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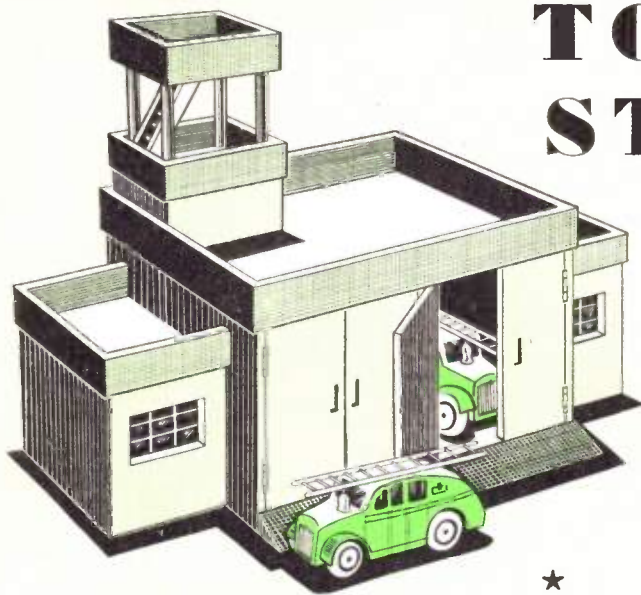
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All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk

TOY FIRE STATION



GARAGES with which youngsters can play in conjunction with their toy motors are very popular, and as a variation on this theme we have designed a toy fire station. It is intended for use with fire tenders and other appliances such as in the Dinky Toy range and gives much scope for modern minded boys to let play with their imaginations.

★ FREE Design

★ inside ★

It would make an ideal gift for any time of the year. The overall width with side buildings is 13½ ins., the depth is 6½ ins. and to the top of the tower the height is 8 ins. The ensemble consists of a

main building holding two tenders up to a maximum of 5 ins. in length and the garage has double doors. Positioned at each end are buildings which represent offices etc. and these are movable so as to give alternative layouts.

On the flat roof is placed the lookout tower to the top of which access is gained by a ladder. The tower can also be positioned as desired. The flat roof is suggested as the place for drying hoses and for hose drill, etc.

The materials used throughout are ¼ in. and ½ in. wood. The cutting is quite straightforward and there are no awkward joints to make, the pieces being butted together.

Trace the various parts and transfer them by carbon paper on to their appropriate thicknesses of wood. Where the parts are not shown full size on the design sheet, appropriate measurements are given. Cut out the pieces neatly with the fretsaw and clean them up thoroughly preparatory to assembly.

It will be seen that the leading edge of the base of the main building has to be chamfered according to section, and this forms a ramp allowing for easy entry and exit of the vehicles.

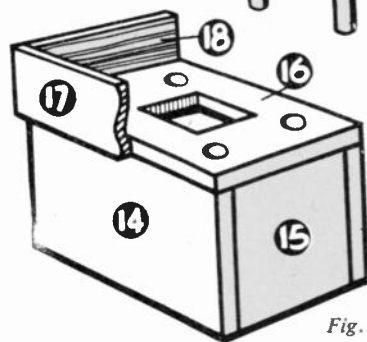
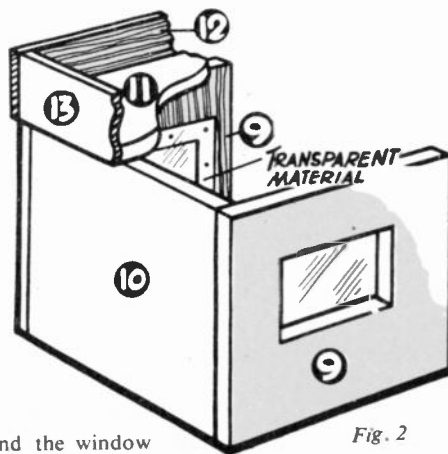
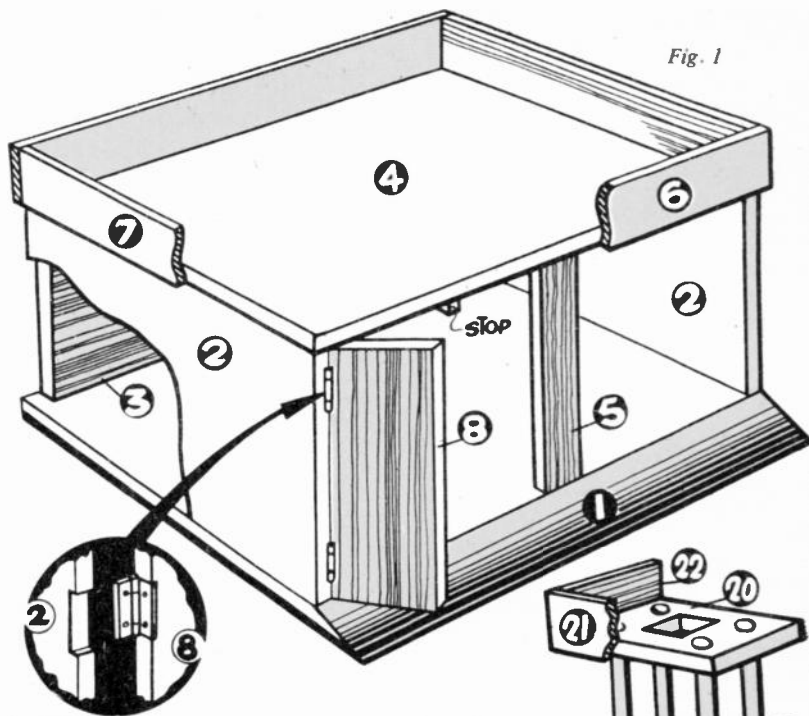
**FOR ALL HOME CRAFTSMEN
Over 60 years of 'Do-it-Yourself'**

4 ½^D

ASSEMBLING THE FIRE STATION

Fig. 1 shows the box-like construction of the main garage and how the various pieces are glued and pinned together. When fixing the doors note that cuts are made in pieces 2, 5 and 8 (the doors) to allow the hinges to fit flush. Small stops made from waste wood are glued in the centre at the top of each entrance bay to prevent the doors swinging inwards. Note that the parapet walls are formed from $\frac{1}{2}$ in. wood (pieces 6 and 7) which are butted together at the corners and pinned and glued to the top (piece 4.)

The two side buildings are identical in shape, having windows at the back and front. Their makeup is seen clearly in Fig. 2. They are three-sided buildings made to abut on to the main garage, and they have no bases. A top parapet is also added to these buildings on the three sides and the keen modelmaker can also, if desired, add doors which can be cut into pieces 10. Transparent



material is pinned behind the window openings in pieces 9, and the frame markings are indicated by the addition of black paint.

The assembly of the lookout tower and ladder is shown in Fig. 3. The base consists of pieces 14, 15 and 16 pinned and glued together, with the parapet added as in the other sections. Piece 16 is drilled to take the dowels which form the pillars holding the top platform. This consists of piece 20, correspondingly drilled and surrounded by pieces 21 and 22. Glue the dowels (pieces 19) into pieces 16 and 20.

Make up the ladder as shown in the

detail on the design sheet. Pieces 23 are shaped and connected with rungs, which consist of small pins with their heads removed. The bottom of the ladder rests on piece 16 and the top goes through the square aperture cut in piece 20 and is then fixed by gluing to the ledge.

Other fixtures such as handles and ball catches for the doors can be added as desired. It is suggested that the buildings be painted grey overall. The doors should be a bright red with the parapets black, and the ladder can be finished in yellow.

KIT FOR 15/6

Readers should obtain Hobbies Kit No. 3230 for making the Toy Fire Station. It contains selected panels of wood, hinges, transparent material, etc. Obtainable from branches or Hobbies Ltd, Dereham, Norfolk (post free)

MATCH-BOX LABELS

TO obtain a flame just over a century and a half ago one had to use a tinder-box, a tinder-horn or chuck-mucks. Then, in 1826 the match was invented. It is generally believed that an Englishman, a Stockton-on-Tees chemist named John Walker, was the first to produce and sell a practical friction match. Records show that the first sale of his invention from his shop was during April 1827.

These matches were sold in tins. Each tin contained one hundred matches, which had cardboard stems, and cost one shilling plus twopence for the tin. Soon the cardboard stems were replaced by hand split wooden stems and later cardboard boxes were used instead of tins. Each box, approximately the size used today, contained a piece of sand-paper to ignite the match.

It was during 1829 that the first box label appeared. Compared with later labels it was most dull; merely giving the maker's name, the contents of the box and instructions on how to use the matches. The first illustrated label was issued the following year.

Soon there were many manufacturers of matches, all of whom began to adorn their boxes with a great variety of colourful labels. While the British labels have always been colourful other countries have perhaps produced more exotic specimens. Some of those from India and Japan bear the most intricate designs and delicate colours.

Most things of note seem to have appeared on labels at some time. These have included exhibitions and expeditions, fruits and flowers, people and places, battle scenes and sporting events, humorous situations and witticisms, birds and beasts, kings and queens, real buildings and mythical creatures, ideas and inventions. Perhaps the most appropriate title that has appeared was that which captioned a label portraying Adam and Eve. It bore the legend 'The First Match'.

Since the older labels depicted contemporary events English history has to an extent been faithfully recorded on the match box. This has led to issues of sets showing world disasters and, more happily, Royal marriages. As a matter of fact the Royalty of the world seem to have always been a favoured subject for labels as well as being great collectors of them.

Collectors of match-box labels are called 'phillumenists' which comes from the Greek 'philos' — meaning loving, and the Latin 'lumen' meaning light.

Perhaps it was only to be anticipated that the competition piece for July (designing a Scout notice board) would be more attractive to our younger readers. In the junior section a very appropriate design was submitted by Henry Atkinson, of Yarm-on-Tees, Yorkshire, who wins the prize watch. Ball point pens were awarded to the senders of the next best entries.



THE SENIOR AWARD

RULES

1. Entries must be received by the Competition Editor, *Hobbies Weekly*, Dereham, Norfolk, by October 31st and cannot be returned. We reserve the right to publish details of any entry.
2. Winners will be notified and prizes despatched by November 14th. Details will be published in a subsequent issue of *Hobbies Weekly*.
3. The name, full address and age of the competitor must accompany the entry.
4. An entry must be the unaided effort of the competitor. All entries for the Junior Section *must* be accompanied by the certificate below, or a similar declaration on plain paper, signed by a parent, otherwise the work cannot be considered.
5. Because of Customs regulations and the necessity to adhere to a definite closing date, entries are confined to those from Great Britain and Northern Ireland.
6. The judges' decision is final and no correspondence can be entered into.

CERTIFICATE (for Juniors)

The entry is the unaided work of
..... aged.....

Signed

Relationship.....

Address.....

SOMETIMES an inexpensive decoration is required for wood or leather work. One such suitable method is by 'scorch painting', 'poker work' or pyrography.

Pokers can easily be made. Any small iron rods can be used, with the ends filed to different degrees of sharpness. Iron skewers are suitable, as well as knitting needles and small screwdrivers. It is easier to work if the poker is about 8ins. long, and a wooden handle should be driven on to each one.

Draw on paper the design to be burnt then transfer on to the wood or leather by tracing or using carbon paper.

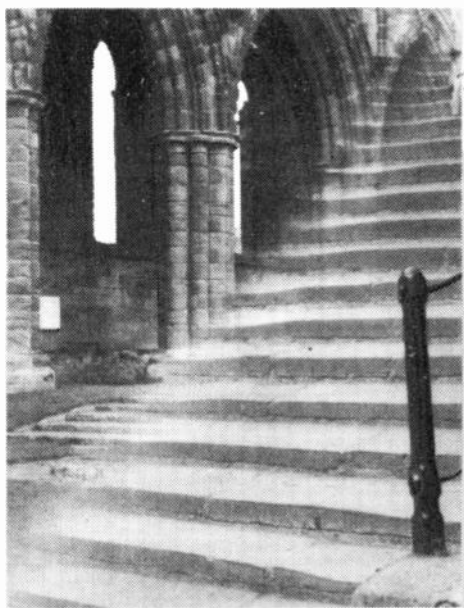
When heating the poker, on a gas-jet if possible, wrap a wet cloth around the handle, and do not make the poker too hot or it will be impossible to make a clear-cut burn line. As it is so difficult to correct an error it is advisable to first try each heated poker on a piece of scrap wood.

Start by burning the thicker lines, leaving all the small detailed work until last when the thinnest poker should be held as though a pen.

When the design has been completed the whole engraving can be stained (the lighter the stain the better the results) and polished. It is then that the advantages of this art can be seen and appreciated.

The competition this month is to design and engrave on wood, using the above process, a match-box label using any theme. The thickness of wood used is not to be more than $\frac{1}{2}$ in. and the maximum size of each entry is 6ins. by 4ins. Stain and polish may be used.

Prizes of wrist watches are again offered to winners of the Senior (16 and over) and Junior (15 and under) sections. Ball-point pens will be awarded for the next best efforts in each section.



COMBINATION PRINTING

By S. H.
Longbottom

Visitors to Whithy will know that there are many steps to climb before one reaches the Abbey. This combination print shows part of the steps and part of the Abbey.

BY using a method popular in portraiture some years ago, it is possible to combine pictures together or to remove undesirable backgrounds. This method is known as vignetting and you may have seen many head and shoulder portraits where the background fades away to the white of the paper.

In practice the image is made by

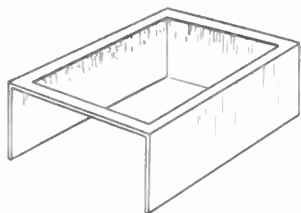


FIG 1

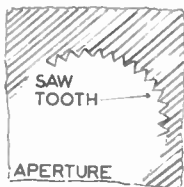


FIG 2

printing through a mask on to the sensitised paper, the shape of the mask being adapted to the particular needs. This shape could be in the form of an ellipse, a pear or circular, the rims being cut out to a saw tooth to give the diffusion and held above the level of the paper.

The prepared masks may be held by the hand, moving slowly up and down, but it is frequently a decided advantage to make a temporary holder for more complicated manipulations.

Fig. 1 shows how an inverted box can be converted for this purpose by cutting out an aperture at the top and removing one end — the other will be required to maintain the box in position. The masks

of thin cardboard are placed on top of the frame thus made and enlarging done in the ordinary manner, but through the aperture in the mask. The effect is to leave the remainder of the paper unexposed and intact. Normally, these masks should be about 4ins. or 5ins.

size of the printing paper and sit comfortably on the box-frame. The apertures to be cut out can be determined by first correctly focusing the picture on the enlarger baseboard, placing the box-frame in position, then marking out the area you wish to mask. Nearer to the lens the image will be blurred, yet sufficient for your purpose. The masking paper is cut with a small, saw-tooth edge as shown in Fig. 2. You need not be too careful about this, so long as you keep to the shape. A most useful tool for this purpose is the pen nib trimmer with a sharp, spade cutter to fit the normal penholder and costing only 3d. at a handicrafts shop.

Circles, triangles and rectangles are quite easy to make, while any special shape to fit the image may be prepared as described. After preparation, the mask is laid on the box-frame when printing may proceed.

In a vignetted portrait the background fades away, due to the fact that it is printed through an ellipse shaped mask, leaving the balance of the paper perfectly white. But the method has many other possibilities. We may merge



Here the outside was first printed, shielding the centre with a disc. Note that you cannot detect the wires holding this disc.

above the paper surface, but it may be necessary to experiment a little to determine the accurate height, packing the base of the box with battens to increase.

Before describing some tricks possible with the method it may be as well to deal with the preparation of the masks.

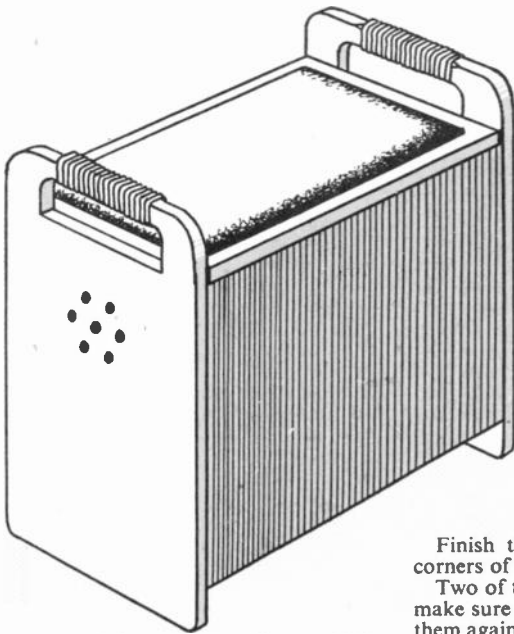
You require some black paper or thin opaque card, large enough to cover the

two pictures together quite easily without the preparation of special masks as shown in the top illustration, the second step in our process. This picture was made by laying a straight, saw-tooth mask diagonally across the box-frame and exposing the other half of the picture. The next step is to place the mask on the opposite

●Continued on page 390

STOOL FOR A BEDROOM

*Described
By
A. Fraser*



THIS piece of woodwork was designed specially for a lady's bedroom, in particular as a seat to be used in front of a dressing table. In this respect it will be found very acceptable to the female members of the household. However, it has another purpose. It is built in the form of a box and the seat operates also as a lid. It, therefore, becomes a handy receptacle for soiled linen, shirts, etc., awaiting the laundry, and possibly for other articles, such as shoes and so on. It will contribute greatly to the tidiness of a bedroom.

The woodwork is very simple and anyone with ordinary tools and only passable skill can make a good job of it.

The wood used, for the most part, is $\frac{3}{8}$ in. thick plywood of ordinary quality. If one fancies a veneered surfaced wood, later to be waxed or polished, then there is no reason why this should not be used, if the expense is no objection. Solid panels of good wood could also be used but these are dear and need to be joined to make the width — a job not recommended to beginners.

The first thing to do is to make the sides. First saw out a true rectangle, measuring 12 ins. by 19 ins. When this is done, draw in the shape for the cut-out at the top, using the square and compass. Fig. 1 shows how this should look.

Use a fretsaw to cut out the shape. After sawing, clean up the cut-out with files and glasspaper block. Finish the top by chamfering the four angles of the grip for about 8 ins. in the middle. (See Fig. 2).

Finish the side by rounding off the corners of the bottom.

Two of these sides will be needed and make sure they are identical, by holding them against each other.

Finally, draw a line 3 ins. from the bottom of each side, to indicate the

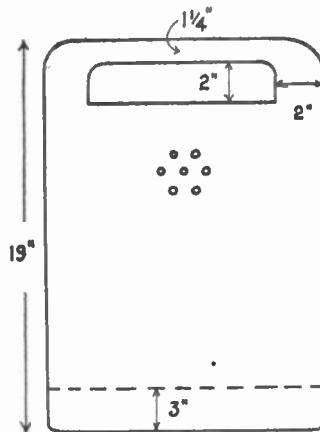


Fig. 1

position of the seat or box bottom, and bore the holes in the place shown, using a $\frac{1}{8}$ in. bit. These holes are for ventilation, which is necessary if dirty linen is to be deposited in the box. A 3 in. circle, drawn with a compass, will guide the placing of the holes.

Now, saw out a rectangle of $\frac{3}{8}$ in. plywood for the bottom of the box. This should be 11 $\frac{1}{2}$ ins. from back to front and 17 ins. wide. See that the rectangle is true.

Next, make the front and back of the box, using the same material. The

width should be 17 ins. wide, and the depth 12 $\frac{1}{2}$ ins. These pieces should also be identical.

When this is done, the box can be temporarily assembled to see if all the parts fit properly. If correct, they can be fixed permanently, using glue and 1 in. thin panel pins.

The floor of the box is attached to the sides first, as shown in Fig. 3, leaving $\frac{1}{8}$ in. clearance on either side, for the front and back panels to sit in. These panels cover the edge of the floor, and are flush with the edges.

Incidentally, the panel pins are driven below the level of the wood with a punch and the hole filled up with plastic wood. Any pieces of plastic wood left raised up after drying, should be glasspapered down.

The actual seat can now be made. First, saw out two rectangles of plywood. One piece should be of $\frac{1}{8}$ in. or $\frac{3}{16}$ in. thickness and should measure

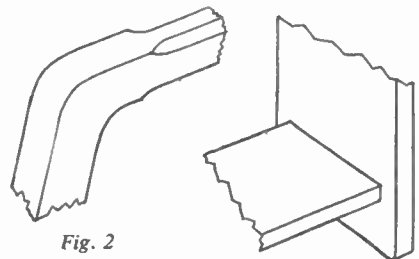


Fig. 2

Fig. 3

Fig. 4

16 ins. by 11 ins., with slightly rounded corners. The other piece should be of $\frac{1}{8}$ in. or, preferably, $\frac{1}{4}$ in. thick plywood and should measure 17 ins. by 12 ins.

Take the smaller, thinner piece of plywood and lay on it some layers of felt, making each layer slightly smaller in extent than the previous one. (See Fig. 4.) The depth of the felt will depend on how soft and springy you need the seat to be. Other materials, of course,

beside felt can be used. A piece of sponge rubber would be excellent, but any thick soft stuff, bits of coating material or blanket, for instance, would do.

The cushioning material is next covered with leather, leatherette or plastic material. This is best done by laying the plastic (face down) on the table and on to this the board with the felt (etc.) underneath — i.e., upside down. The plastic or leatherette is then lapped over on all four sides, tightly, and glued and temporarily tacked into place. A 1in. overlap should be sufficient. The tacks are removed when the glue has set. A thick fold at each corner is prevented by cutting out a 'V' section, as in the manner of bookbinding.

The plywood, with cushion now fixed, is then glued to the top of the ½in. thick piece of plywood previously cut. A ½in. clearance will be left all round. It is best, however, to leave this

operation until the painting of the wood has been done — this prevents the seat covering from being spoiled, as would certainly happen if the stool were painted after the cushion had been fixed.

In the meantime, attach the hinges to the seat top, at the back. Two 1in. brass hinges will do. Use a chisel and let down the hinges into the wood, so that the seat bottom comes flush down on the back panel top. Lift the seat base on the hinges and see if it swings out and up satisfactorily. It should clear the handles easily and not catch them. There should be sufficient room for the lid to clear the binding which is later to be put on the handles. (See later.)

When satisfied with the lid fitting it can be painted as desired and when dry, the cushion section can be glued on. To help the gluing process, the majority of the area where the cushion lies, should not have been painted.

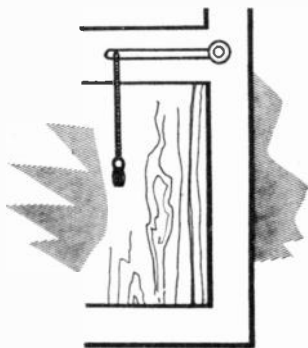
The rest of the stool (or box) can now

be cleaned up with glasspaper and painted. When dry, deal with the binding on the handles. This is best made with P.V.C. covered wire, obtainable at any electrical goods shop. It should be about ¼in. or so thick and of a colour to contrast pleasantly with the colour of the rest of the stool.

The end of the wire is anchored by cutting off some of the insulation and twisting the freed wire end into a loop, afterwards fastening this down to the underside of the handle by means of a small round-headed screw with washers. Wind the wire round and round the handle, tightly, with the turns pressed close beside each other. The finish of the winding is anchored in the same way as the beginning. The handle of the opposite side is treated similarly. This little refinement does much to enhance the appearance of the stool.

Finally, attach the lid (or seat) by the hinges, and the job is complete.

HELP BABY TO OPEN THE DOOR



Smooth the wood and paint or stain it to match the panelling of the door.

Fasten one end of a length of decorative cord through the small hole, the cord to be long enough to run from the height of the door handle to within easy reach of baby's hand.

Slip a fairly thick washer over the

spindle and up against the door and then force the strip of wood on behind it at right angles to the floor, the corded end towards the hinges.

Replace the door handle and you then have a lever. It is a simple matter now for any toddler to pull down on the cord to open the door.

(V.H.)

●Continued from page 388

Combination Printing

BABY is ready to trot around the house long before he can reach the handles on the doors, particularly the type that are high up.

That means that parents have a full-time job on their hands running backwards and forwards, opening and shutting doors, an exacting little duty, especially when mother is comfortably settled in her chair or has her hands in the kitchen sink.

A child can close the door easily enough merely by pushing against it, and here is a simple, decorative way of enabling the youngster to open it.

Cut a strip of wood 15ins. in length, 1in. in width and about ½in. in thickness. Remove the door handle from the spindle. You will normally find that the end of the spindle is square. Cut a hole 1½ins. from the end of your length of wood to the exact size and shape of the spindle, and at the other end bore a small hole large enough to take a length of

side, shielding the exposed side while the balance of the picture is printed on the unexposed part of the paper. An experiment or two of this kind will quickly reveal the effect of blending together two different pictures, but it should be remembered that test exposures are necessary for both negatives to produce a perfectly balanced picture, otherwise the difference in negative densities may spoil the entire effect.

The foregoing is quite straightforward and you may now wish to proceed a step further. Reference to the lower illustration on page 388 will show that two pictures have again been combined but here one takes a central place.

To achieve this effect some preliminary observation of the image size of the central picture is necessary with a suitable mask cut to size — but you must retain the portion cut out. In this instance the latter was a disc and attached to two very thin pieces of wire, crossed in the centre, by means of

gumstrip. The wires were then laid on the box frame so that the shadow of the disc fell on to the centre of the paper while the balance of the picture was printing, leaving this area unexposed.

We then exchange the disc for the balance of the mask, replacing the negative in the carrier and making a second exposure as previously described.

It will now be realised that these basic principles will enable you to introduce several pictures on one piece of paper. For example, a mask could be prepared to have a central circular aperture, surrounded by other smaller ones, through each of which a small portrait may be printed in turn, but remember that it will be necessary to shield all those apertures not required, using each one in turn. Or you may prepare a mask from an oblong card, cutting out one quarter only. Such may be placed to allow one quarter to be printed in turn, using different pictures, all of which will blend together at their edges.

THE ISSUES OF SWEDEN

THE Swedes are on the whole quiet and industrious. The peasantry live in wooden houses and have a strange dislike to trees near their dwellings, as they say this prevents them looking out over their beautiful country.

They dislike fresh meat. Their main dishes usually include porridge and salt meat. They make good coffee and

promenades, gardens and country houses. It is especially beautiful, and full of gaiety and movement in winter when the rivers and canals are frozen.

Stamps of 1930 'Night flight over Stockholm' are well worth securing (set of 2 — 2/- used). And keep your eyes open for U.P.U. pictorials of 1924 'Old

comprise Wener, 2,056 square miles; Wetter, a beautiful lake 70 miles long by 13 miles wide; Maelar and Hjelmar, besides many smaller ones.

Some facts and figures

There are many rivers, very short and very rapid, with waterfalls and abound-

By R. Cantwell

sometimes tea — but not the kind we in this country are accustomed to. It is called 'tea-watten' (tea water) — a tea-spoonful to a gallon of water. No danger in Sweden of nerves through excessive tea drinking!

Another popular drink is finkel, or potato brandy. As an aperitif or appetizer for the coming meal, it is customary to swallow a small piece of bread and butter, washed down with a glass of 'finkel'.

Royalty on labels

The King and Queen of Sweden seen on match labels of 1956 (see illustrations). The Royal Palace at Stockholm (capital) appears on stamps of 1941 (5k. blue — 8d. used). Stockholm is a charming city of parks,

City, Stockholm'. These are becoming scarce.

Sweden is bounded on the north by Russian Lapland and Norway; on the south by the Sound and the Baltic; on the west by Norway, the Skagerrak and the Kattegat, and on the east by the Baltic and the Gulf of Bothnia.

Its mountains are the eastern slopes of the Norwegian mountains. Its lakes

ing in fish. The largest of these is the Angermann which flows into the Gulf of Bothnia and the Gota which flows into the Kattegat.

Mineral productions are rich, copper, iron, etc. (Dannemora iron is largely used for the manufacture of steel), lead, sulphur and marble.

Imports are coffee, sugar, colonial produce, salt, spirits, tobacco and machinery. Exports include timber, iron, cattle, zinc, pitch, tar (Stockholm tar, a kind of tar prepared from resinous pine-wood and used in shipbuilding).

There is wild life too in Sweden, wolves, bears and lemmings (small arctic rodents resembling the field mouse) and, of course, the reindeer.



One letter - ten stamps



A fine collection of stamps which appeared on a recent letter to the Editor.

Valuable stamp issues

Stamp issues of 1855, 1858, 1862 and 1866 are valuable. Officials of 1920, surcharged Luftpost, deserve mention. The 10 on 3 ore pale brown, type B. watermark wavy lines, is cat. 3/6 used; and type A — surcharge inverted — £20 mint. 20 on 2 ore yellow (B) 4/6 used. (A) £12 mint; and with watermark Crown £85 mint. 50 on 4 ore lilac (B) 5/- used; (A) £15 mint; Watermark Crown £12 mint.

There are many interesting items for thematic enthusiasts. Match labels (obtainable at about 6/- per 100) cover a wide range of subjects, and Sweden, I can assure you, is a most interesting country to explore if you are so inclined.

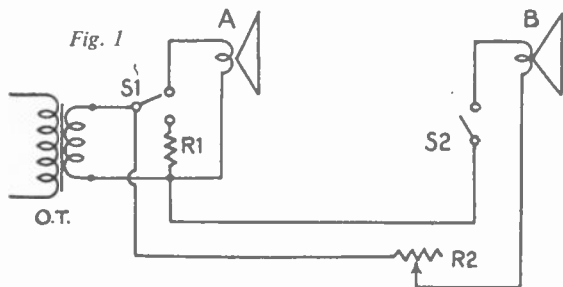
Connecting Phones and Extension Speakers

THERE are many occasions when radio reception is desirable in rooms other than the one in which the domestic radio is situated. An extra radio is an expensive solution, so the answer is the extension speaker, linked up to the house radio.

There are also many times when the reader would like to listen to a certain programme without disturbing other people in the house. With headphones one can listen comfortably without troubling those who are asleep, or who don't wish to hear the programme.

In this article we propose to show how the domestic radio can be fixed up to suit one's needs.

We will deal with extension speakers first as these are more often wanted. Many sets are already fitted with extension speaker sockets, so all one needs is to plug in a P.M. (permanent magnet) speaker. These are usually 2—3 ohm impedance types.



The leads from the sockets to the speaker will no doubt be long, depending on the distance of the extra speaker from the set, so the wire should be fairly thick to keep the resistance down. In most cases ordinary lighting flex will be sufficient.

The extra speaker itself should be mounted on a baffle board about 12ins. square and $\frac{1}{4}$ in. or so thick, with a cut-out for the speaker. Speaker mesh is advisable to protect the cone from damage. Instead of the board, a cabinet can be made to hold the speaker.

No transformer is needed, as is the case with the speaker inside the set. The leads are connected up directly to the tags on the speaker going to the voice coil in the cone.

Where the reader's set has no extension speaker socket, then he must fix up one for himself.

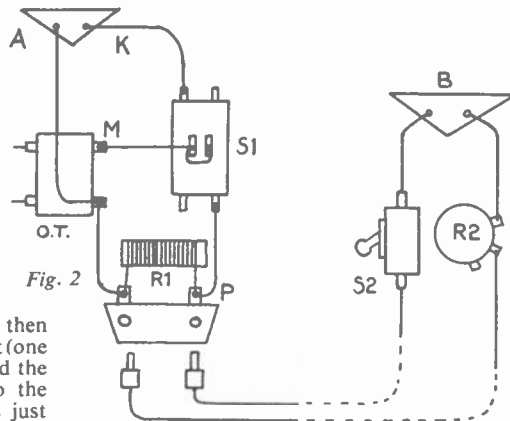
A twin socket strip can be fixed at

some convenient place, either on the chassis or on the side wall of the receiver. A couple of terminals may be used as an alternative. The sockets or terminals should not be allowed to touch any metal part of the receiver. The socket strip or terminals are best mounted on a piece of Paxolin or wood.

By A. Fraser

The back of the cabinet must have a piece sawn out of it to allow access to the strip.

The tags of the socket strip are joined to the ends of the voice coil of the receiver speaker (the tags leading into the cone). Or they may be joined to the ends of the output transformer secondary winding which lead to the voice coil tags. Choose the more accessible points.



The extension speaker then has two leads attached to it (one to each voice coil tag), and the other ends are joined to the socket strip or terminals just set in to the receiver.

Under this system, no high tension current is present in the link-up, so there is no danger of shocks from the extension.

However, this simple method has disadvantages. Both speakers operate at the same time. A really convenient system would be where either speaker can be turned off, leaving the other operating, or both can be turned off. Again, a volume control on the extension speaker is useful.

In the scheme illustrated in Fig. 1, all these things are incorporated. Fig. 2 shows the practical diagram.

In this it will be seen that a switch (S1) is added adjacent to the socket or

terminal strip, so a mounting board sufficiently big to take both these items is necessary on the side wall of the receiver cabinet.

Switch (S2) and control (R2) are, of course, mounted on the baffle board or cabinet of the extension speaker (B).

Switch (S1) can be a toggle type, such as is often used for radio/gram switching. This has two centre tags, with two tags at each end (Note that these two centre tags are joined together as will be seen in the practical arrangement of Fig. 2.)

Instead of the toggle type, a wave-change switch could be used if you have one handy. Fig. 3 shows the connections — only one of the centre tags is used and two outer tags.

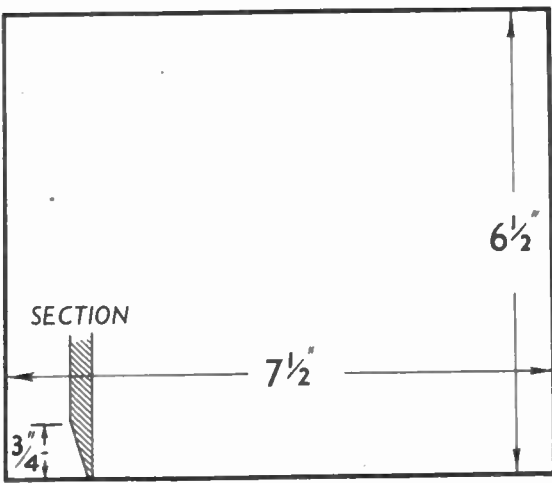
Switch (S2) can be any type of on/off switch. All kinds of switches are available cheaply from J. E. Annakin, 25 Ashfield Place, Otley, Yorks.

The variable resistor (R2) can be a 10

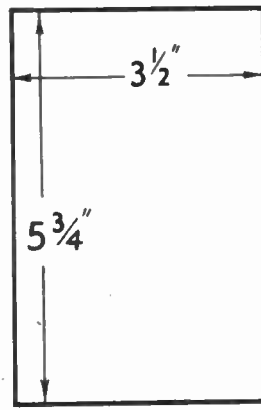
or 25 ohm potentiometer, wire wound. These are obtainable from Radio Supply, 32 The Calls, Leeds 2.

The resistance (R1) is necessary to replace the load of the speaker when this is switched out. If 2 or 3 ohm speakers are used, then this must be the value of the resistor. A suitable resistance can be made by winding $\frac{1}{2}$ yd. of Eureka resistance wire (enamelled) of 30 gauge, round a piece of dowel. Adhesive tape can hold the ends down. If Eureka is not to hand, then use $5\frac{1}{2}$ yds. of 36 gauge copper enamel.

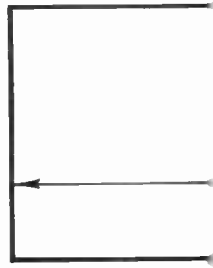
This resistance can be connected directly over the tags of the socket or terminal strip.



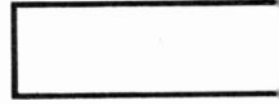
PIECE 1. CUT ONE 1/4 in.



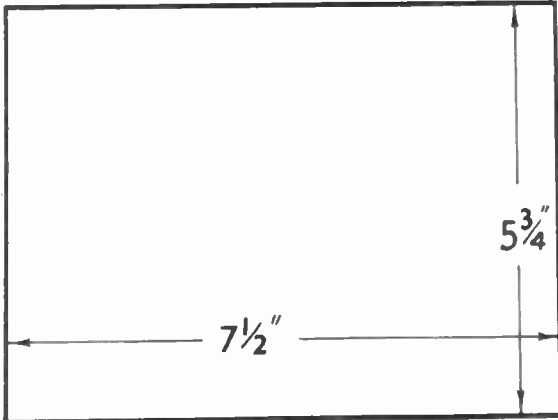
PIECES 2. CUT TWO 1/4 in.



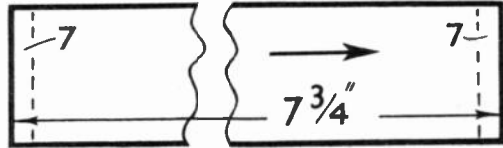
PIECE 3.



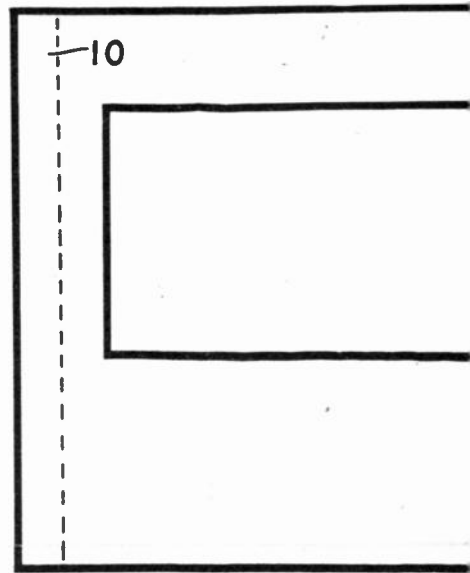
PIECE 5.



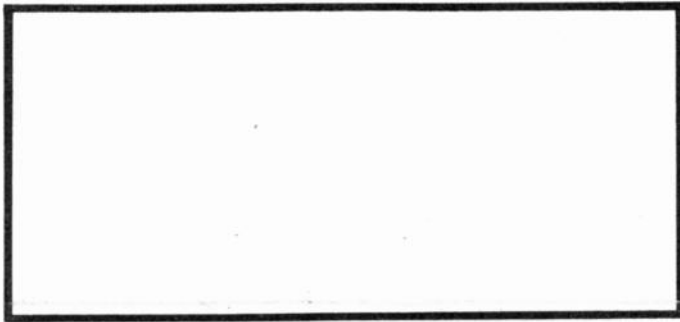
PIECE 4. CUT ONE 1/4 in.



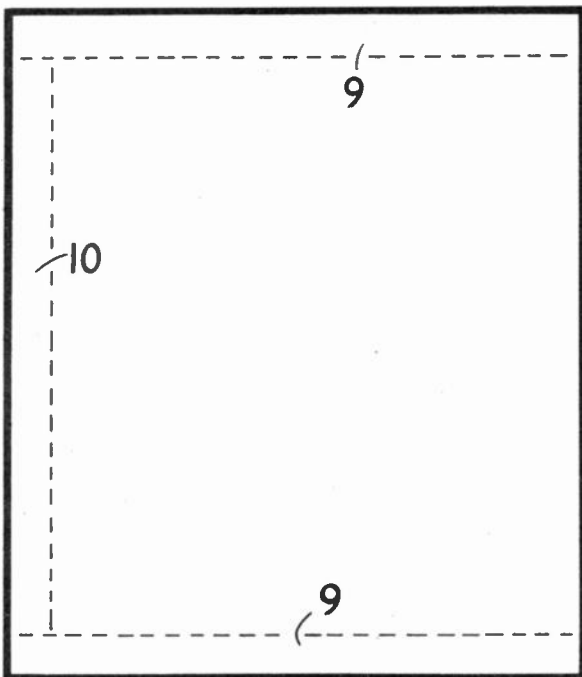
PIECES 6. CUT TWO TO SIZE SHOWN 1/8 in.



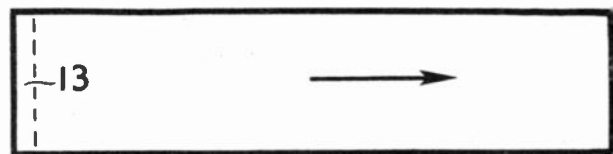
PIECES 9. CUT FOUR 1/4



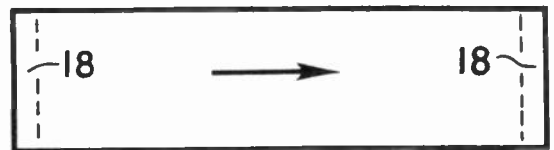
PIECES 8. CUT FOUR 1/4 in.



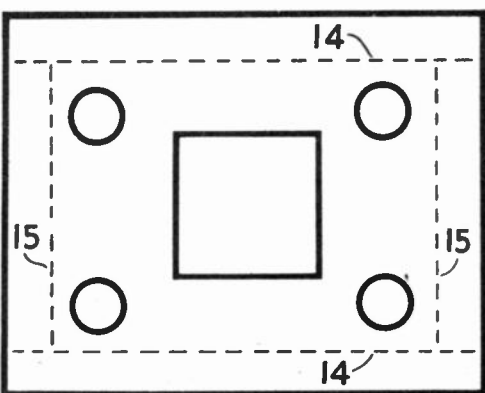
PIECES 11. CUT TWO 1/4 in.



PIECES 12. CUT FOUR 1/8 in.



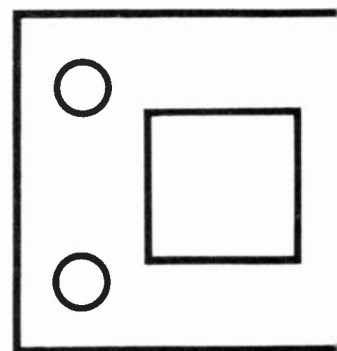
PIECES 17. CUT TWO 1/8 in.



PIECE 16. CUT ONE 1/4 in.



PIECES 19. CUT FOUR FROM 1/4 in. ROUND ROD.



PIECE 20. CUT ONE



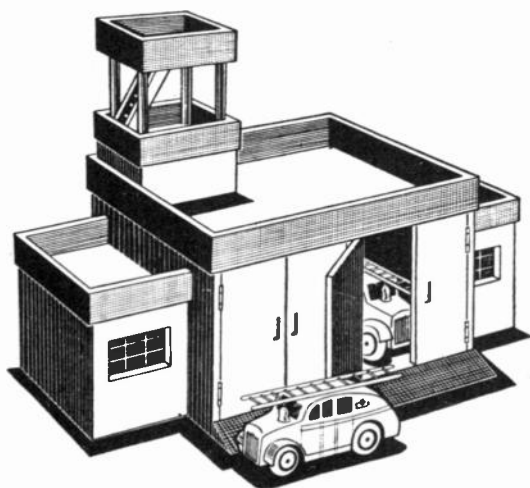
PIECES 23.



DESIGN

No.
3230

TOY FIRE STATION



CUT ONE 1/4 in.

SIZE: 13 1/2 ins. LONG
8 ins. HIGH

CUT ONE 1/4 in.

5 3/4"

PIECES 7. CUT TWO TO SIZE SHOWN
1/8 in.

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PIECES 10. CUT TWO 1/4 in.

PIECES 13. CUT TWO 1/8 in.

PIECES 18. CUT TWO 1/8 in.

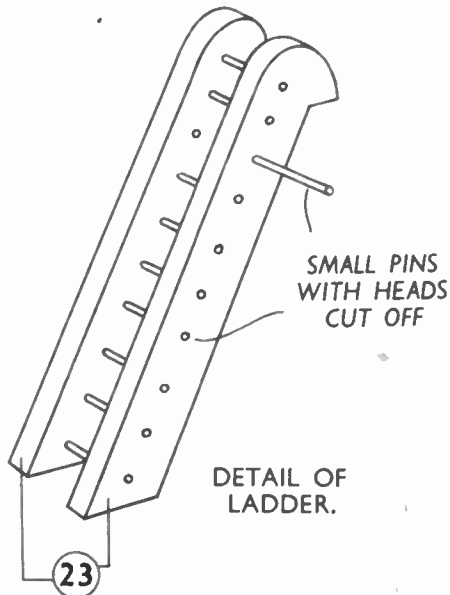
PIECES 15. CUT TWO 1/4 in.

PIECES 14. CUT TWO 1/4 in.

PIECES 21. CUT TWO 1/8 in.

PIECES 22. CUT TWO 1/8 in.

THE ARROWS INDICATE
DIRECTION OF GRAIN
OF WOOD.



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The reader should have no difficulty in setting up the above arrangement. Note that speaker (A) is the speaker already fixed in the receiver, (B) speaker being the extension one. The output transformer (O.T.) is often found on the receiver chassis, but sometimes is mounted on the speaker itself. The leads joining the transformer to the speaker are the ones the reader must look for.

The headphones modification can now be considered. The arrangement for this can be exactly the same as for the extension speaker, except that high impedance phones are used in place of the speaker. In addition, the variable control (R2) should, in this case, be 10K or 25K ohms in value, wirewound. For low impedance phones the control need only be about 2K to 5K ohms.

A socket strip could be provided on the extension speaker cabinet so that the speaker or phones could be interchanged as desired.

Where the reader wishes only to use phones while sitting near to the set, then the long leads and (S2) and (R2) will be unnecessary. One simply plugs in the phones to the socket strip fixed on the receiver side wall (as previously described). Volume in this case is controlled by the receiver volume control which will

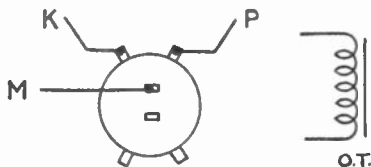


Fig. 3

need to be kept well down unless you want to be deafened. Incidentally, this phones arrangement is very convenient for the deaf who find ordinary speaker reception inadequate.

There is another arrangement for phones, besides the one described. This

consists of a circuit switching phone jack. This is shown in Fig. 4.

It comprises a special plug (to which the phone leads are attached) which is inserted, when wanted, into a jack. Pushing the phone plug partially into the jack will give reception on both speaker and phones at the same time.

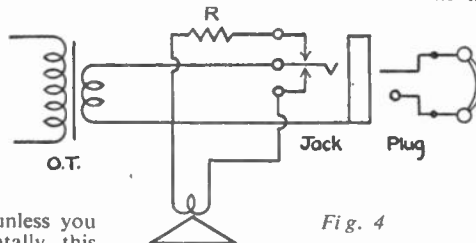
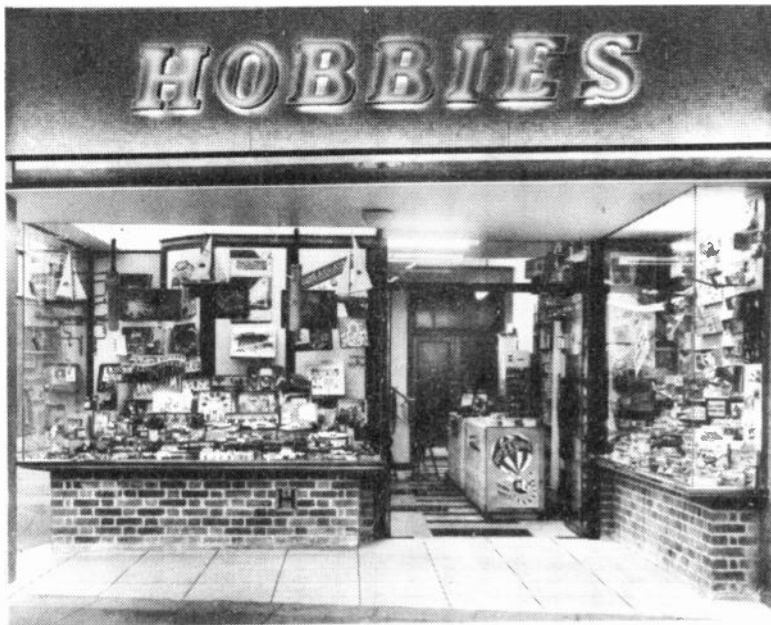


Fig. 4

While pushing the plug right in will cut out the speaker and allow the headphone reception only.

The arrangement is easily seen in the theoretical diagram of Fig. 4.

New Premises at Bristol...



Hobbies new branch premises at Bristol

TO mark the opening of the new premises in Fairfax Street, Bristol (pictured above) the Bristol Branch of Hobbies Limited held a most successful model exhibition which ran for a fortnight. Among the exhibits were

models loaned by the Bristol Ship Model Club, the South Bristol Model Aircraft Club and many local model enthusiasts. This fine display of local amateur craftsmanship attracted considerable attention and many visitors

attended the new Fairfax Street premises to inspect the many models.

In addition to the exhibition, a *Hobbies* model competition was held, and the lucky prizewinners were able to select their prizes from the goods on display in the new shop.

Of special interest to hobbyists in the Bristol area is the Bristol Manager's announcement that a *Hobbies* contest for modellers will be held in the autumn or winter each year. The trophy for the prizewinner in this annual competition will be a fine silver cup, to be held for a year by the winner, and, in addition of course, there will be numerous exciting prizes.

... and a Branch for Grimsby

Lincolnshire, and in particular the area around Grimsby, is now enjoying the facilities of a Hobbies branch. This is at 88 Victoria Street, Grimsby and the premises are those formerly occupied by W. A. Haw, who for many years has catered for the needs of hobbyists. All the facilities previously offered will be continued, and in addition a full range of Hobbies designs, kits and materials will be available. As in all Hobbies branches, personal shoppers will receive courteous attention and readers are invited to call in to see the manager who will be pleased to help with hobbyist's problems.

Stage Coach in Light Bulb

SINCE the early days of sailing ships the construction of ships' models within bottles has exercised a unique fascination for modellers. The building of a stagecoach in an electric light bulb, however, is quite an interesting departure, and it is probably the first time that this popular Hobbies model has been constructed in such confined quarters.

The bulb chosen was of the floodlight variety, the inside diameter of the actual bulb being 5½ ins. and the neck 2 ins.

The preparation of the bulb was the same as for all bulb models. The brass

Once it was inside the bulb, it was unrolled and glued in position. Having

★★★★★★★★★★★★★★★★★
 ★ We are indebted to Mr. W. ★
 ★ Schramm of Durban, South Africa, ★
 ★ for details of this novel conversion ★
 ★ which won for him first prize at a ★
 ★ Port Elizabeth hobbies exhibition. ★
 ★ Readers might like to try his other ★
 ★ suggestions for inserting models ★
 ★ into lamp bulbs. ★
 ★★★★★★★★★★★★★★★★★★

Having thus assembled the coach, it was glued into its final position on the platform. Then the figures of the driver and guards were fixed on their respective seats. This completed the coach, leaving the horses (which would occupy the whole of the bulb's neck) to be fitted. (Fig. 2.)

These horses were made complete with harness before being fixed within the bulb one by one in the following manner.

To commence with, the reins were glued in the driver's hands and these long lengths of thread were brought out

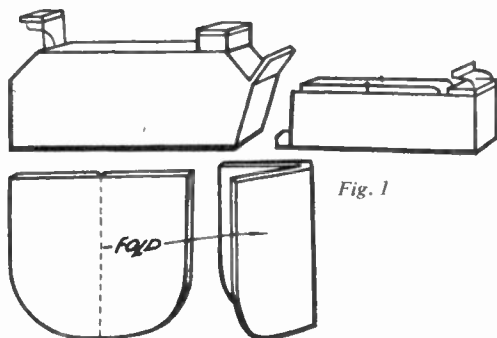


Fig. 1

cap was unscrewed from the neck and, using a fine three-cornered file, a cut was made right round the neck to make an opening just less than the diameter of the brass cap. This was when the filament was removed.

Apart from the orthodox method of putting a sailing ship model into a bulb or bottle, the method of getting any model into a bulb is to make the parts small enough to pass through the neck of the bulb, assembling all parts inside. Any model can be built inside a bulb in this way, and it is only a matter of time and a little patience before the art is mastered.

Having taken the measurements of the bulb and the model which was to be built, it was found that the plan did not require scaling down. The plan used was that in *Hobbies Weekly* No. 2925, Vol. 113.

The first part of the model to be placed in the bulb was of course the platform on which the model rests. This was made of balsa wood sheet cut to the shape of the bulb.

To get it into the bulb, it was cut into strips less than the width of the opening in the bulb which in this case was 1½ ins. A sheet of tissue paper was then glued behind these strips after lining them up. This acted as a hinge when the strips were rolled up to place them in the bulb.

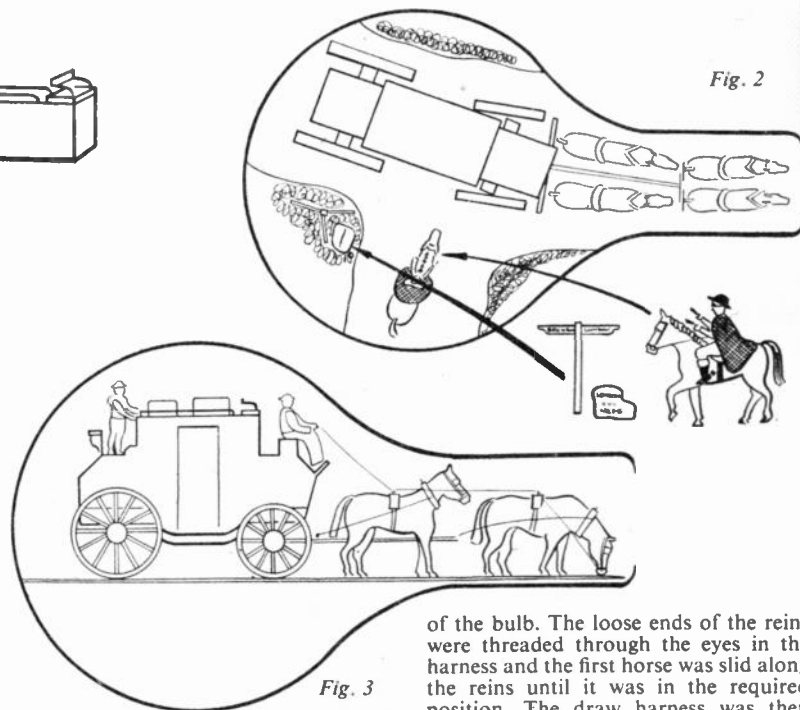


Fig. 3

accomplished this task, I turned to building the coach.

The coach was built from eight separate parts with three figures added. The rear wheels, the chassis, the front wheels were all individual units and the body was made from four pieces (Fig. 1.)

The first units to go into the bulb were the rear wheels, followed by the chassis to which the wheels were fixed. Then followed the front-wheel unit and this was fixed to the chassis too; the lower half of the coach body was next and the chassis was glued into position on this. Then came the top half of the body and when this was fixed the two sides were inserted (folded in half), and glued in position.

of the bulb. The loose ends of the reins were threaded through the eyes in the harness and the first horse was slid along the reins until it was in the required position. The draw harness was then fixed to the chassis. One pair of reins was fixed in position on this first horse with the other pair leading through to the leading horse. Each horse was fixed in position in this manner and then all the loose ends of reins were cut off.

The model was then complete (Fig. 3) and the brass cap was glued back on over the neck and the whole model was mounted on a suitable stand.

The fixing or moving of all the various parts in the bulb was accomplished with the aid of a pair of long surgical forceps and various pieces of wire hooked and bent to individual designs and requirements.

● Continued on page 396

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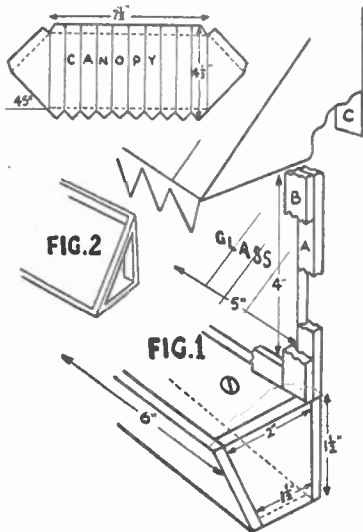
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A Gay Setting for Dwarf Cacti

YOU bought your cactus plants because they were so attractive. Why not make this fascinating holder in the shape of a miniature window with box to hang on a wall in the home? You should complete it in an evening,



and, except for buying a small piece of glass, you will probably find the rest of the materials hanging around in the workshop.

First, cut a base-board measuring 9ins. square, from $\frac{1}{4}$ in. plywood. Buy a piece of pebble or cathedral glass, measuring 5ins. by 4ins. Lay the piece of glass centrally on the base-board and with a pencil, mark around its outline.

From 3 ply wood, cut $\frac{1}{4}$ in. wide strips and with small, headless tacks, nail the strips around the pencil marks so that the glass fits inside the rectangle (see (A) in Fig. 1).

To hold glass in position, cut $\frac{1}{4}$ in. wide strips of 3 ply wood (see (B)). Nail these strips over (A) keeping the outside edges flush with one another.

Make the window box of 3 ply wood, of a size and shape as shown. The front and sides are glued together but before fixing the front, screw the back piece of the box to under the window frame with two small countersunk head screws. This also prevents the glass from sliding out.

The three little diamond shapes on the front of the box are simply small squares of 3 ply wood glued on.

Before assembling the window and frame, cut from a magazine a suitably sized picture of a woman, children, a bird in cage, bowl of flowers, a dog or a cat (as shown) and place behind the glass. This gives the fitting the finished three-dimensional touch.

Finally, divide the window into two halves by gluing into position a strip of 3 ply wood, $\frac{1}{4}$ in. wide.

The gay canopy can be made in various ways. The easiest method is from good quality cardboard. Cut to the shape as illustrated, score across the dotted lines and bend all lines inward. Paint gay stripes across or stick on lengths of coloured paper instead.

Even better, if father is handy with the metal shears he can cut out the shape from sheet tin. In this case, the return lugs (C) will have to be drilled to take screws to affix the canopy to the base-board.

Mother may like to make a real canopy from cloth. In this case, make up a similar cardboard shape but cut away the bulk of the cardboard leaving only the leading supports, as shown in Fig. 2. The cloth canopy is then simply draped over the frame and held in position here and there with a spot of glue. Father may like to improve it even further, by making a simple wire frame, held through holes drilled in the baseboard.

Paint the finished job in gay colours. A life-like treatment of the base-board is to make up a mixture of sawdust and



By
E. Capper

cream flat paint. When applied and dry, the result looks almost like a real rough-cast wall.

One point to watch. The sizes given for the window box should be suitable for most standard dwarf pots now on the market. However, you may have larger or smaller pots than would suit the sizes given here. Measure your pot, top and bottom and make your window box to fit accordingly. Do not however, make it a tight fit.

If you do not care for cacti plants you can make an attractive alternative by filling the pots with sprigs of everlasting flowers and keeping them firm in the pots, by filling with a wet mixture of plaster of Paris.

● **Continued from page 394**

Stage Coach in Bulb

All the painting was carried out before the parts were assembled and any touching up was done with a brush bent so as to get round the bends into the bulb.

Any model can be built this way and among those I have 'bulbed' in the past are the Hobbies Designs 'Comet' Airliner, 13th-century Warship, 'Elizabeth Bonaventure' Galleon and the 'Bounty' all scaled down to the required size. There is no limit to the size of the models, the smallest I have done being less than $\frac{1}{4}$ in. long in a bulb normally used for lighting on model railway coaches. I have also built a merry-go-

round, driven by an electric motor with flashing light all compact within the bulb.

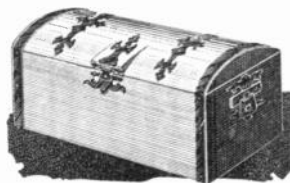
The stagecoach took me some two weeks, working roughly three hours per night, to build the parts, and a full day from 10 a.m. to 6 p.m. to assemble them in the bulb. To fill up space in the bulb and also to make the model a little more realistic, I included with my model a highwayman, signpost and milestone. Inclusion of the highwayman meant my having to re-design the horses as I wanted them standing still, and to avoid regimentation I made the one with its head lowered.

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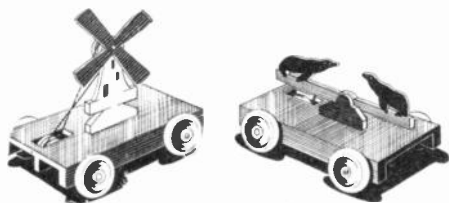
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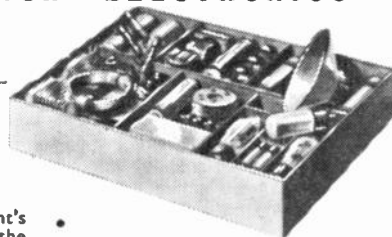
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Forecasting the Weather

FORECASTING the weather can be a most interesting occupation, and when done with a fair amount of accuracy, is of real assistance to a large number of people. We are all anxious to know if it will be fine for a picnic in the country, or whether we should take a mac when we go to work in the morning.

The gardener can plan his jobs accordingly when he knows what weather to expect, and, doubtless, many of your friends will welcome a reasonably accurate forecast.

By A. F. Taylor

The state of the atmosphere tells us much about the weather, and when we can register its pressure we are well on the way to accurate forecasting. A barometer will record atmospheric pressure, and tell us when it is going to rain or be fine, but it is an expensive instrument to buy.

Here is a very simple instrument which you can easily construct for next-to-nothing. It is very sensitive to atmospheric pressure and despite its simplicity it will be found to be extremely accurate.

In its simplest form our barometer consists of two bottles as shown in Fig. 1. The top one which is inverted with its neck inserted in the other bottle should have a long neck and a fairly large body. The bottom bottle is filled with water, preferably coloured, so that it can be seen more easily, which, with the fluctuations in atmospheric pressure, will rise and fall in the neck of the top bottle.

Simple yet efficient

By means of a scale behind the neck the variations can be recorded and the coming weather forecast. A rise generally indicates the approach of fine weather, while a corresponding fall usually warns of rain and storms.

A chemistry flask with a long neck is ideal for this type of barometer, but you may have difficulty in getting a suitable pattern, so we have designed the very simple yet efficient instrument depicted in Fig. 2.

The bottom container is a small ink bottle. The 1 oz. size should be large enough. Any other type of bottle can be used for this, but it should have a large opening into which a nice cork can be fitted.

We now need a piece of glass tube

6ins. to 8ins. long, of about $\frac{1}{4}$ in. diameter, and also a small bottle or phial. Choose a nice sound cork to fit the small bottle or phial, and drill a hole in the centre to fit the glass tube tightly.

A piece of brass tube with the end filed to a sharp edge will cut the cork. Use a twisting action with gentle pressure. If the hole is too small, it can be opened with a round file or piece of

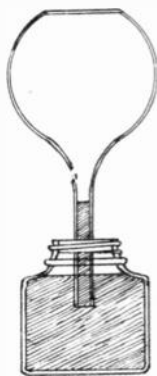


FIG. 1.

glasspaper wrapped round a rod. A chemist having a set of cork drills would do the job for you if you cannot manage it.

The joints between bottle, cork and tube must be air tight, so you must seal them with beeswax or tallow. Place a few small pieces round the cork, warm the blade of a knife or piece of flat metal to melt the wax, and make a perfect join.

The cork in the ink bottle need only be $\frac{1}{4}$ in. thick, and this also has a hole in the centre to take the glass tube. There are also a few small holes round the edge of this cork to allow the air to enter freely. The number and size is not important — say, about three holes $\frac{1}{4}$ in. diameter. (Fig. 3.)

Allow the glass tube to go right through this cork, so that it goes about half way into the bottle.

Fill the bottle to within about $\frac{1}{2}$ in. of the top with water coloured with a few drops of ink or other similar dye. The glass tube, with small empty bottle attached inverted and inserted through the corked top of the other bottle.

Do not use too large a bottle at the top or too fine a glass tube, as this will cause too great a movement of liquid in the tube: it may, in fact, sometimes be quite empty, or it can overflow into the top bottle.

To make the instrument usable we



FIG. 3



FIG. 2

need a certain amount of the liquid to flow up the tube — say, about half way. Hold the small bottle in the hand, the warmth of which will cause the air inside to expand, and you will see bubbles coming out of the tube into the large bottle.

Allow about half a dozen to come, and then remove the hand, and on cooling, the liquid will be drawn up into the tube. Give it a little time to settle down, and if not high enough, let a few more bubbles out.

The diagram shows a cross-section of a rain gauge. It consists of a vertical tube with a funnel-shaped collector at the top. Inside the tube, there is a scale marked from 0 to 10. The scale is labeled 'INCHES' at the top. The tube is shown partially filled with water, with the water level reaching approximately the 4-inch mark. The gauge is mounted on a base.

A barometer should be kept in an even temperature, otherwise it is apt to act as a thermometer.

It should not be difficult to make a case to house the instrument with a slot in the centre to show the tube and scale. Neatly made of hardwood and polished it is quite suitable to take its place in the hall.

Next week's double number

This is the last issue in Vol. 124 and next Wednesday we shall start Vol. 125 with a special double feature number to celebrate the beginning of our 63rd year of publication. With this birthday number there will be a free design for a charming Toy Windmill which can be used as a central theme for a farm layout incorporating model toys and figures — a grand idea as a gift for a youngster. There will also be special articles on regular features in this enlarged edition — price 9d. for that week only.

Stag's Head Overlay



FOR USE ON A VARIETY OF PROJECTS

THE stag's head is a popular request for decorative overlays. It can be used on a wide variety of subjects and may be cut from wood, metal or plastic.

Trace the shape and transfer to the material by means of carbon paper. Drill the interior frets and cut out these first. The saw must of course be threaded through each time.

Finally cut round the outline, taking particular care with the antlers if using wood. Hobbies metal-cutting saws are ideal for use on aluminium, copper or brass, whilst an ordinary saw will cut perspex and most plastics.

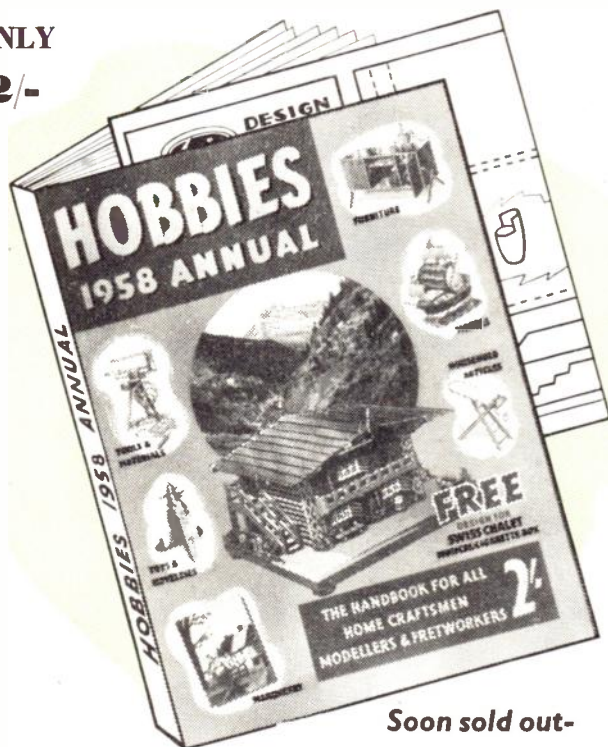
Remember when cutting perspex that a little oil along the cutting line will prevent the cut closing up behind the saw. (M.p.)



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