lino WHEN laying line the average & ☆ scratch his head when confronted ☆ with odd-shaped corners and proiections. A length of solder will & come in handy here. Bend it round ☆ to the shape it is desired to fit, lay ☆ it on the line and trace the outline with a sharp point. Cutting away & the waste is then easy and ensures ☆ a neat job.

☆ WORTH KNOWING ☆ ☆

process is rather a messy one, and if a little more expense is not objected to, a proprietary brand of paint remover. such as can be bought at most oilshops. is preferable.

French Polish Defect T HAVE french polished a table and find that anything left on it overnight leaves a mark as it sticks. Can you give me a remedy? (W.S .- Portslade).

ONTRIBUTING causes towards the trouble lie in an excessive quantity of oil having been used, failure to work each rubber dry before recharging, and the use of methylated finish instead of methylated spirit. Should it happen that bleached shellac has been used, quite possibly the moisture in it was not properly dried out. We fear nothing can be done except leaving the polish to harden itself, which it will do in time.

Staining Pigskin

T HAVE some white pigskin and would I like to stain it blue. Is there any possibility of a dye, if so, could you give me any information? (S.S.—Dinnington). TOU should buy some of the dye I known as Soluble Blue, from a laboratory furnisher, or through your dispensing chemist, who can order it from British Drug Houses Ltd. Dissolve enough of this in hot water to produce a deep blue solution. Dampen the leather so that it is wet through to the flesh side, and then brush the dye solution evenly on. Allow to dry and buff with a soft cloth. A point to be remembered in shade judgment is that the wet pigskin will appear much darker than when dry. Allowance should be made for this. Should the dye appear to go on patchily, fine grease films are present. A trial should, therefore, be made on a small piece. The grease films are removable by sponging with dilute detergent, followed

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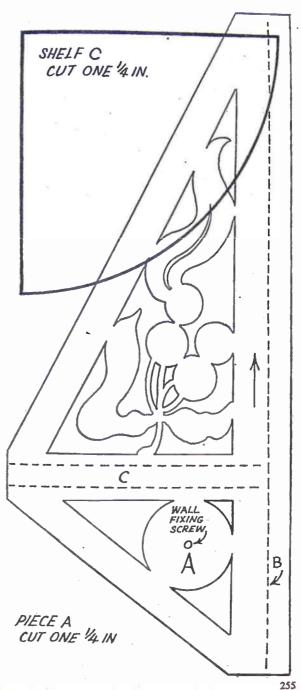
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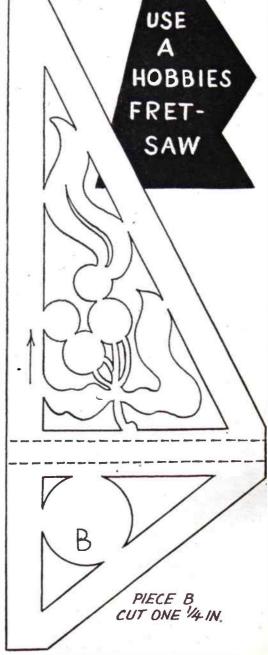
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