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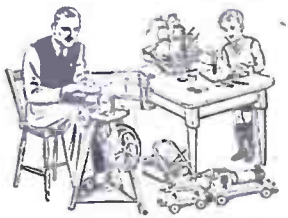

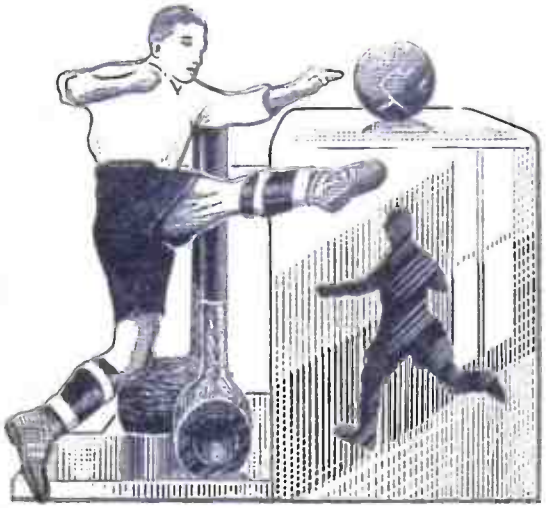

★ Made from this week's ★

FREE DESIGN

A FOOTBALLER PIPE STAND

ATTRACTIVE SERVICEABLE AND EASILY MADE

AMONG the thousands of readers of *Hobbies Weekly*, there must be many who are also keen followers of football. To them this pipe stand will have a special appeal because the footballer silhouette can be painted in club colours. It will also make an ideal present for a pipe-smoking friend. For those who have no interest in pipe smoking, we suggest that the holes for the pipes can be omitted and a long slot cut which can be used for holding letters and circulars.

No Difficult Joints

There are no difficult joints to make, the construction being quite straightforward, and the whole thing can be cut out with a fretsaw. The parts are numbered in order of assembly and all you have to do is follow the instructions carefully and glue together as you go along.

The box and large figure are cut from ¼in. wood, and the small overlays from ⅛in. Transfer the patterns to the wood by using carbon paper, or by pricking the rectangular pieces through with a pin, and cut out with a medium grade fretsaw. The large figure (No. 8) and the smaller overlays (Nos. 9 and 10) should be cut with a fine grade saw. Remember to drill the interior cuts with a fretwork drill and cut these first.

Assembly

Having cleaned up the edges with glasspaper, you can commence assembly. Piece 1 is the base and the sides are glued and pinned to this as shown by the dotted lines. The sides will also be glued together and strengthened with pins if necessary. Note that the sides (3 and 4) differ in that part 3 has two mortises cut as shown.

Piece 5, which has holes cut for the

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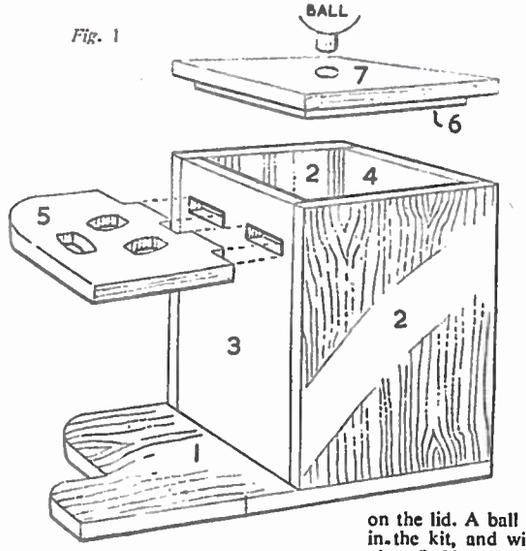
Fig. 1



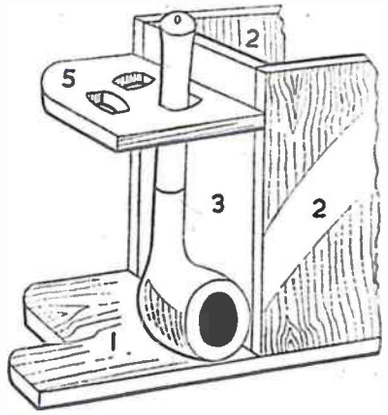


Fig. 2

pipe stems, is now glued into position in the mortises, as indicated in Fig. 1. Fig. 2 shows the same piece glued flush up against the side (3) in its correct position.

Making the Lid

The lid is made from two pieces of ¼in. wood, which are glued together so that the top (piece 7) overlaps all round ¼in. This is shown in the section in the bottom right-hand corner of the design sheet. Piece 6 should fit snugly into the top of the box. The large figure (8) is glued to the front of the box, and to pieces 1 and 5 in the positions shown in the illustration and by the dotted line on the front (2). Dotted lines also indicate the positions of the two smaller overlays.

The box should be stained lightly with spirit stain and given two coats of varnish. The first coat should be lightly rubbed over with glasspaper before the second coat is applied. Note that it is better to rub in with a cloth rather than to brush on the stain. This applies particularly to end grain where the stain will soak in and be much darker than the surrounding pieces, if it is applied with a brush.

The Figures

As far as the figures are concerned, they can either be left as plain silhouettes and painted black, or they can actually be painted up in life-like colours. Those who follow the career of any particular club, might like to paint the large footballer so that he represents a player of that club.

It only remains now to fit the football on the lid. A ball ornament is supplied in the kit, and will fit the hole cut in piece 7. You may have to cut a small piece off the projection on the ball if this is too long. Paint the ball brown and when dry, mark it to represent a football. The markings can be made with an ordinary lead pencil. When perfectly dry, glue in the hole provided.

KIT No. 2976

A complete kit for making this pipe stand, including all necessary wood, and turned ball, can be obtained from any Hobbies Branch, or post free from Hobbies Ltd., Dereham, Norfolk, price 7/6, including tax.

Lining the Box

If you intend to keep tobacco in the wooden box, we suggest that it be lined with tinfoil glued in place. This will prevent the natural aroma of the wood from scenting the tobacco, and it will also serve to keep the tobacco moist.

Don't forget to include an ounce of your friend's favourite tobacco if you are making this as a present.

JOBS ABOUT THE HOUSE

Staining Floors

THE author is often asked the best preparation for permanently staining wooden floor surrounds. People complain that many proprietory brands are too shiny, or take too long to dry. Now I consider the best material, and strangely enough by far the most economical, is Vandyke Crystals. These can be bought very cheaply at any hardware store—half-a-pound costs only coppers and is adequate for more than one room.

Place your crystals into an old bucket, and pour on to them half-a-gallon of boiling water. The density of the stain can be tested by trying it on a piece of wood. If you find it too dark, then more water needs to be added to lighten it; if it is found to be too light, then two coats should prove satisfactory. Make sure your floor boards are quite clean; rub down rough patches with glasspaper (particularly if the floor boards are new) and then apply your stain. The best method of application is with an old piece of rag. This enables you to apply it much more evenly than with a brush. You can, however, use a brush, but more care is needed to avoid patchiness. If you use a rag you need not be worried about it staining your hands as it will wash off quite easily with water, but on wood it impregnates right in. Remember, though, start staining your floor at a point furthest from the door to enable you to get out of the room without stepping on the wet stain.

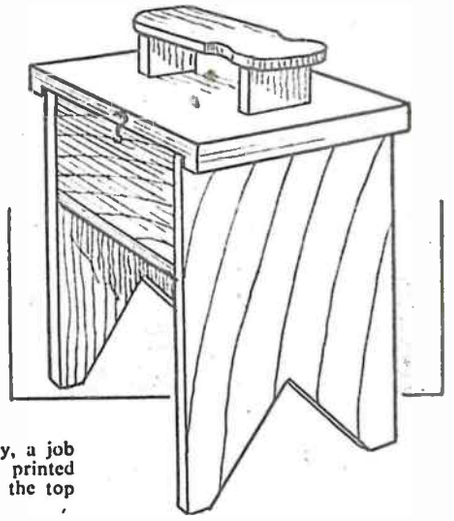
Polishing

The stain will be quite dry in an hour or so, particularly on a fine day, when it will be ready to polish. A good wax polish rubbed in liberally will give a good foundation, when only occasional polishing will be necessary to maintain a gleaming floor.

This same stain is excellent for furniture or any woodwork, as you can French polish or varnish over it. (J.T.)

HANDYMAN'S PROJECT

A Box for Shoe Polish and Brushes



THIS useful piece of scullery furniture provides a receptacle for shoe brushes and polish, keeping the black and brown kinds separate, to prevent the unfortunate error (occasionally happening), of cleaning a brown pair of shoes with the brush reserved for the black ones, with annoying results. It also embodies a stand for resting the feet on while shoe polishing, sparing the seat of a chair from dirt and scratches when, unfortunately, used for that purpose. Most housewives will welcome it.

Deal, ¼in. thick, is suggested for making, or thereabouts, but almost any thickness could be used as long as the box is strong enough to stand the weight placed on it. A view of the box,

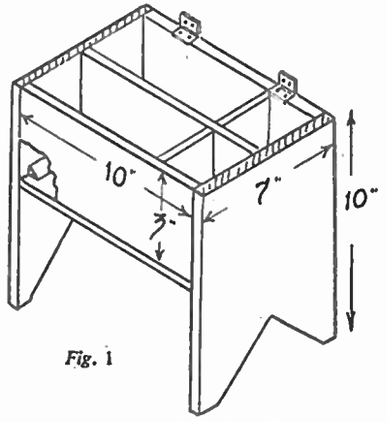


Fig. 1

minus lid, is given in Fig. 1, with suggested dimensions. Cut the ends to shape, and saw out an angular piece from each from the bottom, say, 4ins. wide, and tapering to the tip 4ins. also. This helps the box to stand more steady if the scullery floor is a trifle uneven in parts.

Cut the two sides, and nail the ends to them to form the carcase. Nail strongly with oval nails, and punch the heads down a trifle. Cut the bottom of the box, which can well be of plywood, and nail to the lower edges of the sides, or screws could be employed here if the plywood is of the thin variety; it makes a stronger joint.

Two division pieces are required, one cut to the interior length of the box, the other to the width. At 3ins. from one end of the lengthwise division cut a notch out to half the width of the wood. Cut a similar notch out of the cross piece, and join the two together, then press in the box and nail in place through the ends and sides. A few nails can also be driven in them through the plywood bottom. These compartments hold the brushes and polishes, of course, and it would be a good idea to print the words 'BLACK' and 'BROWN' on each respectively, a job easily done if the words are printed neatly on paper and glued to the top edges of the division pieces.

The Lid

Cut the lid to the outside width of the box, and 2ins. longer than the outside length. To the overhanging ends screw ¼in. wide battens underneath, as shown in Fig. 2, to prevent warping. The lid can now be hinged to the box with 1½ins. iron butt hinges, the hinges being completely recessed in the edges of the box. Now remove the lid for fitting the footboard to it.

To support this, cut a pair of uprights to the shape shown at (A) in Fig. 2. Allow a little extra for the tenons, which can be 1in. wide. Along a centre line, drawn lengthwise down the lid of the box, cut out two mortises to suit these tenons, about 6ins. apart. Make these a tight fit for the tenons, and glue parts (A) in position. When the glue is set hard, drive in, from underneath the lid, nails each side of the tenons into parts (A) to hold them firmly in place, as a specially strong fixing is necessary here, the footboard being often used for lifting the box about.

The footboard, Fig. 3, is cut from

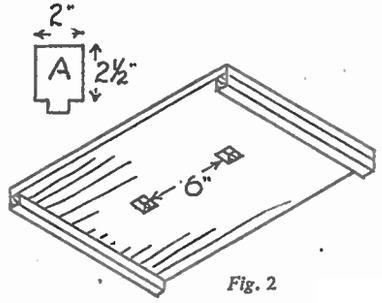


Fig. 2

stout wood; it has to stand weight and flimsy stuff will only break or splinter. Cut it to the dimensions given, round off at heel and toe, and saw out at the instep to narrow it at that particular part. Unless this is efficiently done it will be found difficult to clean shoes where the instep comes. Don't, of course, overdo it, or the footboard may be weakened too much.

Now screw the footboard to parts (A) with well countersunk screws, leaving no

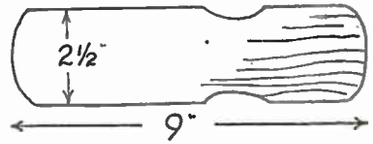
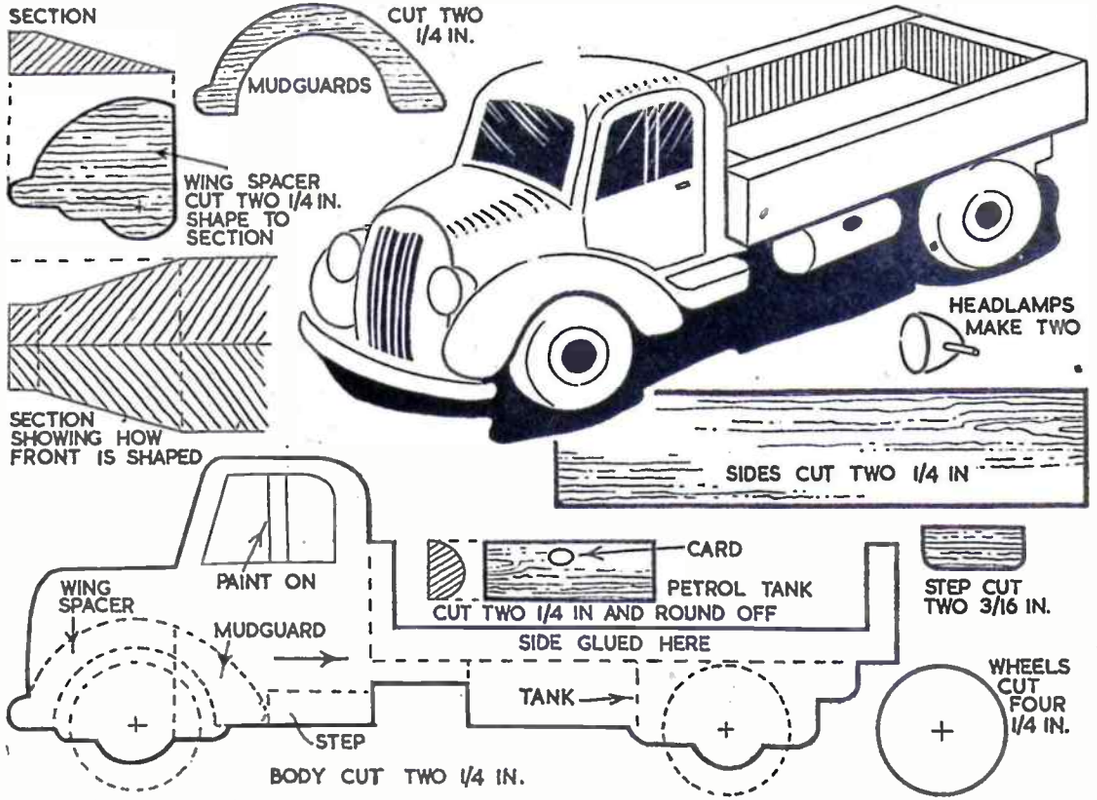


Fig. 3

projecting heads to scratch the soles of the shoes. Rescrew the lid to the box, and fix a hook and eye fastener for security. Though not absolutely necessary, it may be as well to glue inside the box pieces of triangular fillets at each end to prevent dust dropping through where the plywood bottom contacts the ends of the box, but is not nailed thereto. Fig. 1 shows this, a portion of one side being cut away in Fig. 1 to reveal part of the fillets mentioned.

It is not usual to varnish or paint such articles of scullery furniture as this, but it must be admitted that if so finished, they soil less quickly, and certainly look much better, so if a little paint is handy it might well be employed for the purpose. (W.J.E.)

A Miniature Toy Lorry



IN previous issues we have given a wide range of miniature vehicles which are all to the same scale. To continue the series we now start on a range of larger vehicles, including lorries, trucks and other types of transport, but still, of course, to the same scale.

We have tried to keep shaping to a minimum, but we cannot avoid a certain amount, and, since the toy is small, you will find that the shaping necessary, on the wings and bonnet, can be done with a sharp penknife.

Trace the body piece and transfer to a piece of ¼in. wood. Note that two such pieces are required. Remember that the grain runs lengthwise. This will facilitate the shaping of the bonnet. Cut out with a 'fretsaw and glue the two pieces together. Go round with a file and glasspaper and clean up until the two pieces appear as one.

You will see from the section that the front portion representing the bonnet has to be shaped. Indicate the lines of the section with a pencil and then pare away the waste wood with a penknife.

In order to bring the mudguards parallel with the sides you must insert the two spacing pieces. Each wing spacer is shaped to a feather edge as shown by the section. These two pieces go on either side of the bonnet and are shaped on opposite sides. When these have been glued in place the mudguards can be fitted over them.

The rounded projections at the front of the wing spacers, mudguard and body, represent the front bumper bar. When cleaned up these will appear as one.

The sides are cut from ¼in. wood to the actual size shown. One corner is broken away to make room for the picture of the finished thing, but all you need do for size is to connect up the lines to complete the rectangle.

Two small steps are next cut from ⅛in. wood and glued to the cab. The petrol tanks are shaped up from waste ¼in. wood and glued in front of the rear wheels.

Headlamps are shaped from waste wood and fixed by means of fretpins with the heads cut off. The small illustration shows how this is done.

Cut the wheels from ¼in. wood and round off. They could alternatively be cut from ¼in. round rod in ¼in. lengths. Bore the holes in the centre before starting to shape.

Give the whole thing one flat coat of priming paint and then paint the colours in bright enamel. The windscreen and windows will be black and the tyres grey. When the paint is dry the wheels can be fixed by means of ⅛in. round-head screws. (M)

A 'QUICK CHANGE' PUPPET

BELIEVED to have originated in Germany, novelty puppets of the type illustrated in this article have been widely exhibited in America for some time. The idea of this 'quick-change' puppetry is that the puppet which first appears on the stage is rapidly transformed into something entirely different, to the surprise and delight of your audience.

In the model illustrated, the audience

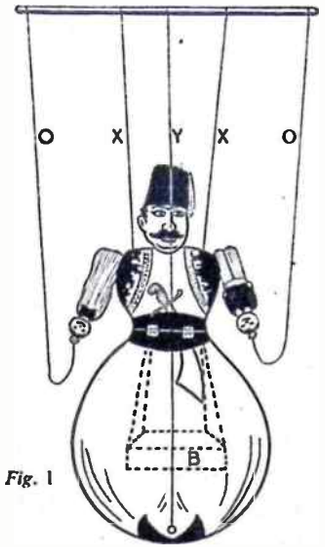


Fig. 1

first sees a Turkoman in native garb. In a flash this becomes a balloon on the ground with two figures standing by. These figures hop into the car of the balloon, which then rises into the air and off the stage.

The figure of the Turk is shown at Fig. 1. With the exception of the two arms, this is made entirely in one piece, from ¼in. plywood. The size of the figure will depend on the theatre that you are using, but if you have made marionettes as described in my previous articles, it is recommended that your Turk is of the same height, i.e. 14ins.

You will see that the outline of the Turk is an easy one to copy. After marking this outline on your sheet of plywood, cut it out in one piece with a fretsaw, and then saw it across the waist to divide it into two sections. These two parts are then to be carefully re-joined with two small hinges as shown.

With the hinges in position you should be able to close the two sections together so that the lower half completely hides the top.

Two tiny staples, which can easily be made from straight pins with the heads clipped off, are tapped into the model, midway between the head and each shoulder. These are the points to which the strings marked (X) will be attached later. The (Y) string can be fastened at the base of the model in a similar manner or a small hole may be drilled for this purpose.

As will be seen from the illustrations, the Turk's arms later become the two figures which hop into the car of the balloon, so they are attached in such a way that they can be released by lifting the strings (O). This effect is easily achieved. A panel pin is tapped into each shoulder so that it projects at a slight upward angle. Each 'arm' has two of the tiny staples fastened into its base, and these are hooked on to the panel pins. Should the heads of the panel pins be so large as to offer resistance when you slide the staples off, they should be filed down a little. A third staple is positioned on top of the head of each of the little figures. To these are attached the control strings (O).

The arms themselves may be made from plywood from the original sheet, so there is little wastage. They should be roughly fashioned as shown, and it is not necessary to attempt to disguise them. Indeed, it is a good idea to paint the two sides of each figure alike, so that a front view is presented to the audience no matter which side faces them.

The features and clothing of the Turk may be painted, but a better method is to cut out strips of gaily coloured material and fasten these in place separately to represent the costume. By adopting this method the sash can be made to hide the hinges. In any case a real tassel should be added to the 'fez'.

(B) in Fig. 1 represents the position of the car of the balloon. In the first part of the presentation this is hidden behind the puppet. It can be made from any material which is available, the only consideration being that it must be strong enough and deep enough to support the balloon's passengers. The car is suspended by four strings which are attached to the top section of the puppet at the waist.

The rear of the lower half is coloured a silver/grey with darker seams to represent the envelope of the balloon.

It only remains to connect the five strings to the control bar, which is one straight length of ¼in. dowel. The connecting positions are clearly shown in Fig. 1. Remembering that the ideal height for the control is breast-high to the operator, fasten the two (X) strings first. These should support the weight of the whole model in an upright position while it is standing on the ground or the stage.

The (Y) string should have no slack but must not take any weight until it is desired to lift the balloon envelope into position.

The two (O) strings are of such a length as will allow the 'arms' to reach to the same level as the car, when they are detached.

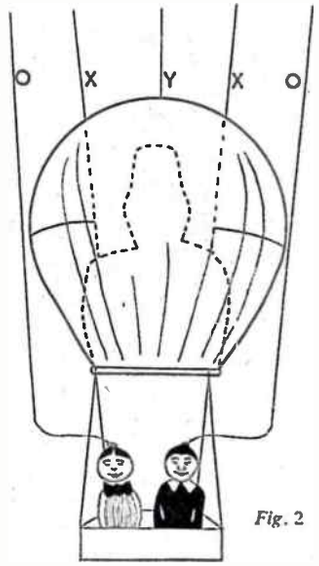


Fig. 2

Manipulation will present no difficulties, and with a little practice you will be able to effect the transformation very quickly. With the control bar held in the right hand the Turk is brought on stage. The free hand then lifts the (Y) string and the slack is held between the right thumb and forefinger. One after the other the small figures are detached and lowered, and later made to hop into the car. The whole is then lifted from the stage.

This particular puppet can be used as a compere for your puppet show, appearing between the other 'turns'. The important aspect of this article, however, is the IDEA. From it a large variety of novel effects can be worked out with a little ingenuity. (C.R.C.)

A Compass 'Plane & 'Remote Control'

By R. C. F. Bartley

ANOTHER compass model design is shown in Fig. 7. This is a miniature of the 'Brabazon', and operates in a similar manner to the ship. The wings tend to make this model very sensitive to the slightest vibration and it will oscillate for a considerable time before coming to rest pointing North.

When used with the 'Remote Control' to be described, it will readily spin out of control, and the effort required to regain this will cause much amusement. After a little practice it will be found that the model may be controlled quite easily and steered to any point of the compass.

Construction

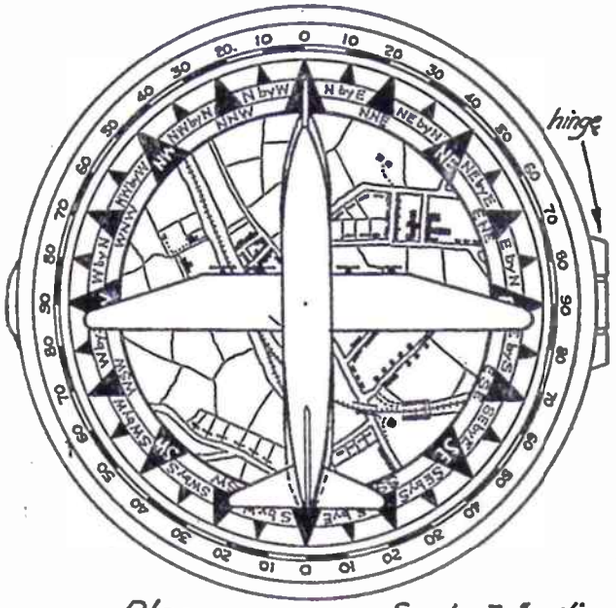
The method of construction is similar to the ship, except that the model is not cut into two pieces. The hole in the centre is made to take a snap fastener, and any space left by this inset is filled in with a little plastic wood or putty.

It will be necessary to balance the model in both directions, i.e. lengthways and across the wings. This is done by using small brass pins and inserting these where necessary, these, of course, being cut flush to the model. The case may be made from any suitable material at hand. If necessary it can easily be made of stout cardboard with a loose glass cover to fit as a lid.

Compass Card

The compass card for this design is glued to the base of the container. After the card has been marked out with all the compass points indicated, a portion of an ordnance map is cut to a circular shape and glued on top of the compass card. As before, the model is not clipped to the spindle but just placed in position, thus allowing other designs to be fitted if required.

Fig. 7. The "Compass Plane."



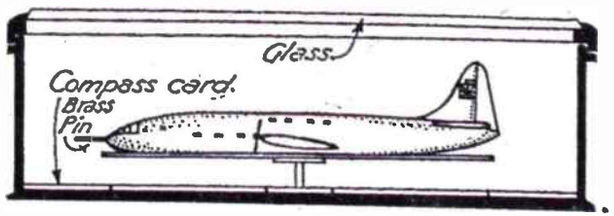


Fig. 8

Fig. 9.

Figs. 8 and 9 show two further designs for these models arranged in glass containers. Various little glass jars can be cut down, using a glass cutter to form the ring cylinder, and then a circular piece of glass cut to size may be cemented on top. A square container made of 'Perspex' could, alternatively, be used, and the compass card arranged inside accordingly.

The models in these designs will be clipped to the spindle unless provision is made for a removable cover. To make the ship novelty more interesting, the glass should be painted on the inside to represent small waves. The inside of the base will also be painted green.

For the 'Brabazon' small clouds may be painted on the lower half of the glass cylinder.

The base for these containers can be made either of wood or cardboard and painted in coloured enamels. Fig. 6 showed how the case is constructed and also a simple method of clipping the model to the spindle.

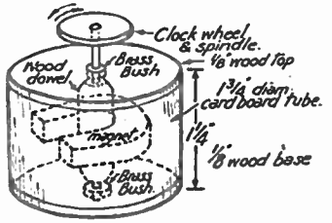
If it is desired, a 'Remote Control' unit can be used with the magnetic models described. This 'control', which is simply a small magnet centred on a spindle, is quite easy to make. The 'Eclipse' horseshoe type of magnet has been found suitable for this purpose and details are given in Fig. 10.

To Use the Control

Place the magnetic model on the table and bring the control to a distance of between 6ins. and 1ft. from the model. This distance will depend upon the strength of the magnetic field. By turning the small wheel of the control slowly, using the thumb and finger, the model will commence to swing clockwise or anti-clockwise. To stop the model, reverse the wheel action. The model will stop and then immediately swing the other way.

As soon as this happens reverse the wheel again slightly; it should now be possible to control the model and steer it to the right or left into any compass direction. With practice, the operator can swing the model in any direction with rapidity. Of course, should the operator become excited the model will generally get out of control, as the normal reaction is to twist the wheel backward and forward in an attempt to regain control.

Fig. 10 Remote Control Unit.



Another Novelty

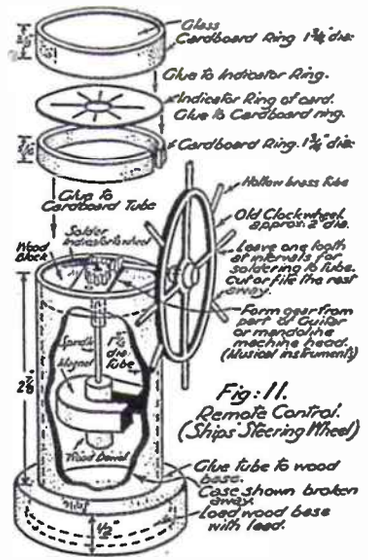
Another novel control is one made in the form of a ship's steering wheel which is geared to a small magnet. The wheel, being geared, will swing the model slowly either to port or starboard and appear to control it in the same way as the steering wheel of a ship. Fig. 11 shows how this may be constructed, and, except for the magnet, the cost is practically negligible.

The body of the unit was made from 1¾ins. diameter cardboard tubing glued to a wooden base which was hollowed out so that a piece of lead could be inserted to load and keep the unit steady when operating the steering wheel with the finger.

Horseshoe Magnet

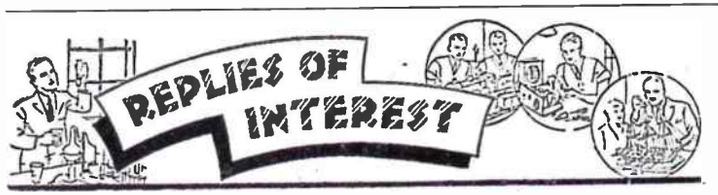
An 'eclipse' horseshoe type magnet was used and this was centred up on a wooden dowel. One end of a steel spindle was then driven into the dowel. Next, a circular wooden block was made to fit inside the top of the tube. After drilling a hole to take the shank of the gear the block was glued in position.

The gear was made from part of an old machine head of a musical instrument—the guitar. These can be found in music shops where many old and broken parts of such instruments may be obtained. Cut off one gear and remove the peg, then drill two holes in the metal plate. Screw the gear to the wooden block. Now force the other end of the steel spindle into the hollow shank of the gear.



Steering Wheel

For the steering wheel a part of an old clock can be used. Solder this to the spindle containing the worm wheel. Complete as shown in the diagram Fig. 11. (R.C.F.B.)



Refrigerator Problem

I AM making a refrigerator on the 'evaporation method', and would like your advice of an aerated compound which I can pack round, but I want it so that when I fill the top cavity with water, this does not go soft and fall away from the cabinet when the liquid seeps through to the bottom. (P.M.—Islington).

WE consider the most satisfactory substance for your food safe would be porous tiling, but are unable to supply an address, though a pottery would be the most likely place. Failing this, cork might serve as it is a non-conductor of heat, and would not be unduly affected by water. A few brass screws would fix it in position, and we consider would be more efficient than cement which might hamper the evaporation necessary for lowering the temperature.

* * *

'Smeared' Furniture

THE two wardrobes of my bedroom suite always have a smear on them, not unlike 'bloom'. I have tried vinegar and water on them but failed to remove the smears. What mixture could I try to make a nice clear polished surface? (R.T.—Bromley).

THE 'bloom' on furniture is generally considered due to the presence of moisture in the shellac used in the polish. It may also be caused by polishing in a cold room. As the application of vinegar fails to remove this, the fault may well lie with the shellac, or other resins used in manufacture. A recommended remedy for this is to wipe the furniture well with a clean fluffless rag, and then apply a coat of paper copal varnish.

* * *

Wringer Rollers

PLEASE tell me how best to repair wooden rollers of a wringer that have become warped and peeling off. I have tried putting plastic wood on them, but find that the stuff comes right off again, and although it has dried hard will not cling to the rollers. (R.J.N.—Epsom).

NO stopping will be of use for wood rollers in such condition as you mention, the vibration and pressure will force it away. The best repair would be to have the rollers re-turned to remove the rotted broken fibres and to cover with sheet rubber. The only alternative we can suggest is to wrap strips of calico round the worn portions of the rollers until level, and then cover entirely with a double layer of the same material, the full width of the rollers. This makes a good temporary repair, but, of course, not a lasting one.

Learn to Understand Radio Symbols

BEGINNERS who have become interested in radio construction occasionally appear to experience difficulty in understanding the various symbols used in circuits. However, these symbols are not difficult, and are comparatively few in number. Once they have been fully understood they are almost self-explanatory, and no further trouble in reading them should arise. Such symbols are, in a simplified form, a schematic representation of the actual function the component performs. Reference to Fig. 1, and the following explanations, should make this quite clear.

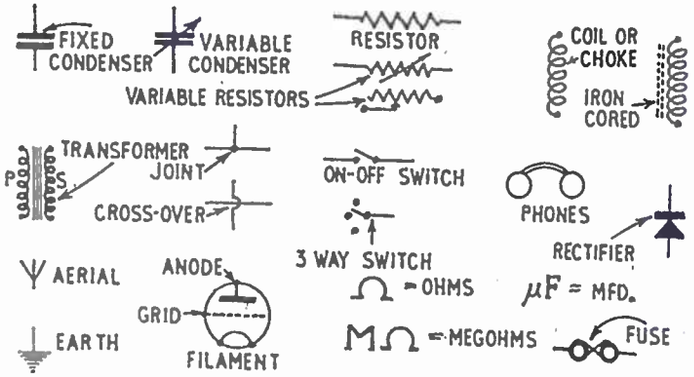


Fig. 1—Various radio symbols

Condensers

These are fixed and variable, the latter being used for tuning, reaction, and similar functions. Fixed condensers may be in cardboard or bakelite cases, with the capacity marked on. Small condensers of up to about ·1 mfd. usually have wire-ends or tags, though terminals are occasionally provided. Such condensers may be connected either way in the circuit (e.g., there is no polarity). They are often referred to as paper or mica condensers, this indicating the type of insulation between the plates. The symbol represents two metal plates separated by an insulator—this is what a condenser actually is. The metal plates are usually of foil, rolled or folded to reduce dimensions.

Arrows

An arrow through a symbol always indicates that the component is variable. Variable condensers are, therefore, indicated as shown. Tuning condensers normally have strong plates with an air space between them; smaller condensers and reaction condensers have thinner plates, separated by sheets of mica or a similar insulator. Such condensers are referred to as 'solid dielectric' condensers. The tuning type is known as an 'air-spaced' or 'air dielectric' condenser. As the air dielectric condenser has better insulating properties, it is always used for tuning unless space is important. If space is limited, the solid dielectric type can be used with almost equal efficiency.

Pre-set variable condensers have a dotted arrow. They are adjusted with a screwdriver, then left.

Resistors

Though the symbol may be assumed to represent a length of resistance wire, the resistors in receivers are usually made from carbon. An arrow indicates that the resistor is variable. Variable resistors in which a slider (arrow) is shown as moving along the element are known as potentiometers. The resistance value is normally marked in Ohms, the symbol being as in Fig. 1. Resistances of high value are marked in Megohms, a Megohm being 1,000,000 Ohms. In ex-Service and other diagrams 'K' will sometimes be seen; this means 'thousands of Ohms'; e.g.—5K is 5,000 Ohms.

Coils and Chokes

These consist of coiled wire, and the symbol is easily remembered. When a choke is particularly indicated, it is usually marked: e.g.—H.F.C. (High Frequency Choke). Two or more windings may be found on a single tuning coil.

Coils and H.F. Chokes with dust-iron cores have dotted lines to represent the core. If the core is solid, as in a Low Frequency Choke (L.F. Choke), the lines are not dotted, but continuous. In large circuits coils, etc., may be marked L1, L2, L3, and so on. 'L' is the term for an 'inductance' or coil of wire in any form.

Transformers

These consist of coils of wire upon an iron core, as the symbol suggests. 'P' and 'S' indicate Primary and Secondary. Such a transformer may be used between the valves in a set, or for coupling the speaker to the output valve. Mains transformers are similarly shown. With the latter, there may be two or more secondary windings, each providing a different output voltage. The ratio of the transformer, or other characteristics, is normally given in the diagram, or in explanatory notes.

Wiring

Joints are shown by a dot. When wires in a diagram cross but do not join, this is normally shown as illustrated. In some ex-service diagrams, however, no 'bridge' or loop is shown, the wires merely crossing, but with no dot.

Switches, too, are almost self-explanatory. When switches have several contacts, each contact is shown as a dot. The selector arm, or contact, is shown as a short line, as illustrated.

Phones and Speakers

The headphone symbol will be readily remembered. If it is desirable that the phones be connected in a definite polarity, positive and negative symbols are added. The positive lead of the phones will be marked by a red covering or thread to the wire.

Loudspeakers are usually shown by the letter 'S' at the points to which the speaker should be connected. In some diagrams phones will be indicated by the letters 'Ph' or 'P'.

Rectifiers

A crystal detector is also a rectifier, and is indicated by the same symbol. Rectifiers may be of many types—low-voltage ones for charging, high-voltage ones for high tension circuits, and so on. The particular characteristics will normally be indicated. For example, a 250 V 30 mA rating indicates that the rectifier should be able to work at 250 Volts, and pass 30 milliamps current.

Other Symbols

Those for Aerial and Earth represent a pick-up wire or antennae, and a connection taken to Earth. The latter is usually a buried metal spike or similar object. In very complicated circuits many small earth symbols may be found; these are all points to be joined to earthed wiring in the set at the most convenient place.

The symbols for Ohms and Megohms has been explained. The capacity of condensers may be shown in μF, MFD. or Microfarads—all are the same. Very small condensers may be marked in pF (Picafarads), especially if from ex-Service equipment. If so, 100 pF equals ·0001 MFD. A condenser marked 200 pF is, therefore, ·0002 MFD and so on.

The symbol for a fuse represents one or more thin wires between contacts or terminals.

Valve Symbols

The symbol for a triode valve is given, and this type is most often used in the simpler receivers. There are two filament connections, since a current is passed through the filament to heat it. The emitted electrons then pass through the grid to the anode.

Screen-grid valves are similarly shown, but with an extra grid between the first grid and the anode. Pentode valves will have yet another grid, known as the suppressor grid.

Receiver Circuit

A complete circuit for an efficient 1-valver is shown in Fig. 2. The signal picked up by the aerial passes down through one winding to earth. This induces a signal in the tuned winding, which is in parallel with the ·0005 tuning condenser. After detection and amplification part of the signal is fed back through the reaction winding; the amount of feed-back depends upon the reaction condenser (·0003 MFD). The audible part of the signal passes through the H.F. Choke, and operates the phones. A H.T. battery of 30 to 60 V can be used, and a 2 volt accumulator. The valve is a triode such as the HL2.

When wiring the valveholder, note that the connections do not come in the same position as in the theoretical symbol of the valve. Instead, anode and grid go to opposite terminals. The other two terminals, marked 'F', provide for the Filament connections.

Finally, it is recommended that the constructor examine the circuit diagrams which have appeared from time to time, comparing the theoretical circuit with the wiring plan. If this is done it will soon be found that most circuits can be followed with ease. (F.G.R.)

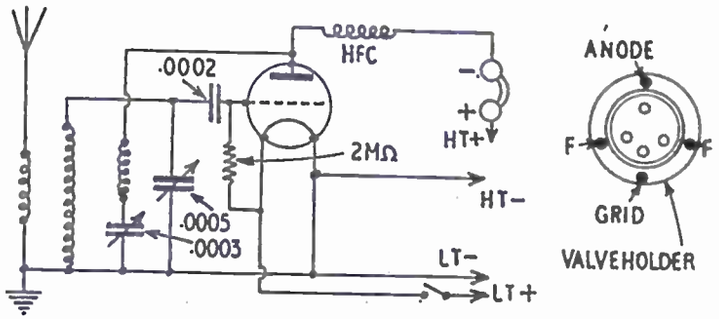


Fig. 2—A one-valver circuit

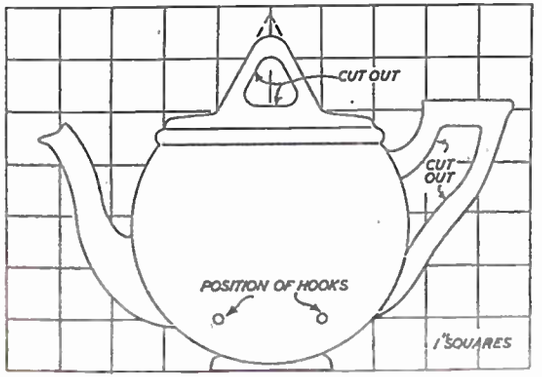
HANGER FOR DISH CLOTHS

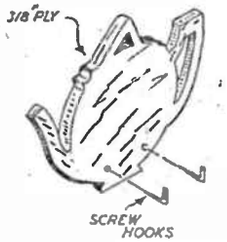
A Kitchen Fitment

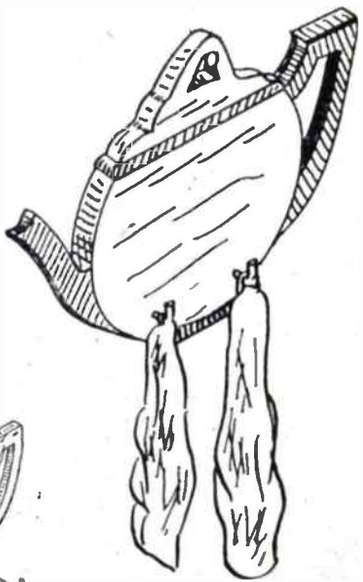
THIS simple fretworking project will take only an hour or so to complete, and yet will look most attractive hanging on the kitchen wall near the stove. Pan cloths, fastened to the metal hooks at the base of the 'teapot', will then always be kept in place ready for use.

The pattern is laid out on a piece of ¼in. ply, 10ins. by 7ins. Divide this panel up into 1in. squares and then transfer the required outlines by reference to the squared plan. Note particularly the two cut-out portions which are fretted out first before cutting the outline. Glasspaper down all rough edges before painting to finish.

The fitment should be finished in bright contrasting colours for the most pleasing effect. Choose a light colour for the main body of the pot and the top of the lid and a darker colour for the spout, handle and rim. Use gloss enamels or lacquers. The two screw hooks are added when all the paint-work is dry. (R.H.W.)







Winter Chub Give Good Sport

THE chub is one of the best winter fishes for sport. When the tips of the overhanging boughs, black and bare, dip into the flood with every gust of wind, the float-fisher regards this particular member of the carp family with respect and admiration. One well-known authority on angling claims that the chub is 'the most satisfactory quarry of the winter anglers' —and that is saying a lot. Yet there is much that is true in this assertion, as anyone will admit who has had the fun of a tussle with a big winter chub on fine tackle.

The winter season for chub-fishing starts in November and carries on to the end of February. If you glance at a list of specimen chub caught on rod and line you will see that the majority were taken between autumn and spring. Therefore, the aspirant to chub honours looks to the winter season for the chance to land a real rod-bender.

Appearance and Size

In colour, the chub is dark greenish-blue on the back, and bright and silvery with glints of brassy reflections on the sides. The ventral and anal fins are of a deep crimson, the dorsal fin and tail are dark grey, ruddy at the base. The anal fin of the chub is rounded or convex on the edge, which helps to identify small chub from dace.

Chub attain a large size. Whilst the average is between 1lb. and 3lbs., it is not uncommon to record specimens of 5lbs. to 6lbs. The record rod-caught chub for English waters is a fish of 8lbs. 4ozs. caught in the river Avon at Christchurch in 1913. The Thames has provided chub up to 7lbs. 6ozs.

Rivers that hold *big* chub include the Hampshire Avon, the Royalty Fishery in particular producing each season fish of 5lbs. to 6lbs. and over. In early March of this year four chub of over 5¼lbs. came from this water, whilst in December, 1951, a specimen of 6lbs. 1oz. was taken, and in March, 1952, one of 6¼lbs.

The Thames, the Kennet, Severn, and Bedford Ouse are other rivers where chub run to big weights. Most of the waters in England containing general fish—as apart from game fish—hold chub. The angler has not far to go to seek a chub water.

Chub delight in clean streams, with sandy or gravelly bottom, being seldom found in stagnant waters. They haunt bends and elbows of rivers, beneath the fringing boughs of willows, under hollow banks, near wood piles, in quiet eddies, weir-pools, at the tails of islands, and in little 'pockets' or bush swims where the current is slack. They are particularly fond of bosky banks shading nice deepish pools. During winter they lurk in the deeper holes, and in backwaters.

Chub may be found in the same spots day after day, for they will not change their quarters if these are congenial. Therefore, when you happen to discover a good chub-hole, mark it for future visits. Remember, a chub-haunt is not always to be found by ocular demonstration; therefore, it is not a bad notion to try out all places that appear to be likely holds of these fish. If chub are there, they soon let you know it, provided you ply your art with intelligence and discretion, keeping in mind the character of your quarry—shy, suspicious, sensitive and vigilant.

Habits

In habits chub are sociable fish, and rove around in small shoals. They are gross feeders, and will sample anything that is edible. Chub are ready takers of all kinds of food carried down stream, from wee frogs to baby field-mice that fall into the pools, insects of wing that flop on the surface, grasshoppers and the like, and they adopt a 'welcome little stranger' attitude to everything and sundry.

However, in winter, the food of chub is mostly of the stuff coming down on the bottom. There are no butterflies nor grasshoppers in the cold months of the year.

When the water is clear you may, by exercising your scoutcraft, peep into a chub-hole and see a dozen or more dim forms swaying in the current, lying in a 'nose-to-tail' formation, two or three big fellows in front, with lesser fish strung out behind. But let one of them catch a glimpse of you and the whole bunch just disappear, ghost-like, seeming to melt away into the deeper water. Return twenty minutes later and in all probability they will be back in the old spot.

Baits and Tackle

During winter, no better bait than a bright and lively worm can be offered to chub. A red worm, or the tail-end of a medium lobworm fished on ledger tackle will often produce results, and especially if the hole has been previously ground-baited with soaked bread and bran mixed with boiled mashed potatoes, to which concoction a few small worms are added. A cleaner-to-use mixture is composed of soaked greaves and clay, made up into balls.

Winter chub may also be taken on a paternoster tackle, a good bait being a knob of *strong* cheese, the stronger the better. A live minnow—if you can procure one during winter—hooked through the top lip, will also be effective on a paternoster, or on float-tackle.

Fishing with running float-tackle is a pleasant method of catching chub in winter. Use a quill float with tapered cork body, shotted so that only just the tip of the float appears above the surface. Plumb the depth, and adjust the bait so that it is suspended at about two-thirds of the depth of the 'swim' you intend to fish.

Throw in a few handfuls of the usual ground-bait and follow it down with your baited hook, checking the float gently as it travels along. When the float suddenly goes 'bang under' in a slant-wise direction, strike and drive the hook home into the jaws of the fish.

Ledgering in winter is also frequently successful after a flood. The ledger consists of 1yd. of medium gut or gut-substitute, with a running bullet about 18ins. from the hook—a split shot on either side of the hook about 9ins. apart will keep the bullet in position. The hook is a No. 10 treble, and the bait a small lump of smelly cheese about the size of a cherry. This is fished in all sorts of holes, and in bush-swims.

The usual bottom rod, with reel of 'Nottingham' or similar pattern with rather large drum for quick-winding, and an optional check, is preferred. The usual plaited silk line of medium strength is advocated, and gut casts and gut-bottoms can be of nylon or similar gut 3x strength. This outfit will serve for all methods of chubbing in winter. (A.S.)

MAPS ON STAMPS (1)

MANY advanced collectors restrict their interests to the stamps of one country or one area, the reason being that they have neither the time nor the money to collect stamps from all over the world. But most start as general collectors, and until they have some thousands of stamps they continue to accept everything that comes along. It is safe to say, though, that even these collectors have preferences either for stamps of a certain country or else for stamps showing certain designs, and if one were asked to hazard a guess at the most popular subject, then map stamps would be a fairly safe guess.

Probably one of the main reasons behind this is that these stamps will show the region from which the stamp has come. That, in a certain measure, is true, but not all stamps are reliable by any means. One rather interesting specimen illustrating this point is the stamp which was issued by the Dominican Republic in 1900, a specimen of which is reproduced here. If you look at an atlas you will see that the island comprises two states—Haiti as well as the Dominican Republic—and that the sizes of each as shown on the stamp do not agree with the sizes as shown on the atlas. Haiti was distinctly annoyed about it, but, fortunately, however, the matter was cleared up amicably.

Most of the early stamps were printed without showing any of the parallels of latitude or meridians of longitude, and consequently they did not give much information. They had no scale on them either. As an example of this, take the present Irish Free State stamps which show a map of Ireland or Eire—no scale; no lines other than the blank outline map. Further, they have not even deliniated Northern Ireland from the rest of Eire.

Another Example

Another stamp that does not show anything is the Canadian stamp of 1898—'We hold a vaster Empire than has been'—because the map is one that does not portray the facts correctly. The Empire was coloured red, but owing to the type of map projection great exaggeration is shown in the northern part. The Australian map with a kangaroo, the design which was used for all values of the Australian stamps, is another example of a useless map, and so is the New Zealand map of 1923 issued to commemorate the return of the penny post.

The same need not be said about the map on the 6d. of the 1940 set showing a map of the world, because, unlike the Canadian, this has added interest. There is a small picture of the ship 'Dunedin' which brought the first shipment of frozen mutton to London on February 15th, 1882. Not only is this information on the stamp, but the route is also marked. Certain other map stamps have the date printed very boldly upon them; and this generally introduces an item of historical interest. For example, the Canadian set issued in 1927 to commemorate the 60th anniversary of Confederation had a 12 cent stamp showing a map of Canada, and over a small part of it was printed the date 1867, while on the whole of the land we see 1927. So, with a little thought, we can learn something from the stamp.

The 1904 10c. stamp of the U.S.A. shows a map with an area in the centre shaded, and having the figures 1803 printed over it. If we investigate we shall find that this is the date on which the U.S.A. bought the area shown shaded (Louisiana) for £3,000,000. The same country in 1933 issued a stamp showing a map of the world, and on it marked the routes taken by Admiral Byrd in his various Antarctic flights. In 1931 Newfoundland issued an air stamp value one dollar, and this stamp showed a map of the North Atlantic Ocean stretching from Newfoundland to Europe. The stamp is marked 'Historic Atlantic Flights' and seven such flight tracks are mapped out, named and dated. For example, one is marked Lindberg—New York to Paris 1927; another Sir J. Alcock—St. John's to Ireland 1919. The Hawker uncompleted flight is also marked, and so is the Kingsford-Smith Ireland to Harbour Grace 1930, which was one of the early flights from east to west.

Another rather unusual map stamp comes from Newfoundland. It is the one issued in 1933, the 20c. of the Sir Humphrey Gilbert set. This is a very old map of Newfoundland, one of 1633, and it is printed upside down, that is to say the south of the map is at the top of the stamp and the north at the bottom. It is not a mistake, because the north point has been drawn in and so has the scale. Spain issued a very old map of the river Amazon. That was in 1933 in connection with the Iglesias Amazon Expedition. The river is drawn as an undulating line, quite regular, each

(*Continued on page* 110)

Dominican Republic — two countries, one island *Canada confederation stamp* *Sierra Leone issue. Compare with Liberian stamp* *The Liberian issue*

Interest in Replies

IT often surprises me to note how interested our readers are in other people's problems. With the publication of almost every issue containing a 'Replies of Interest' feature, we have letters from readers giving alternative solutions to the particular problems which have been answered.

One such letter came in the other day from far away Calcutta, and was over the signature of one of our overseas readers whose name is Biswajit Biswas. It referred to a reply in our issue of May 21st, in which a reader had complained of being in trouble with rust marks on his clothes.

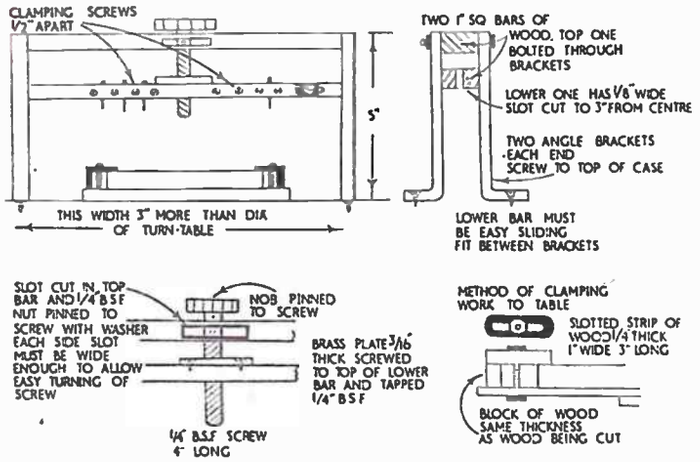
Mr. Biswas informs me that he had similar troubles with rust marks on cotton and linen goods and successfully removed them with oxalic acid. He recommends that a 10 per cent solution be made in water, taking both by weight. A piece of cotton wool is then soaked in the solution and smeared on the marked area. After a few minutes, he says, the mark will completely disappear, when the article is then thoroughly washed in ordinary water. We are assured that our reader has used this treatment hundreds of times with brilliant results.

* * *

Super Wheel Maker

FOLLOWING publication of details of a wheel making device in one of our 1951 issues, we had a letter from Mr. Nicholson, of Stanley, Co Durham, with which he enclosed drawings, shown on this page, for a motorised wheel maker.

He tells us that the device can be attached to any old gramophone, thus eliminating the necessity of having to keep turning the work, while at the same time giving much quicker production. The cutter bar is much the same as in a hand operated one, while nearly all the material can be purchased at any Woolworth's store.



Mr. Nicholson's wheel maker

Maps on Stamps (1)

(*Continued from page* 108)

tributary being the same size as the next.

It would be very difficult to name any country which has never appeared on a map stamp. Even the north and the south poles have been mapped, the former on the Russian stamp issued in 1938 to commemorate the north pole flight, and the latter three times. The Falkland Islands Dependencies in 1946 brought out a set with a map of the Antarctic, the Argentine Republic brought out two stamps to commemorate the 43rd anniversary of the first Argentine Antarctic Mail, and in 1947 Chile also had two stamps for the same area.

Two countries wished to show the world where they were situated, and they both chose to do this by means of their postage stamps. But the methods they used were opposite. As we illustrate both stamps here, readers may judge for themselves which they prefer. Sierra Leone, on the 1½d. value of the William Wilberforce issue of 1933, used as the design a fairly large map of Sierra Leone with a small inset map of Africa having just a white spot to indicate the position of the country. Next door Liberia, in 1928, had a stamp showing a map of Africa as the main part of the design and the only named country on the map was that of the issuing country. Take your choice.

Liberia, in 1940, issued what can only be called a picture-map. It is a view of the coast as if taken from an aeroplane. Only one or two trees appear, all the others having been removed so that they do not interfere with the views of the rivers, etc.

(L.P.V.V.)

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