

# Hobbies

## WEEKLY

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## A NOVEL ELECTRIC MORSE SENDER

**H**ERE is something quite novel which the reader can make and operate for practice in sending Morse. It is easily constructed from a few pieces of wood and provides simple use for so many who are training with the A.T.C. or as signallers for the services.

Anyone can operate it, as no skill is required, and this is very helpful to those wishing to learn to read the buzzer and having no skilled sender to assist.

The sender has merely to turn the disc to the required letters and draw the contact down in the slots when the buzzer will operate correctly. It is quite simple.

### The Under Parts

To make, first construct the under-frame shown in Fig. 1 from linn. by 2in. wood. The pieces are fitted together with a halved joint and glued. In the centre of the joint drive in a 2in. wire nail and cut off its head.

This is the pivot pin on which the disc rotates. At A fit in a quarter circle of fretwood, nailing it to fillets so as to be level with the top of the frame. At B fit over a 5in. length of copper foil, bending it over either side and fastening it down with tacks. The fillet on the left side will also help to keep it down.

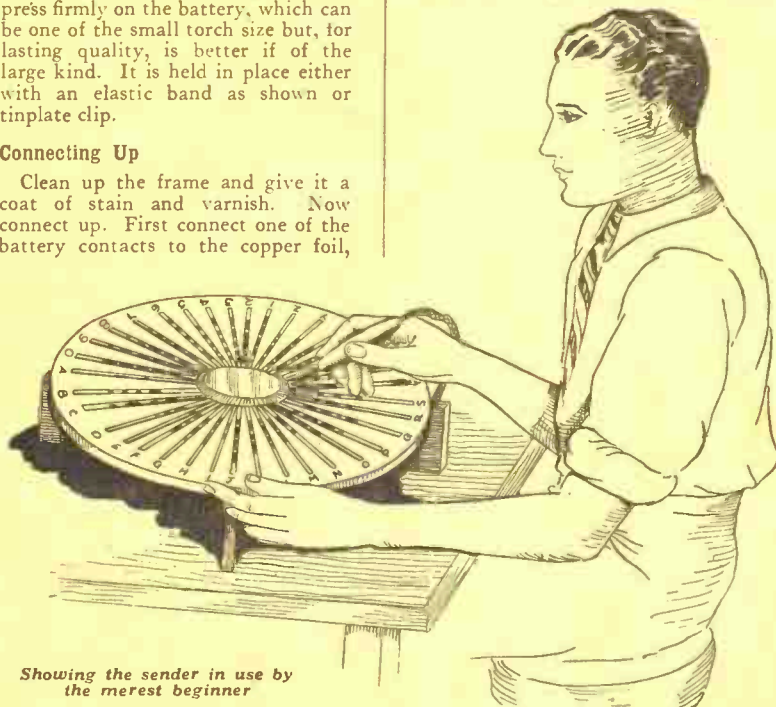
At C, a small buzzer is screwed. On the other side of this are fitted two thin metal L shaped contacts, cut from brass or tin. Arrange these to press firmly on the battery, which can be one of the small torch size but, for lasting quality, is better if of the large kind. It is held in place either with an elastic band as shown or tinplate clip.

### Connecting Up

Clean up the frame and give it a coat of stain and varnish. Now connect up. First connect one of the battery contacts to the copper foil,

then the remaining battery contact to the buzzer.

To the other terminal of the buzzer connect a length of single flex. This



Showing the sender in use by the merest beginner

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flex will pass through a hole in the frame, and is later fitted to the disc contact to be described further on.

The disc is cut from stout cardboard to the diameter given in Fig. 2, which shows a quarter of it only for reasons of space. From the centre also strike the circles E and F, then with the aid of a protractor, divide the disc into 36 equal parts each of 10 degrees.

Draw lines from the centre, cutting through each part, and on these lines between circles E and F, cut slots 3.16in. wide. These can be cut

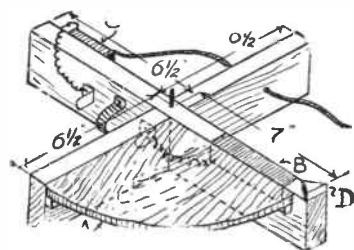


Fig. 1—The underframe parts

out neatly with a chisel and mallet, holding the cardboard on a piece of wood.

This done, cut a second disc, this time from very thin card, such as Bristol board, and glue this to the bottom of the thicker disc. From a piece of fretwood cut out a 4in. disc.

Bevel the edge of this and glue to the top of the cardboard disc exactly in the centre. Bore a hole in this to fit over the pivot pin, and try the disc in place.

It will be found that the front of the

frame extends beyond the disc 1/2in. On this bit glue a triangular piece of fretwood, as at D, for a pointer.

On the Bristol board, where it shows through the slots, cut out spaces according to the dots and dashes of the Morse code. For the dots cut out spaces 1/4in. long, for the spaces 1/2in. long, with intervals of 1/4in. between each.

#### Cutting the Morse

To make this clearer, the detail Fig. 3 shows the letter V about which we hear so much nowadays, three dots

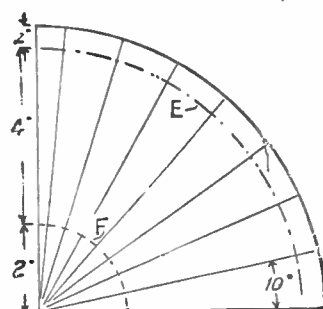


Fig. 2—Marking the slot positions

and a dash. Cut the letters and figures as directed and indicate each with its proper letter or figure in bold ink before its respective slot.

The disc contact is now to be made. This is shown in Fig. 4. First cut two pieces of fretwood to size given. For the contact itself, break off a piece of watch mainspring about 5ins. long.

To one end of this press tightly over a small piece of thin brass or tin.

Hammer it down to make sure it is firmly on, leaving a bit outside.

To this bit solder the free end of the flex, all ready connected to the buzzer.

Now lay the spring between the pieces of fretwood, with 1 1/2in. projecting from the forward end, and nail the wood together and so sandwich the spring between. Drive the nails either side of the spring to prevent the latter shifting sideways.

To allow a small bit of the flex to also come between, chisel out a little groove. Fig. 4, G, shows these details. Now shape up the wood as at H to make it comfortable to grip.

This completes the sender. To operate it, turn the disc until the re-

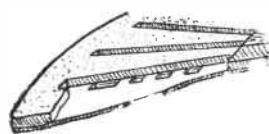


Fig. 3—The disc slots



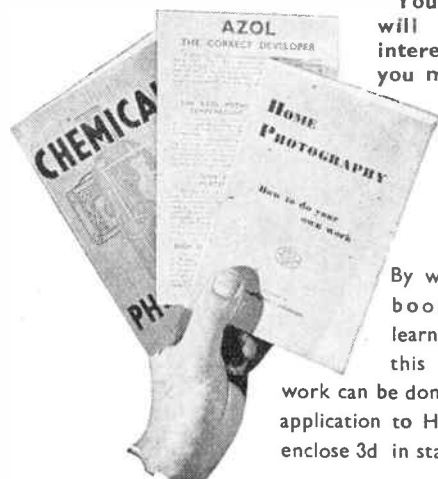
Fig. 4—The handle and contact parts

quired letter is opposite the pointer and, inserting the contact in the slot, draw it firmly down.

The buzzer will at once respond with the letter in Morse code. When using the contact, see the curve of the spring is upward so as not to scratch the cardboard but slide over it.

No switch is needed as the circuit is only closed when the contact touches the copper foil below the disc.

## Why not do your own Developing & Printing—



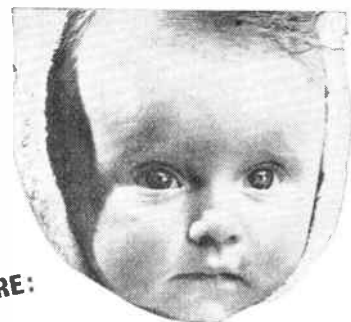
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### EYES ON THE FUTURE:

The time will come when you need no longer miss a good picture for want of a film. Meanwhile, the output of Selo films is necessarily restricted, but all available supplies are distributed through approved dealers. If your photographic dealer is out of stock, please do not write to the manufacturers; Ilford Limited cannot supply amateur photographers direct.

# SELO FILMS

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# How to utilise your old gramophone discs for a RECORD BLACK-OUT SHADE

WHILE sorting out all your old gramophone records in response to the recent appeal for such salvage, keep a few scratched worn ones, for you can make useful black-out electric lamp shades from them, as shown by the illustration herewith. These shades, like the bakelite A.R.P. shades, do not allow light to penetrate at the sides; the light is projected downwards only.

Such shades are ideal for hall lamps and other lamps not rendered fully opaque by means of glass bowls or reflector-type conical-shaped metal shades. A black-out window blind is not enough protection against light from unprotected lamps. From outside the glow of the lamp can be clearly seen, even if a 60-watt lamp is used.

Hence the need for absolute protection in the form of a bakelite shade. These cost about 6d. each, are neat in shape and are obtainable in fancy colours. However, you can make simple black ones easily from records, whether 8ins. or 10ins. in diameter.

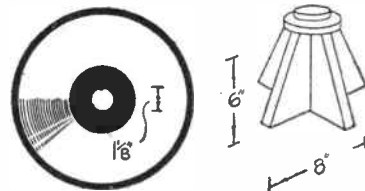


Fig. 1—Hole to cut in the record

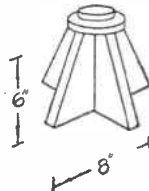


Fig. 2—Wooden form

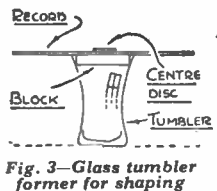


Fig. 3—Glass tumbler former for shaping

For ordinary electric lamps, the 10in. record makes an ideal size of shade. The small 5-watt night light lamp requires an 8in. record, while larger lamps (such as the type with long filaments) require 12in. records. Making the shade is a straightforward job. The first thing to do is to cut an 1 1/2 in. hole in the centre of the record (see Fig. 1). The hole is cut with an ordinary fretsaw blade and the diameter should be large enough to take the electric lamp holder fitting easily.

Some holders require 1 1/4 in. holes. Others require an 1 1/2 in. hole. Thus, a penny or a half-crown makes a useful template in scoring the hole size on the record. Simply centre the coin on the record and hold it in place firmly

with a finger, then score around it with a nail.

When cut out, cut a centre disc from a piece of 1/4 in. wood that fits easily into the hole. Another disc is cut from 1/4 in. or 3/8 in. wood to fit neatly inside the top of a drinking glass or tumbler (see Fig. 3). The centre disc is screwed to the top of the larger disc, in the centre as shown.

The large disc must fit inside the tumbler so it rests level with the rim. The side of the tumbler should be about 5ins. long by about 3ins. in diameter at the top.

## Working the Shape

Now comes the interesting part of the work—the actual shaping of the record. Fill the tumbler with water and put the wooden disc into it. Get a bucket or basin and fill it with water, then heat it to boiling point on the stove or gas-ring.

A bucket is the best utensil to use, providing the diameter will take the record easily. When heated, turn off the gas and slowly lower the tumbler into the water so it rests on the bottom. The record is set on the top of the tumbler so the hole engages with the centre disc.

The hot water, of course, should cover the record by 3ins. or so, for if only partly immersed, the water will not soften the record into a workable pliancy, which is wanted if you are to make a success of the shaping. So see that there is a sufficient depth of water above the record.

## Softening the Disc

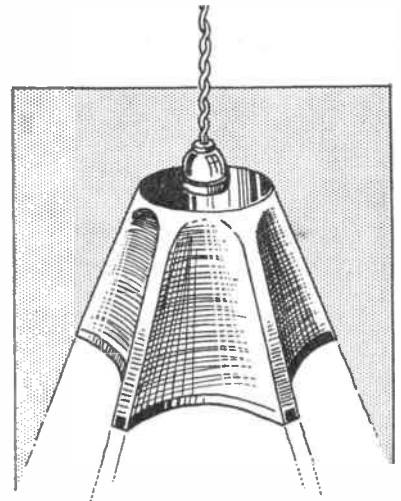
Boiling water will soften the record almost at once, but the trouble is in putting your hands into boiling water, so you should let it cool or not bring it to the boiling point. Both hands are used in pressing the record down over the tumbler.

The record will shape itself into a wavy pattern under the pressure. When shaped, finally press on the centre of the record to make it flat (it may have bulged upwards slightly owing to the downward pressure) and then lift it out and allow to cool.

It will harden up again in a few minutes. Your hands will probably be stained black a little, but the black is easily removed with soap and a scrubbing brush. The inky stain is worse if you boil the record in water containing washing soda, so do not use mother's bath of suds!

## The Basin Method

Instead of shaping the record while under the water, you could set the record in a basin of hot water until it is soft, then lift it out and press it into shape over the tumbler,



the latter being set on a table. This is probably the best method, but you will have to be quick, as the pliancy of the record diminishes as it cools.

Moreover, the record will not stain your hands so much. The inky stain is a harmless dye. It will be on your palms and finger tips which come in contact with the record.

Your first attempt may be successful. On the other hand, you may have bigger waves at one side than the other. This gives the finished shade a lob-sided appearance. Experience will show you how you can obtain even waves; a lot depends on the even pressure of the fingers.

The glass tumbler is a quickly-made former. A better, more accurate former can be made from two pieces of wood. These are cut and slotted to fit together as shown at Fig. 2. The centre discs are nailed on top.

## Shaping

When softened, the record is set on top and pressed down at the sides, the four sloping shoulders being an accurate guide for the fingers. You will be able to "feel" these shoulders through the record and thus be able to make a better job of the shaping.

An attractive four-corner scallop shape is the result, as seen by the illustration. When the record has become hard, lift it off the wooden former and wipe it with a dry cloth. There is no need to finish it off in any way; it has an attractive finish.

It would not be a bad idea to drill about four 1/4 in. holes in the top part of the shade to serve as air vents. There is a great deal of heat from 60-watt and 75-watt lamps, but while there is no danger of the heat emitted causing the shade to soften and droop into a shapeless mass, there is no harm in being cautious.

# A simple circuit and components for morse practice with A VALVE OSCILLATOR

TO those readers who are now busily practising their morse code in connection with the A.T.C. or other Service organisations, this article, dealing with the construction of a valve oscillator which can be easily built up by the veriest amateur, will be found of extreme utility. The circuit is quite simple and straightforward and is mostly made from old second-hand components which even in these days can still be purchased fairly cheaply.

## General Layout

An old L.F. or Power Valve and valve holder, a Low Frequency Transformer (Ratio 5/1) a key and a pair of phones are all the components required. Power for the valve is supplied from a small grid-bias battery (9 volts) and the filament supply is from an accumulator or nearly run-down torch battery.

The advantages of possessing such an instrument for practice will be apparent as soon as it is handled, but the main one is that a similar note is heard in the phones as would be heard from a real C.W. station, thus making the practice much more helpful and real when compared with the usual gruff note of an ordinary buzzer.

## In the Phones

It can also be used in a room where other activities are taking place, as the note is only heard in the phones and this will be quite an advantage if your family wish to listen to the broadcast set when you are practising. Several pairs of phones can be used if necessary.

The way in which you build up and house your set will vary somewhat according to the type of components you are using, but a study of the circuit diagram and the diagram of the set as built by the writer, will act as a general guide.

## Quite Compact

The original set as described is all

## Solution to last week's Cross Word Puzzle

S	A	C	C	H	A	R	I	N	
F	A	T	H	E	R		O	N	E
I	L	L	U	S	T	R	A	T	E
S	E	A	R	S		R	E	D	
T	N	N		M	R				
T		S	T	A	M	P	S		
T	R	I	C	K		T	R	E	
U	C	I		E	D	E	N		
C	O		S	P	I	R	I	T	S
K	I	N	G				G	E	

compactly built into a wooden box 6ins. square internally and 4ins. deep, but the set could be built up on a baseboard if you do not wish to spend too much time on the construction. We will take it, however, that you have made or obtained a box which is roughly about the size mentioned. No lid is required.

You will find it easier to build up and wire the set if the bottom is temporarily taken out, leaving just the four sides on which to build up. Start by screwing down the L.F. Transformer to one of the sides and beside it screw down the valve holder. Arrange these so you have room for the grid bias battery and torch battery (if used) to stand on their ends behind these components.

## Wiring

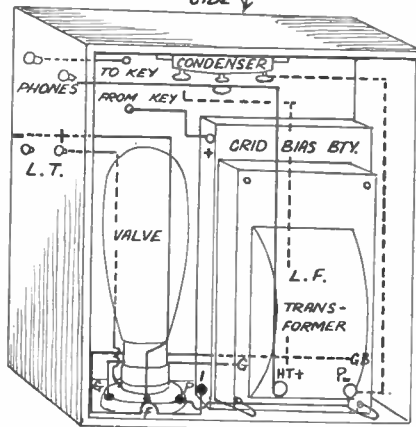
Drill holes and fix two terminals for the phones and commence to wire up as the circuit diagram. As soon as this is done, the bottom can be screwed on. We can next screw the key on the bottom (on the outside, of course), drilling a hole through which to pass a wire leading from one of the key terminals to the H.T. positive inside the box.

If you are using an accumulator, two extra terminals must be fixed to the sides, as the accumulator will have to be outside the box. If you prefer to use a torch battery for the filament, you must remember not to exceed the 2 volts or the valve filaments will be damaged. A 1.5 volt bell battery would do, or a flashlight battery which has had some use and lost some of its voltage.

## Testing

Having finished off all the wiring, check through to see that no mistakes or omissions have occurred and then

KEY SCREWED ON THIS SIDE ↓



Detail and position of components in case

we are ready to start. We now have the box inverted with the key on top and all the other components out of sight and dustproof. Having connected up the phones on to the outside terminals, on pressing the key, a good clear note should be heard.

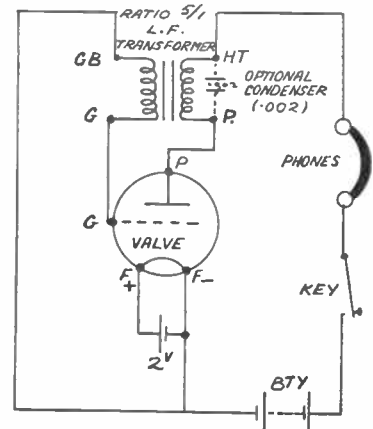
## Add a Condenser

With certain types of transformers this may not be very clear, but the addition of a condenser of about .002 capacity across the H.T. and Plate terminals of the transformer will generally cure this trouble. An old pre-set condenser whose capacity can be altered by screwing down a little knob is very suitable. This can be tried in any case if such a condenser is available as it offers an easy means of altering the pitch of the note to suit the listener. You will find ample room for it inside the box.

## Point to Point

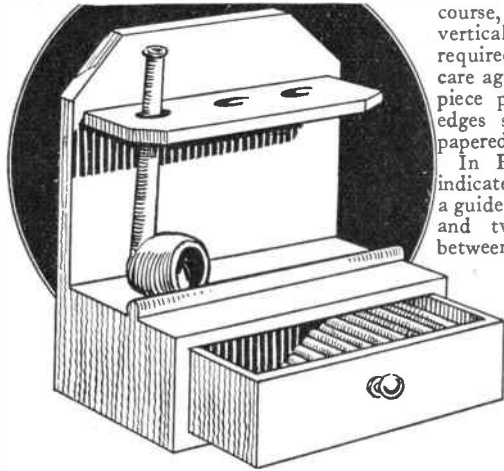
For those of you who are not able to follow easily the circuit diagram point to point wiring is given here :-

1. Grid of transformer to grid of valve holder.
2. GB of transformer to negative filament of valve holder.
3. Negative of L.T. and H.T. to this same terminal on valve holder.
4. Positive of L.T. to other filament terminal on valve holder.
5. Plate of transformer to Plate on valve holder.
6. H.T. of transformer to one of phone terminals.
7. Other side of phones to one terminal of key.
8. Other terminal of key to H.T. positive.
9. (Optional condenser) across H.T. and Plate on transformer.



The circuit diagram of the set

# What a useful Xmas Present you have in making this PIPE RACK AND DRAWER



course, the anxiety of keeping to a vertical cut is eliminated. If it is required to clean up the cut edges, care again must be taken to hold the piece perfectly upright. All sharp edges should be just lightly glass-papered.

In Fig. 1 two dotted lines are indicated on the back piece A. This is a guide for the fixing of the pipe rack, and two holes should be bored between these two lines to take screws for the fixing.

After the holes are made, they should be countersunk on the back of the piece so the heads of the screws lie flush and neat. The top corners of the back A are cut to 45 degrees, these being previously marked with the set square.

The parts B and C are cut in pairs, so, having marked out and cut one piece, it can be used as a template for drawing round to outline the other piece. This assures accuracy of fit when the time comes for assembling the pieces.

## Points to Note

Note in gluing up that the parts all lie flush at the ends of drawer compartment. This again simplifies the final cleaning on a flat surface of glasspaper. The rounded fillet D which is glued and pinned to B is placed 2½ ins. out from the back, thus allowing the pipes to rest as shown in the section Fig. 2 without falling forward.

In this diagram, too, it will be noted how the front edges of pieces B are slightly rounded off, so the outer ends of C should also match this.

The outline for the pipe rack E is given in Fig. 3. The holes should be ¾ in. in diameter and should preferably be made with the brace and bit, although holes cut with the fretsaw can be quite cleanly cut if sufficient care be taken. Glue and

screw the rack on and then proceed to make the drawer.

## Making the Drawer

The method of making the drawer is shown in the outline diagram at the top of Fig. 4. The jointing of the sides and ends is given in the enlarged detail.

To mark the jointing correctly, divide the width of the pieces G, H and I into three and allow the thickness of the wood—viz., ¼ in.—as

## CUTTING LIST

- A—8½ by 8 ins. by ½ in.
- B—8 by 4½ ins. by ½ in. Cut 2.
- C—4½ by 2 ins. by ½ in. Cut 2.
- D—8 ins. by ½ in. by ½ in.
- E—7½ by 1½ ins. by ½ in.
- F—7½ by 2 ins. by ½ in.
- G—7½ by 1½ ins. by ½ in.
- H—3½ by 1½ ins. by ½ in. Cut 2.
- I—7½ by 1½ ins. by ½ in.
- J—7½ by 3½ ins. by ½ in.

width of each tenon and its recess. Cut the joints cleanly with the fretsaw and afterwards glue them up, testing the inside of the frame thus made with the set square to ensure its being perfectly square.

A few fine fret pins can be driven in the joints after the glue has hardened, as seen in the outline diagram of the drawer.

## The Drawer Front

The front of the drawer, marked F, should be set out to fit exactly into the opening of the front and is glued there to piece G. Note how the floor J is glued to the drawer frame, and the front F laps over it and so hides the edge.

Mahogany is suggested as being the most suitable wood to use for the rack and drawer, and regarding finish, no better could be applied than french polish put on with a brush. The surface of the wood must, of course, be well cleaned with coarse and fine glasspaper before the polish can be put on.

**H**ERE is an ideal piece of work for the fretwork beginner.

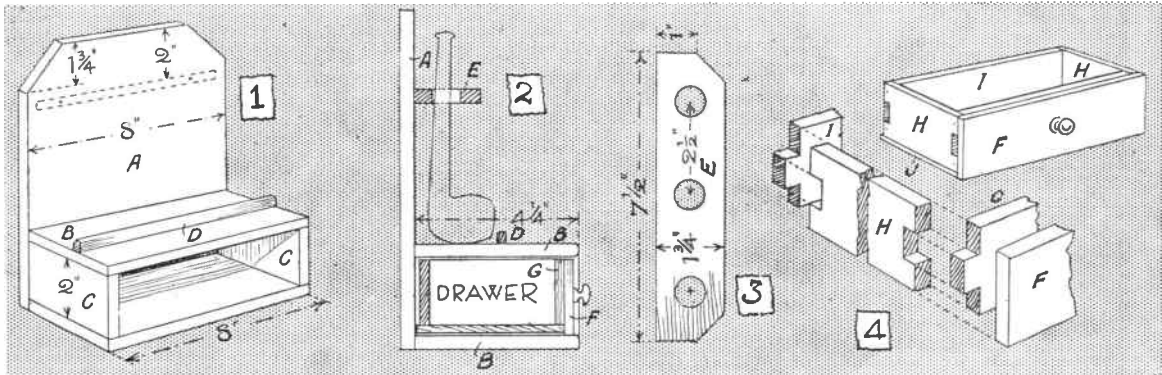
This is a simple pipe rack with drawer beneath for cigarettes. It is just the thing for the side table where the homelover usually has his books and smoking kit. The marking out of the various parts must be carefully and accurately done if a true fit is to be made, and in this respect a drawing board with the square and set squares are almost indispensable.

In Fig. 1 the general arrangement of the parts are seen, and some measurements, helpful for assembling. A full cutting list is included, so there may be no difficulty in setting out the parts.

## The Main Back

Piece A being the main back should first be marked and cut. As fairly thick wood is suggested for the main parts of the rack, care must be taken in the cutting with the fretsaw to keep a perfectly vertical cut. Otherwise the pieces will not fit accurately and closely.

If the worker has a fret machine, of



# Points to watch if you want to be sure of getting BETTER PHOTOGRAPHY

THE last two articles on photography were concerned with the parts of a camera and their uses, and we shall at times have to refer to the various points mentioned in those articles. In this chapter we switch off apparatus to tackle the individual using it, who, presumably, wants to make really good photographs. Or shall we start talking about 'pictures'?

It is a much better word, deeper in its meaning than either photographs or 'snapshots' and its use will encourage a different feeling about your hobby.

## Interest Subjects

Will you first ask yourself whether you are more interested in any one particular type of picture? The mention of a few groups may help you to decide what gives you the greatest pleasure. There are architectural subjects and interiors, landscapes and river scenes, trees, monuments and historical buildings, figure studies and table top or still life subjects. Which of these attract your attention and appeal to you when visiting an exhibition of paintings or photographs?

When on a ramble have you been particularly struck with the beauty of a landscape with its trees and hedges, and, perhaps, a whitewashed cottage or a church? Or have you enjoyed more the few minutes that were spent in some grand old cathedral with its intriguing lines and graceful arches? Perhaps it was a mediaeval castle with moat and drawbridge, which persuaded you to expose some of your spool so you might have records of your visit. You should know what attracts you most and try to link this with your camera work.

## Spoiling a Strip

We have seen strips of film with eight negatives and each of a different subject. There may have been a reason for the variety, but it is not what you would find in a spool exposed by a photographer who has been doing the work for many years.

Our leading exhibitionists are those who concentrate on one or possibly two subjects. This concentration plays its part every time an exposure is made by these individuals and it is only by so doing that one can hope to achieve a good percentage of successful results.

Learn not to be in a hurry when trying to get something that is really pictorial. Examine it from all angles for it may be there is something which you have not noticed and which may just spoil your reproduction of the scene.

Let us take this point further. Most of us are fond of landscapes and they can, of course, be of great variety and characteristic of the district. You can have them with or without trees or figures; there might be an interesting group of saplings on the bank of a lake; or it might be a genuine old English whitewashed cottage in a shady country lane.

## Getting the Best

You were very struck with the scene as you approached, everything in it seemed to be in its right place and just inviting you to get the camera ready. It might, however, be worth while waiting for that motor car to get away. It might be even better if taken from the other side, for by so doing you avoid that very heavy tree which is overshadowing a corner of the view.

Is the lighting quite right for making the exposure? It is very strong on the cottage wall and that gate in the foreground, perhaps, that cloud which will soon be overhead will soften the light. It would probably look much better in an evening light than at mid-day; in that case it would be better to return later, rather than waste a film. Why not sit down on the bank and wait for that cloud to pass.

These and similar thoughts occurring to you at the time, will help much more than you expect. It is by this that you will develop a personality in your work, put your pictures on the line at the exhibition, and give you something beautiful on the walls of your home.

We have known amateurs wait for an hour for an individual to walk into a scene and not be satisfied until the figure actually fits the picture. A well dressed lady would be out of place in a picture of a farm, but an old man in farm clothes or a maid complete with white apron would be part of the whole.

## A True Story

Here is a true story to illustrate the point. A friend went with several

members of his camera club on a ramble. Towards tea-time they arrived at a bridge over a very pretty part of a river, and he was at once attracted. He promptly fixed up his camera and started viewing the scene from first this side and then the other, taking his time and shifting a few inches to the right or left.

His fellow members became impatient, they had made their exposures and were thinking about tea, till at last they decided to go on without him. When he was alone he went over the ground again, for he knew that he was on a good thing but there was just something lacking.

## Patience

This did not reveal itself, however, until he had got the camera in an entirely different spot. Then he realised that while the composition was perfect, yet the light on the water was too strong. It overpowered the shadows under the trees on the bank. He was pondering this when he caught sight of a cloud coming very slowly in the direction of the scene. Very slowly indeed, but it arrived and he made the exposure.

The result was a perfect picture. He had never made a print for exhibition, but this one appeared in the principal London shows and in several provincial ones. Altogether it brought him orders for several copies, amounting to many pounds in value, besides medals and other trophies. But, above all these, it made a real pictorialist of him.

## Pictures Now

You can achieve similar success by specialising on your subject and by making a very definite study of each scene or view before touching the trigger. November is a good month for landscape work, the lighting is usually soft, the trees have shed many leaves and the natural colourings are very pictorial.

Do not be in a hurry. Take your time and you will soon learn how to avoid mistakes and to return with a spool full of first class results.

## Do you know—

*THAT asbestos in gas fires are best kept clean by blowing all dirt away with bellows and that smoke marks can be removed by sprinkling dry salt over the asbestos prior to lighting the gas?*

*THAT paraffin oil and salt removes stubborn stains from baths, etc.?*

*THAT bent celluloid knitting needles are easily made straight again by immersing them in warm water?*

*THAT distempered walls having grease stains can be effectively cleaned with a paste consisting of fuller's earth and water?*

*THAT mildew on leather articles can be removed by rubbing in vaseline and wiping with a soft clean cloth?*

*THAT hot-water bottles should be washed out once a month with cold water to which a little ammonia is added so as to preserve the rubber and keep it from becoming hard and thus cracking in time?*

*THAT a little egg-shell, crushed into a fine powder, then sprinkled on a scrubbing brush, will remove stains from kitchen table tops and other white furniture?*

# In these days of economy it is a wise plan to DISTEMPER OVER WALLPAPER

**O**WING to the shortage of wallpaper and the high price of any available wallpaper, many people have decided to try the war-time policy of distemping over the wallpaper in their homes, thus saving a lot of work and much expense.

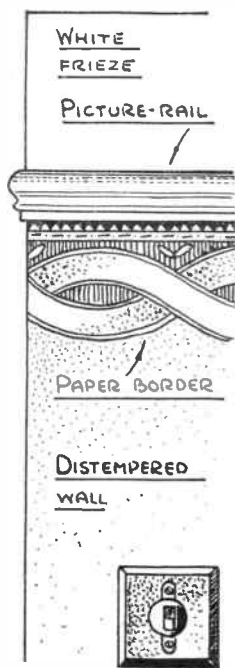
It is a good idea and the job can be tackled any time. After three long years of war, without any innovation in the home owing to the possibility of destruction or damage by the German raiding planes, one becomes tired of looking at the same old wallpaper, borders and faded colours. One really needs a change in one's surroundings despite the war.

## A Washable Distemper

Now, the war-time home decorator has two kinds of wall distemper to choose; size-distemper and the washable variety. Ordinary size-distemper, however, is not very suitable for interior decoration in living quarters; its use is usually confined to ceilings and the walls of coal-cellars, outhouses, etc., much the same as whitewash.

Water-paint (washable distemper) is the best stuff to use. It is oil-bound and thus waterproof when dry; it does not rub off on one's clothes. Moreover, it is much easier to apply than size-distemper which, unlike the waterpaint, dries quickly, so that one

needs to be quick and expert in handling it. Oil-bound washable distemper is sold in powder form in packets or as a thick paste in tins. Naturally, it is slightly more expensive than the



A suitable border over a distempered wall

size-distemper, owing to its manufacture, but the extra cash is worth expending. It is obtainable in various colours: light stone, green, blue and tangerine being popular.

## What It Covers

Some people prefer to use the powder form of distemper, buying a fresh packet when needed to finish the distemping of walls. This may be economical, but unless care is exercised in adding the correct amount of water each time, there are bound to be light and dark patches according to the thickness and thin consistency of the distemper.

If the stuff sold in tins is preferred, it is wise to obtain a 5 lb. or 7 lb. tin and, in consequence, be sure you will have sufficient to go round of the same shade of colour.

The writer was able to distemper the walls of a large kitchen twice with the one 7 lb. tin, with sufficient left over to do an outhouse. Such a tin, however, will cover approximately 45 square yards, according to the porosity of the wall surface.

## Distemping Over Wallpaper

The main object of this article, of course, is to give the amateur a few practical hints on how to distemper over patterned wallpaper successfully, not over plain walls, i.e., painted or bare walls. The first useful hint is to buy (or borrow) a good two-knot distemper brush.

An ordinary flat 6in. wide whitewash brush would do, by the way. A new brush should not be used until it has been soaked in water for a couple of hours. This is to soften the hairs and make them more pliable, thus avoiding any likelihood of "streaks" in the distemping.

Before distemping the room, remove as much furniture as possible and lift all carpets and rugs out of the way. Splashing is inevitable, so any furniture that cannot be removed, must be covered with soiled linen sheets (old bed sheets and newspapers are ideal).

If you intend to whitewash the

ceiling and the frieze of paper surrounding the top of the walls, dust both with a dry, clean brush, such as a handbrush or the whitewashing brush, not forgetting to dust along the top of the picture-rail.

Having done that to satisfaction, brush the walls and skirting. Have a look at the wallpaper and re-paste it against the wall where found loose. The best way to re-paste it is to cut the paper down the centre with a sharp knife or razor blade, then make top and bottom horizontal cuts so the paper opens out as if on hinges.

## Holes and Tears

Strongly-sized paste is applied to the wall and underside of the paper, then the latter carefully pressed back in place, using a clean, soft, dry cloth. Wipe off any excess paste. If the paper can be peeled away from, for example, the bottom of the skirting, then lift it and apply the paste underneath and wipe it down with the rag.

Holes in the wall and tears in the paper should be patched up with pieces of remnants of the same wallpaper that match, for it must be explained that dark outlines of flowers and so forth in the design will (unless very thick distemper is applied) show through.

This, by the way, is not unusual and the faint outlines in the design add charm to the appearance of the distemping; a great deal depends on the colour of the distemper.

## Applying the Distemper

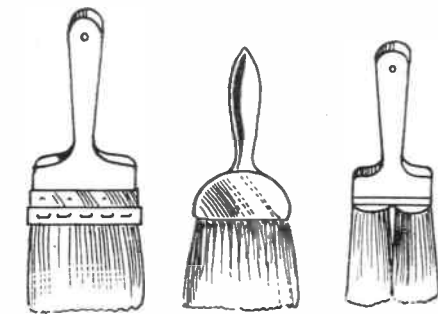
Now, while you should coat the wallpaper with size, it is not absolutely essential. The writer did a good job without such a foundation, the paper being best quality stuff and in a fair condition after three years on the walls.

To apply the distemper, remove the lid from the tin and scrape out about half of the contents (in the case of a 7 lb. tin) into a clean bucket, using a wooden spoon. Add a small quantity of water and beat the paste into a thin cream. Then add about a pint of water in small quantities at a time to thin the cream out to a workable consistency. The bucket should be roughly half-filled with distemper when thinned out.

## Remove Fittings

Remember to remove electric light switch plates before distemping. Hanging lights and bulbs are also best out of the way to prevent damage.

The proper starting point is at the top of a corner of the room, working down towards the skirting. A section of about 18ins. square should be covered at a time or you might



Whitewash brush A soft flat dusting brush Two-knot distemper brush

prefer to make a sweep from the picture-rail down to the skirting, proceeding thus according to the width of the brush until one wall is covered completely.

### Not up your Sleeve

If tall, you should be able to reach up to the picture-rail with ease, applying the distemper over the existing border of paper directly beneath the moulding. If you cannot reach the border without undue stretching, stand on a box or old chair, for there is no sense in working uncomfortably.

Another point, by keeping the brush held as horizontal as possible, there is no tendency for the distemper to run down the handle and thus up the sleeve of the coat or overalls you may be wearing. Much of this can be avoided by not loading the brush excessively.

Simply dip it into the distemper, then press the hairs against the inside of the bucket to allow the excess wash to flow off. Then brush the wall, using the tip of the brush only. Do not forget to keep stirring the distemper with the wooden spoon or by swirling the brush in it at frequent intervals.

### A Second Application

While applying the distemper, you may think that it is rather on the thin side owing to the fact that the paper design appears to be showing through somewhat plainly. This is due to the water-paint being wet; when it has dried, you will notice a big difference.

If the wallpaper is of a light colour and with a plain pattern in the design, one application should suffice. It is worth while to study the colour of the wallpaper and use a similar-coloured distemper.

For instance, if the wallpaper is a bright, yellow colour, tinged with outlines of flowers with gold and light brown, a light stone distemper would remove the faded appearance and "kill" most of the pattern outline in a pleasing manner.

On the other hand, a red-orange colour (tangerine) will undoubtedly hide the pattern effect to satisfaction. If necessary, you can always apply a second coat of distemper. Wait, of course, until the first coat has thoroughly dried out; any wrinkles that have appeared (due to the dampness) in the wallpaper, will stretch out as the distemper dries.

### A New Border

While rolls of wallpaper are not too plentiful, one is certain to be able to obtain sufficient yards of bordering. A new border underneath the picture-rail certainly makes a striking difference to the distempered walls.

The border should be pasted up after the distemper has dried and the picture moulding painted. You will then not be afraid of marking the wall with the paint, knowing that it

will be effectively covered by the fresh border. If, of course, the picture-rail needs only a rubbing with furniture polish to shine it as new, there is no need to waste good paint on it.

Pick a border that harmonizes with the colour scheme of the room or the colour of the distemper. You should, if possible, select a border that is wider than the old border, so the latter will be completely covered. If you cannot obtain a border wide enough, remember that narrow-strip stuff can be used double. Such strips require to be separated with the scissors, so when buying, take into account that you will have to cut "twin" strips.

### A Stippling Effect

In order to hide inadvertent brush marks, some home decorators revert to the use of "stippling" the distemper, this being done while the distemper is wet. To stipple is very simple, for one merely dabs the wet surface with a stippling brush or with a sponge.

A stippling brush consists of short, coarse bristles and has an arched handle. It is dabbed lightly on the distemper in short "taps" so as to leave impressions of the bristles which obliterate any brush marks.

### With a Sponge

Stippling is done as you apply the distemper. The brush must be wiped clean from time to time to prevent "clogging" of the bristles.

The sponge method can be very effective. For example, having applied a suitable colour to the wall, such as light stone and allowed the application to dry, the second coat could be tangerine, this being dabbed lightly with the sponge, the lighter background showing through in a charming, professional manner.

Use the flat side of the sponge and pat it against the wet distemper gently but firmly. Do not twist or turn the sponge while pressing, as this will mar the surface and ruin the whole effect.

A little practice on a spare piece will soon put you right.

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## The Editor's Notebook

HAVE you ever considered the peculiarity of words which have crept into our language and wondered at their derivation? Such a subject forms an interesting and fascinating study for those who have time and opportunity to delve into such matters. A case arose recently when I had the pleasure of enjoying a paper read to the Junior Institution of Engineers on "Some Technical Terms" as given by Mr. J. Foster Petree. Among the many which he covered was the term "pitman" which, as readers will know, is the name of the wooden rod actuating the fretsaw (and also the longer one connecting treadle and driving wheel).

NOW this same term is used in connection with the sewing machine, but is not so used in many other spheres. So why "pitman?" The lecturer himself did not know, but some enlightenment was later provided by Hobbies Engineer Director (Mr. K. S. Jewson) who, belonging to a family of timber merchants, took the natural view of the term when he started as an apprentice upwards of 30 years ago. In his childhood days, he says, he well remembers timber cut from end to end on the saw pit, by the top sawyer standing on the log or deal, and the bottom sawyer underneath in the pit, operating a very long saw with handles each end. The pitman

of a treadle fretsaw causes the saw to go up and down, and works under the cutting table. So does the bottom sawyer in the saw pit (i.e. the pit man). The suggestion, Mr. Jewson adds is speculation and without authority, but in the days before road transport and steam power, the sight of top and bottom sawyers working at the saw pit, converting local timber, must have been a very common one, as we in these days may easily fail to realize.

THUS the word "pitman" may have come to be accepted into current usage when it was intended to convey the name of a rod required to produce a to-and-fro movement, leaving the term connecting rod to apply more particularly to cases where a reciprocating action is linked up so as to make the wheels go round.

I OFTEN wonder what is the age of our oldest reader? The latest record I have is from one 91 years old—John Porter of Mistly, Essex—still a very active worker! He writes to me that he still does inlaid work, such as trays, table tops, firescreens, etc., and has done more since his retirement from the railway 21 years ago. Mr. Porter still enjoys his hobby and can undertake it without glasses! Well done, sir. Now can anyone beat that?

The Editor