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# **ADJUSTABLE STOOL**

Ideal for kitchen use

177

### Make it from FREE design in this issue

THIS very handy stool can be made quite easily by even the novice at woodwork. It provides an extra seat at the kitchen table, being 19ins. from the ground and its height is adjustable up to a further 12ins. in 2in. steps. This makes it most useful for adjusting to the different comfortable working heights to be met with in the kitchen, such as preparing vegetables at the sink, or food at the kitchen cabinet. It could also be used to advantage by a child who has grown out of its high chair and for whom an ordinary kitchen chair would be too low, despite the use of cushions.

Of very simple construction, there is no special shaping to do and no difficult joints to conquer. The four Hobbies contemporary legs are as easy as pie to fix, and a comfortable seat is ensured by the use of a soft pad such as foam rubber.

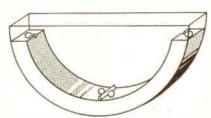
The height adjustment is obtained by raising or lowering the seat shaft into a boxed pedestal, which gives additional rigidity to the stool, the seating height of which is fixed by the use of a peg.

Instructions on page 178

FOR ALL HOME CRAFTSMEN over 60 years of 'Do-it-Yourself' World Radio History



## A CENTRIFUGAL PUZZLE



HERE is a little puzzle which will cause endless amusement among your friends. It is one of those puzzles so difficult to do unless you know how, yet so easy when let into the secret. It has been designed in a very handy size so that it can be slipped into the pocket.

The puzzle consists of a small block of wood in the shape of a half circle with a slight recess cut in its two flat ends. Sides are fitted and a top of transparent material so that the two ball bearings are totally enclosed and visible. The idea is to get the two balls into the recesses at the top, one fitting into each side.

Most people try to solve the puzzle by tilting or shaking it, but it is impossible to do it this way. Spinning the puzzle round is the only possible way to solve it, and this action causes the balls to fly outward up the curved sides and into the recesses at the top due to centrifugal force.

Placing the puzzle on a flat smooth surface with its ends pointing upwards and giving it a good sharp spin with a rotating motion is all that is needed.

The puzzle should be made of a close grained wood that can be finished with a high polish, and a hardwood such as mahogany or walnut is very suitable. Sycamore and beech, too, can be used with success.

#### Cut with a fretsaw

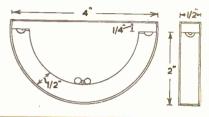
A thickness of  $\frac{1}{2}$  in. is sufficient but this can vary slightly and so can the size of the curve although the 4in. diameter half circle is a very handy size. Cut the two curves, especially the inner one, carefully with a fretsaw so that they will not require much glasspapering to finish them.

Make the two recesses either with a countersunk drill or cut them out with a small gouge. They should be in the centres of each end and have a small channel leading to the inner surface as shown. This makes people think that the balls must be rolled up the slope and into the recess via this channel, which, of course, is not the case.

Now make the inner part as smooth as you can using a fine grade glasspaper to finish with, then french polish it until you have a good gloss. To keep the balls in their respective sides a small dividing piece is fitted into the centre of the curve. A saw cut will take this and it need not be more than  $\frac{1}{2}$  in. high.

The puzzle must now be cased in so that the balls cannot escape. First fit sides to come about  $\frac{1}{2}$  in. above the top of the curve and these can be card or very thin ply glued on but it would be much better if the entire casing were made of perspex. In any case the top piece must be transparent and can be either thin glass or plastic.

If the entire case is of perspex use the proper plastic cement to seal the joints, but if card or wood sides have been fitted the top can be secured with Sellotape. Don't forget to fill in the narrow space between the top of the curve containing the recess and the top of the case. A slip of card is sufficient or a strip of thin perspex can be used making it fit the entire curve and extend the necessary  $\frac{1}{4}$  in. above it to meet the top of the casing. (A.F.T.)



### **Making the Adjustable Stool**

Obviously on a project of this nature the design sheet is not large enough to show the parts full size, but all the components are detailed thereon and the appropriate measurements given.

Workers making up the stool from a Hobbies kit will notice the layout of the various pieces to be cut from the  $\frac{3}{2}$  in. furniture panel, detailed in the bottom right-hand corner of the design sheet. Mark these off and cut out. Pieces 1 and 5 are the same size (10ins. square) taking the full width of the panel. Piece 1 has a 3 in. square cut from the centre as shown. Pieces 4, which measure 15 ins. by 2 jins. are glued together to form the seat shaft.

Make up the box pedestal as shown by butting together two pieces 3 between two pieces 2, which are cut from §in. stripwood. Nails or countersunk screws should be added for strengthening if desired. The top of this section goes flush with the top of piece 1 through the 3in. square cut-out, being secured by glue.

The next step is to screw the leg blocks underneath piece 1 as shown in the detail on the design sheet. Then attach the screw legs into the blocks and adjust the stool thus far so that it stands squarely on the four legs and pedestal.

Now drill six  $\frac{3}{4}$  in. holes to take the peg in the shaft which has already been assembled from pieces 4, taking the distance measurements from the design sheet. Ensure that the shaft is a good fit in the pedestal.

The seat platform (piece 5), can next be glued and screwed centrally on to the top of the shaft. Ensure alignment of pieces 1 and 5 when the seat is lowered. For added strength. lengths of  $\frac{3}{2}$  in. quarter-round beading are mitred and Hobbies Kit No. 3294 for making the Adjustable Stool includes all wood, beading, contemporary legs, etc. Obtainable from branches, etc., or by post from Hobbies Ltd., Dereham, Norfolk price 32/6 (post free).

Cushion materials not supplied

glued round the shaft under the seat platform (see detail).

At this stage the stool should have the finish applied. Glasspaper thoroughly, fill any holes with plastic wood and finally ensure that the seat shaft moves freely up and down inside the pedestal and that the peg, which is made from a 6in. length of §in. diameter round rod, is a good fit in the holes. Finish is optional to the choice of the worker, and in many cases a pastel shade of enamel will be chosen to match other kitchen details. The stool could of course, be stained and varnished or polished.

Materials, for the seat cushion are not provided in Hobbies kit, but can be purchased separately at local stores or made from materials already to hand. We suggest a pad of 2in. thick foam rubber, covered with any cloth material or leather cloth. This is stretched tightly over the chosen padding, and pinned under piece 5.

# NOVELTIES YOU CAN MAKE

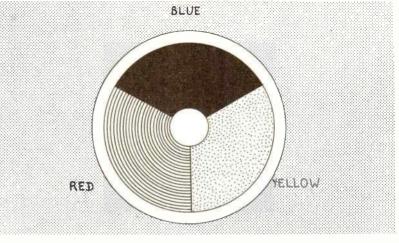
UCH amusement and interest will be caused by this colourful spinning toy, which can be made in a few minutes, from a disc of strong white cardboard, and some pieces of brightly coloured gummed paper.

 $\overline{A}$  circle, with  $\overline{a}$  radius of 2ins. is drawn on the cardboard with a pair of compasses, and is then cut out with sharp scissors. In the centre of the disc a hole,  $\frac{1}{2}$  in. in diameter is cut.

The colours chosen for the disc, should be red, blue and yellow and these must not be too dark. Three segments of  $120^{\circ}$  (measured with a protractor) and radius  $1\frac{1}{3}$  ins., one of each of the three colours, are cut out of gummed paper.

Very carefully stick the segments on to the disc in such a way that they form a neat inner circle of continuous colour, bordered by a uniform margin of bare white card  $\frac{1}{2}$  in. wide. Then, with a sharp knife, clean away the paper which covers the hole in the centre of the disc.

To spin the disc, thread it upon an 18ins. length of thin flexible string and hold one end of the string firmly in each hand. Twist the string by twirling the disc around several dozen times, and then pull the string taut. As the disc spins unevenly on the string, it will appear to change colour in a most



### A Spinning Colour Toy...

beautiful manner.

The illusion occurs because the coloured segments touch the string in turn as the disc spins, and also because different parts of the disc turn at unequal speeds. The effect is that the

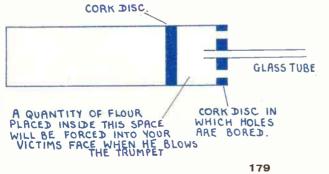
colours appear to 'run together', giving rise to continually changing new ones.

The writer believes that this toy is in fact the Chromatrope, invented by the French scientist Bellair in 1876, but has been unable to verify this.

### ... and a Magic Trumpet

THE amateur magician will find this deceptive little instrument just the thing to foil the talkative know all', who is invariably present at his performances. Under the pretext that he wants an assistant 'to blow the magic trumpet' in order to bring about some surprising effect, the conjurer selects the trouble maker and hands him the cardboard device described here. When the performer gives the word, the unfortunate victim blows the trumpet, which, instead of producing a noise, showers his face with flour.

To make the trumpet, obtain a cardboard tube about 1½ins. in diameter and at least 6ins. long. A mailing tube will serve excellently, although the card-



board centre of a toilet roll will do quite well. You will also require a short length of glass tubing and two round in. thick slices of cork that will fit tightly into the tube. In the centre of one of the discs bore a hole which will just take the glass tube, and bore six small holes in a neat circular arrangement around the rim of the disc.

It will now be an easy matter to assemble the instrument. First, push the plain cork disc  $1\frac{1}{2}$ ins. into one end of the cardboard tube. Then push the glass tube into the centre of the perforated disc. Place a quantity of dry flour into the small space above the plain cork disc, and firmly fit the holed disc with the glass mouthpiece into the end of the cardboard tube.

Test the trumpet by blowing into the mouthpiece, when the force of the air blast should blow back a cloud of flour through the holes in the end piece.

In conclusion it must be stressed that for the best effect the apparatus should not be employed unkindly. Used considerately the 'trumpet' will be an invaluable item in the conjury's 'bag of tricks'. (A.W.)

#### **Pleasure** in Art



# THE DESIGNS FROM NATURE

THERE are in our midst many people who are not very artistic, yet they do find pleasure and satisfaction in art work.

As with so many other tasks, finding the courage to make a start is the real difficulty, and as that is so in the case of design, I would suggest a simple experiment to be carried out with leaves of various shapes and sizes.

Squeeze out a small quantity of lino printing ink of the required colour on to a sheet of glass. Using a roller or small piece of cloth, smear the ink thinly over a reasonable area — larger than the size of the largest leaf to be used. Place a leaf, veins downward on the ink, and press it all over to ensure a uniform coverage. Carefully lift it off, and place it on the paper where it is required to print. Gently press it into place with a scrap of thin card.

When removed, the leaf will leave an imprint such as those illustrated. A second 'take' will result in a lighter print, showing even greater detail.

The production of lino blocks suitable for printing designs, etc., is a process which requires much care and preparation, and yet here it is shown how nature can supply many detailed prints of infinite variety.

How can one utilize this method in the production of craft work? Such are its possibilities that it is impossible to mention all the ideas that come to mind, but for the purpose of illustration I will mention a few.

Fabric printing is an obvious use, and materials for curtains, cushion covers, etc., are produced with various sized leaves according to the scale of the work.

With care, prints would register very nicely on enamelled boxes and trays, and these could be carried out in a variety of colours.

In the same way plate mats could be so decorated. Indeed, objects ranging from lampshades to book jackets would benefit by this treatment.

Thus leaf shapes found in nature are used as design motifs, and all that is required is that the artist should arrange these attractively and work with care. (D.H.H.)

### Interesting Locos – No. 15

THE sturdy little six wheels coupled goods tender engine shown in our illustration was originally designed by Mr. R. J. Billinton in 1901, and was then known as Class 'C2', but the class were popularly called the 'Vulcan' Goods at the time.

In 1908 Mr. D. Earle Marsh began to rebuild them, fitting a greatly enlarged boiler as shown and other modifications, and classifying them as 'C2X'.

In 1920 the engines came in for further attention when Mr. L. B. Billinton fitted his arrangement of top feed dome to several of the class, including No. 534 as shown.

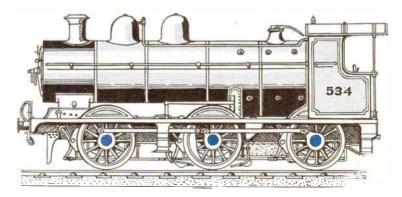
These smart little machines were in the past often called upon to undertake passenger duties, especially at holiday times when the L.B.S.C. locomotives were often worked hard and fast.

As illustrated, the class carried the following leading features: boiler, length of barrel 10ft.  $10\frac{2}{3}$ ins., containing 243 tubes of  $1\frac{2}{3}$ in. diameter. Heating surface, tubes  $1,194\cdot88$  sq. ft., firebox 105.41 sq. ft. Total=1,300.29 sq. ft. Grate area=18.75 sq. ft. Working

pressure 170 lbs. per sq. in. Weight engine in working order, 45<sup>1</sup>/<sub>2</sub> tons. The centre line of the boiler was 8ft. 2ins. . above rail level.

In 1919-20, three of the class were stationed at the G.W.R. running shed at

Old Oak Common for the purpose of working G.W.R. coal trains through to the L.B. & S.C. line. They were very useful in this class of work, having a tractive force, at 85 per cent boiler pressure, of 20,288 lbs. (A.J.R.)



No. 15. L.B. & S.C.R. Class 'C2X' Goods Engines 180

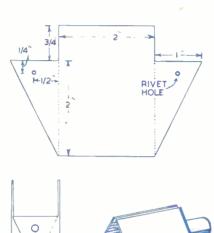
# To ease your work **PIPE OR DOWEL ROD CLAMP**

ONSIDERABLE difficulty is often experienced in holding circular articles such as tubing or dowel rod when cutting, drilling or otherwise working on them. Fixing in a vice is not always possible or even advisable, and it is certainly not an ideal grip for such round objects.

With a properly designed clamp, however, such as the one illustrated, a very secure grip is obtained, and the article is not marked or damaged in any way. The greater the downward pressure exerted on the pipe or rod, the stronger will be the grip of the clamp, and this can, indeed, be very great. For thin tubing which could be easily distorted if gripped in a vice, the clamp has a very special appeal.

The clamp is made of sheet metal, and a good hard brass is probably the best kind to use, although others may be tried. A stout tinplate for instance would be quite suitable for the smaller sizes, but would need something more substantial when larger work is done.

The tool may be made in various sizes, and the thickness of the metal must vary in proportion to the size, so as to do its job efficiently without bending or buckling out of shape. The sizes quoted are to make an average sized clamp, and will be very helpful when amending to make a smaller or larger version of the tool. Two pieces of metal cut to the shape shown in Fig. 1 are needed for each clamp, and in this case they are 4ins.



long and 2≹ins. wide. Thin sheet can easily be cut with shears, but a cleaner sharper cut, irrespective of thickness, will be made with a fretsaw, and will require less filing and finishing off when made this way.

Smooth all edges with emery cloth, especially the two sides of the right angle, so that there are no sharp edges to mark the rod or tube. Drill a hole in both sides of each piece sufficiently large enough to take a substantial rivet.

Make right angle bends where shown by the dotted lines of Fig. 1, and this is best done in a vice, so that they can be hammered down neatly. Complete the tool by inserting the rivets and hammer down to make an easy but not loose fit. Fig. 2 shows a side view of the finished clamp.

If the clamp you have is too big for the job in hand, and you do not wish to spend time making a smaller one, a strip of wood inserted beside the tube or rod will hold it firmly. It is a good idea to cut a few strips of different thickness to keep for this purpose.

A further improvement to give added strength to the sides can be made by fitting pieces of wood to them. A piece 2≹ins. by 2ins. screwed to each side will increase its power immensely. A thickness of ‡in. will do for the smaller clamp, increasing it a little for a larger one. (A.F.T.)

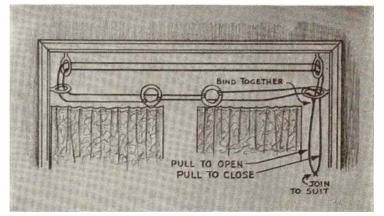
# Make pull cords for your curtains

How do you pull or draw back the curtains in your home especially if you have tall, lofty windows? There is no need to stand on a chair each time.

The drawing shows the arrangement whereby curtains are operated with one looped length of cord. The hooks and eyelets are exaggerated in order to show more easily the operation.

The curtains themselves will, of course, run on the usual roller track or expanding cord. The two centre hooks shown, would therefore be fitted behind the curtain.

Note also that four lengths of cord traverse through the right-hand lower hook and are joined to run into two lengths, which in turn are joined at the bottom to form a loop of a length to suit your convenience. Bind the joins strongly with twine, smearing a layer of tube glue over it as you bind.



The distance apart of the hooks is also exaggerated and they can, of course, be fitted much closer together than 181 as illustrated. The usual pelmet affixed afterwards should easily hide all the mechanism. (E.C.)

## THE 'TEN CARD' TRICK



This ingenious card trick is performed with any ten cards taken from the pack, and you may be sure of mystifying your friends. While no manipulative skill is required whatever, and it is almost impossible to detect the secret, care is essential in perfecting the routine to be described, so a few trials are recommended before presentation.

Extract any ten cards from a full pack of cards, hand to a friend who may shuffle them as much as he likes, but explain that throughout the trick the small pile is considered to have a top and bottom. Obviously, the top card is the one on top of the little pack when they are face downwards while the one at the other end is at the bottom.

Turn your back on your friend, so that you are entirely unaware of his selection, asking for one card to be selected, memorized, withdrawn and placed at the top of the pack. Now ask your friend to think of any small number he cares between 1 and 9, but without revealing to you, then transferring that number of cards from the top to the bottom separately. Suppose number 4 is chosen, it should be made clear to your friend that the top card is taken and placed at the bottom, then the next similarly and so on until four cards have been transferred one at a time. Incidentally, this is only an illustration, since you are unaware of the number chosen.

Now turn around to face your friend, taking the pile for perusal. Hold the cards in your left hand and reverse the arrangement of the cards by thumbing off one at a time into the right hand, just as though you were counting them. This done, fan out the cards with the faces towards you, work off the top five — in this instance from the right hand side — placing them behind the other five, after which the cards are returned to your friend for another manipulation. See that you give the cards closed together and face downwards.

You now request your friend to again transfer from top to bottom of the pack exactly the same number as previously *plus one more*, and you may turn your back for this operation if you wish.

Recover the cards from your friend, fanning them out and turning the faces away from you, asking for concentration on the original selected card.

Once again the cards are closed and handed back for the final operation, when you ask that the top card be placed face downwards on the table, the next card to the bottom of the pack, the next on the table, the next to the bottom, and so on, until only one card remains in your friend's hand. Here you may say, 'You selected the eight of spades, but you were trying to keep it, for there it is in your hand.' And sure enough, on inspection there will be the eight of spades, or whatever card was chosen ready for turning up.

It is doubtful whether you will be able to detect the secret of this trick from the foregoing description, but it should be no surprise to hear that it has everything to do with the rearrangement of the cards when you take them from your friend. Now look at our illustration and you will find that the eight of spades, which we have quoted as the selected card, is the fourth card from the left.

As with many of these tricks the secret is simple when you know how. All you have to do is to have a quick glance at this fourth card the second time you take them, that is after fanning out and turning the faces towards your friend and immediately before he deals one to the table and one to the bottom.

By turning your back during the selection and the transfer of the cards to the bottom of the pack you cannot know which is the selected card, and this is quite genuine, but after rearranging as described, and then taking a quick glimpse, which must not be too obvious, that fourth card from the left will be the one selected. It is possible to find the value without seeing the faces by means of what is termed a fanpeek, that is by turning up the corner of the card with the thumb when the backs face you, but perhaps you will find it easier to take the quick glimpse.

#### 'Mystifier'



Be prepared for that first fall of snow by making a snow plough now. Removing snow from garden paths and the pavement can be a tedious job with a shovel, and it is one that is often put off till the last moment. Both simple to make and to use it will clear a way in only a fraction of the time taken by shovelling it up. It is onl necessary to place the tool on the ground at an angle of about  $45^{\circ}$  and push the snow out of the way, no lifting at all is wanted.

Any odd piece of wood can be used, the side of a packing case being quite suitable provided it is sound. Size is not important and for general work about 20ins. long and 8ins. wide is quite sufficient.

It is an advantage to bevel the front edge but this is not altogether necessary. Nail this board on to a stout broom handle, and the tool is ready for use.

A smaller version to keep the junior members of the family occupied could be about 12ins. long by 5ins. wide.

# PLANTS FOR CHRISTMAS



The Winter Cherry

A Christmas time, most florists have a tempting collection of flowering pot plants. Having bought one of these exotic vegetables, to give a festive air to the home, it is disappointing if it starts to droop and fade almost as soon as it comes into the house.

In many cases this is not the fault of the new owner — the plants are for all practical purposes dead when purchased. They should be regarded as expendible, in the same way as a bunch of flowers. These are the plants that have been brought into flower out of season by forcing in a greenhouse, where the temperature and the humidity are both high. Then they are removed to an icecold florist's shop, and finally end up in a draughty living-room. It needs a plant with a strong constitution to withstand that sort of treatment.

#### **Different types**

The plants most commonly met at Christmas are: Azaleas, Christmas Cacti, Cyclamens, Heaths (Erica), Saint paulia (African Violets), Solanum (Winter Cherry), and Poinsettias.

These plants may be divided into three classes — hopeless; those that may live if given great care; and those that are tough enough to survive in any case. The Christmas Cactus is, perhaps, one

of the best buys. For it will not only live, it will grow vigorously and produce more and more flowers as its size increases.

When first brought home, it should be placed on the window-sill and kept moist until flowering has ceased. Then it should be kept on the dry side until the spring. In the early summer the Cactus should be re-potted into a rich loam.

Helpful advice on the selection and care of Christmas plants by M. J. Martin

John Innes compost plus bone-meal will do very nicely. Once the danger of frost is past, the Christmas Cactus may be placed out of doors. It should also be given plenty of moisture. About the end of September, the plant must be brought indoors again.

It is advisable to decide on the Cactus' final position before the buds are formed. Some authorities say that the buds will fall if the plant is moved. I have moved plants and got away with it, but there is no point in taking unnecessary risks.

Amongst the plants that may be brought through the winter if great care is taken are the African Violet and the Winter Cherry.

#### Advice on watering

The Saintpaulia or African Violet has a reputation for being difficult. But if sufficient care is given, it will grow and flower freely. When purchased, the plant should be placed in a light position in a warm room. Since the plant will not thrive in a dry atmosphere, the flower pot should be placed on some small pebbles in a saucer. Some water should be placed at the bottom of the saucer; by this arrangement the plant will have a moist atmosphere without actually standing in water.

Saintpaulia should be watered with great care, as they have a tendency to rot. I water my own plants by standing the pot in a bowl of water, thus ensuring that no water gets into the crown. During the summer months, the plant must be shaded from direct sunshine and fed about once a fortnight.

The Winter Cherry may be kept from one year to another, providing it is kept away from a dry atmosphere and draughts. It needs to be kept in a cool room and to be given a daily spraying. In the summer, the Winter Cherry is best kept outdoors.

The remaining plants are difficult, the Poinsettia being impossible to keep in the living-room.

#### Avoid draughts

Azaleas and Cyclamens both like warm moist air and, of course, no draughts. They should be treated similarly to the African Violet, stood on pebbles, so they may have a damp atmosphere without getting their 'feet' wet.

Heaths need a different treatment from the above. They need to be kept cool and watered with great care. If they do not like your treatment, their leaves will fall off with the greatest of ease.

Whether you keep a pot plant for any length of time depends on conditions often beyond your control. But, at least, you should now be able to decide whether you will risk an Azalea or olump for something more robust.



A pair of African violets, pink and purple **183** 

### For young enthusiasts CORE-TUNED CRYSTAL SET

THE variable tuning condenser often employed in crystal sets can be eliminated if some other method of tuning is provided. One such method consists of varying the inductance of the coil, by means of an adjustable core, and this system is used in the simple receiver described here. Coils with adjustable dust-iron cores are a fairly modern development, and can give very good results. If a coil is made up, it should be noted that a *solid* iron core cannot be used, as the losses arising in it will make signals almost inaudible.

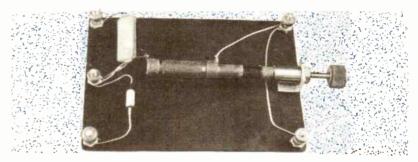
By 'Radio Mech'

The shape and size of the former upon which the coil is wound is not very important. Popular formers of this kind, with cores, vary from about  $\frac{1}{2}$  in. in diameter. They may be purchased new, or can often be found in ex-service equipment. The type with a projecting brass screw, upon which a small knob can be fitted, is most convenient. Turning this knob will then carry the core in and out, for tuning purposes.

The coil will require about 100 turns of thin wire, anything from 40 S.W.G. to 32 S.W.G. being satisfactory. The turns may be wound side by side, or in a pile, as convenient. It is also possible to use any medium wave, ready-made coil, such as those produced for valve receivers.

#### Panel and wiring up

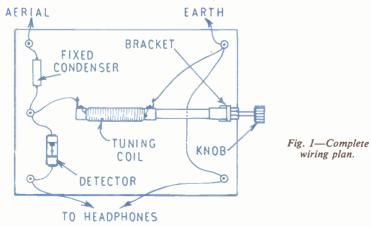
A small panel of ebonite or Paxolin is most suitable, and it can be about 3ins. by 4ins. Six small holes are drilled as in Fig. 1, and small terminals are



fitted in five of these. A bolt is passed through the remaining hole, to secure a bracket holding the coil. The ends of the coil are connected to the terminals shown.

Any type of permanent detector, crystal diode, or cats-whisker detector will be satisfactory. All types, if in good order, give similar results, though the permanent detector or crystal diode is most convenient, as it does not have to be adjusted by hand. Detectors with wire ends are simply connected as shown. Detectors with metal end caps should be fitted in clips, or have connecting leads twisted on each end. Leads should not be soldered to this type of detector, as the heating will probably damage it.

If a cats-whisker detector is used, the crystal is wired to the aerial side of the circuit, and the cats-whisker to the one phone terminal, exactly as for the detector in Fig. 1. With such detectors, the point of the cats-whisker should be moved about until good volume shows that a sensitive spot has been found on the crystal.



Any headphones intended for crystal sets will be satisfactory, and they are connected to the two terminals indicated. A good pair of phones, of the proper type, will help to secure enough volume for comfortable listening.

#### Aerial and earth

Outdoor aerials give best volume, especially if they are fairly long, well insulated at suspension points, and well away from walls and other earthed objects. About 60ft. of 7/22 aerial wire, for the aerial itself and the down-lead, in one uncut length, will do well. Even half this length will also give enough volume in many localities.

. Indoor aerials are suitable when signal strength is good, and when they are fairly high, as in upstairs rooms. They are not satisfactory in metal buildings or a very long way from the local station. For an indoor aerial, thin flex, bell-wire, or other insulated wire is suitable. The wire should be high in the room, and can be extended along two or three walls, near the ceiling. No advantage arises from using a very long wire and doubling it back upon itself, so this means that an indoor aerial will seldom be more than some 30 to 40ft. long.

A good earth will greatly improve volume. The earth lead should be reasonably short, if possible, and can be connected to a metal spike driven into damp soil. Or it may be soldered to a metal sheet, or wire netting, buried some 12ins. to 18ins. deep. The lead may also be taken to a descending water-main pipe. Gas pipes, or hot water pipes, are not suitable.

If the aerial is poor, the fixed condenser shown in Fig. 1 is not necessary, the aerial being taken directly to the detector, instead. But if the aerial is long,

#### Continued on page 185



How would you like your gifts to be the envy of all, this Christmas — gay, attractive, neatly wrapped and a joy to receive? Then treat them in this easy manner, and you will score full marks and appreciation. You will have noticed how the manufacturers endeavour to provide their wares with an attractive appearance, some are really lovely, with ribbons, flowers and pretty pictures. Let your wrappings be even better by touches of your own personality.

These few hints are sure to help, showing the best ways to wrap your gifts with fancy papers, ribbons and tapes.

Most stationers now have ample supplies of fancy wrapping papers. You have quite a choice at your disposal, in stripes, flowery patterns or cellophane. If you like to keep your gift a secret until the last moment of opening, always use a suitably coloured tissue paper inside the cellophane type of wrapping. The ends of the parcel may be fixed with adhesive tape, but ribbons make a nicer finish.

You will require sufficient paper to go round the parcel, plus two extra inches. For the width, allow the width measurement, plus height measurement and an extra 2ins. as shown in Fig. 1. Place the parcel almost centrally on the paper, fold over the back edge temporarily to a position about one-third from the front edge, adjusting until correct (Fig. 2). Now allow this edge to fall free, bringing the front edge over the parcel as far as it will go, rolling the parcel over with the paper. This will bring the two free edges to the underneath side, where they will be held quite firmly by the weight of the parcel, allowing us to attend to the ends without holding the paper.

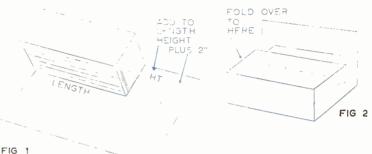
#### **Ribbons for gaiety**

Here most people make an error. Tuck the flaps in from the *sides* as shown in Fig. 3 and not from the top. If you will take the trouble to examine a packet of machine wrapped butter, you will observe the difference. Although unnecessary if you are to use ribbons, a small piece of adhesive tape may be attached.

Ribbons provide the finishing touch.

## MAKING YOUR OWN WRAPPINGS

Collect your old ribbons and see that they are washed and ironed. Colours or widths do not matter, we may be able to use them all. For example, you may use wide ribbon in one direction and narrower ribbon in the other direction. Moreover, colours add to the gaiety. There are many modifications of tying the ribbons, or attaching tape, but try to avoid the common method of a central cord in each direction as used when sending a parcel by post. Long parcels look dainty with three or more narrow ribbons around the width, or



Instead of ribbons you can use the popular adhesive tapes in any colour you choose, or some with printed greetings. We would also mention that it is possible to make small decorative bows with this material, as when using ribbon, if the tape is stuck together, shaped with scissors and a small loop formed round the centre.

Tassels are made from similar loops slashed with scissors, and two or three loops fastened across each other can be fashioned into flowers. Experiment will quickly reveal several modifications.

Most important is a label with the recipient's name neatly written thereon to avoid confusion when the parcels are distributed.

#### Continued from page 184



and signal strength good, this condenser will sharpen tuning, so that there is less chance of interference from other stations. The smaller the condenser is in value, the sharper will tuning become. However, very small values will reduce signal strength too much, so they cannot be used. For this reason, values from about  $\cdot 0001 \mu F$  to  $\cdot 0005 \mu F$  will generally be best.

The core is moved in or out, as necessary, to bring the station up to its best volume. This can be done by hand with the type of coil mentioned. Other types of coil require a screwdriver for adjustment, and are not very convenient, unless the coil is left adjusted to one station. With such coils, a metal screwdriver should not be used. Instead, the core is adjusted with an insulated blade, such as can be made from a length of thin dowel or ebonite rod.

TUCK IN SIDES

you may try fastening diagonally across

the corners. Finally, another novel

addition and festive touch is a sprig of

real holly pushed underneath one of the

your trouble will be well rewarded by

the additional pleasure thus given. (S.L.)

If wrapped as suggested you may be sure your gifts will be appreciated and

FIG 3

ribbons.

If it should be necessary to tune to higher wavelengths, this can be done by adding turns to the coil. Alternatively, one or two small fixed condensers, of about  $0002\mu$ F to  $0005\mu$ F value, may be wired in parallel with the coil. This will have the same result. If it is impossible to tune to a low enough wavelength, as happens with some aerials, when BBC stations around 200 metres are required, then some turns should be *removed* from the coil, to correct this.



THROUGH the ages the sound of bells ringing has stirred the heart of man with the knowledge that something momentous is happening. Let bells echo out across a city and immediately people wonder why. Has a king died or a prince been born? Is there a victory to celebrate or an invasion to fear?

Or one may simply glance at the redletter days on a calendar, to know why the bells peal. It is May Day, Christmas Day or New Year's Eve. Or it is Sunday morning and millions are answering the call of the church bell.

# THE BELLS -By R.L.C.

If we consider the hundreds of themes connected with bells which are depictable in stamps and labels it becomes obvious that a separate album is necessary. And a suggested title — 'The Bells are Ringing'.

Hobbyists who saved stamps and labels issued during Coronation festivities of 1953 could album these items under the heading — 'Bells, Marking Great Events'.

Some bells are used almost exclusively to announce events of historic import.

Great Paul, the 236-year old bell in St. Paul's Cathedral, London, is tolled only to signify the death of a bishop of London, a dean of St. Paul's, the Lord Mayor of the city, or a member of the Royal Family. The death of King George VI occasioned its most recent tolling, once every minute from 11.30 a.m. to 12.30 p.m. as news of his death was being relayed around the world. On the day of the funeral, and as the mile-long cortege moved in slow and ancient pageantry through the streets of London, high overhead Big Ben was tolling, 56 chimes, a minute apart, each marking a year in the late sovereign's life.

Scarcely a bell exists that has not at some time been rung to convey a warning of impending disaster. There are few bells which have not at one time or another joined in the announcement of some great victory.

From time immemorial, bells have proclaimed man's supreme moments. Here is a thematic pastime for every member of the family, including the fretworker, whose contribution of St. Paul's Cathedral (Hobbies Kit No. 240 Special) could well put the final touch.



RS Mary Savill, who lives at 42, Standen Road, Southfield, London, S.W.18, has been a regular Hobbies reader for 25 years.

'I make roses, anemones, daffodils, narcissus, and other flowers, and my hobby of paper flower making, although not strictly within the collectors class, nevertheless holds a supremely high place in the order of hobbies of interest', she says.

Mrs Savill, who is 56, would like to contact readers with similar interests.



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15/6 CRYSTAL RADIO kit. Easy-to-build with only a screwdriver and pliers. Post free — send 15/6 P.O. ALSO — 1 and 2 valve kits. headphones, etc. — send stamped addressed envelope for complete list to — Blanchard's Radio, Dept. HC 8, 13 Gainford Gardens, Manchester 10.

HOME-MADE WINE. Complete equipment. Books, etc. Lists free, — Leigh-Williams, (Dept.C.), 5 Western Drive, Liverpool 19.

EARN Artificial Flower Making, 2/9. -Brown-Bridge, Steyning, Sussex.

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The female ferrule will require to go about half its length on to the cane and this will then allow the male ferrule on the bottom of the next joint to go in far enough to make a firm joint when the rod is assembled.

You now have the job of fitting the small sections of garden cane between the ferrule and the split cane to make an even contact all round and Fig. 4 shows how this must be done. Before pushing in the cane slivers smear the top of the

NE of the most expensive items of fishing tackle is your rod. If you want a good one you have to be prepared to pay. The higher the price of course, the more you pay in Purchase Tax. It is therefore very much cheaper to build your own rods and the saving is very considerable. This saving is again a big factor when a youngster is wanting to get a fishing outfit together.

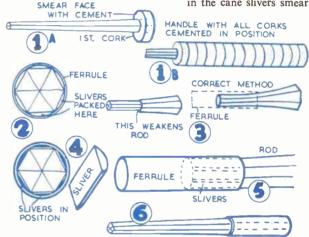
There is no difficulty in building a fishing rod and it is, in fact, a job which can be done with practically no tools. All you will really need is a medium-cut file and glasspaper. First of all you have to decide on what materials you are going to use and this is something I cannot decide for you. Rods are made of splitor built-cane, and these are my own choice. Today we have the comparatively new material — fibre-glass — and a lot of anglers seem to prefer this material to any other. As I say, it is one's own choice. However, no matter what your material, the general principles of building the rod are more or less the same.

Having decided on the material, your next job is to purchase a rod kit from a reliable maker and I deal with one firm only, Messrs. Dawson of 70 Holme Lane, Sheffield 6. In the kit of parts you will receive the sections of timber, corks for the grip, ferrules and rod-rings, whipping silk, glue and varnish. Everything you require is included in the kit.

Today there is a strong tendency to turn over to the use of screw reel fittings and these are far in advance of the sliding rings which often have a habit of slipping off the reel crutch when one is playing the fish of a lifetime! The screw fittings are a little more expensive but are well worth the money and — remember you are building yourself a rod which, with a little care and attention, will last you for years.

The making of the cork handle is the most difficult part of the job. The diagrams will show you how to make one to take a screw reel fitting and also one for taking the sliding ring type of reel fittings. First of all, however, you should give your rod timbers a rub down with fairly smooth glasspaper.

The butt or bottom length is the first on which to go to work. If you are using sliding rings for your reel you will put all the corks on the butt. We will assume that you are building a split-cane rod. Put a cork over the thinner end of the cane and force it down until it is level with the other end of the cane. You will find it is a tight fit. Smear the inner face



of the cork with waterproof cement (I always use Durofix), and push the next cork tightly down on to the first and so on until all the corks are in position. These should be left for twenty-four hours for the cement to set (see Fig. 1, (A) and (B)).

In the meantime you can proceed to fit the female ferrule on to the top end of your butt piece as this will in no way interfere with the corks. Split-cane is hexagon-shaped and the ferrule is round so that the cane only touches at the points (see Fig. 2). You must have an all-round contact so for this you can use small sections from a garden cane to fill the gaps. You will also find that the ferrule will be slightly smaller than the cane so that you will have to remove some of the latter to get a good, tight fit. Start this gradual taper some distance below where the ferrule will fit, otherwise you will have a step in the material which will constitute a weak point (see Fig. 3).

joint with your waterproof cement and then smear a very light coating on the slivers before pushing them into position. The slivers, by the way, should be a little longer than actually required and should also be marked with a pencil for the distance they have to be pushed in. This ensures that they do not protrude beyond the end of the rod section where they would interfere with the fit of the male ferrule. Fig. 5 clearly explains this.

MALE FERRULE

You can fit on all the ferrules whilst you are on the job. Remember, however, that in the case of the male ferrules the timber goes to the bottom of the ferrule. It is only the female where the 'halffitting' is done. Once again the diagram at Fig. 6 is self-explanatory.

The whole job can now be laid aside for the cement to harden and then you will be ready for the operation of shaping the cork handle. This will be explained in my next article.



shape and assemble to form little models—authentic in every detail— "volumetric" in appearance. You get all the essential materials and detailed instructions in each klt. Micromodels are not toys. A Micromodel is a miniature masterpiece worth 10, 20 even 100 times the few shillings the kit costs. Micromodels are only cardboard, but you will be astonished by their colourful appearance.

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## SOME GIFT SUGGESTIONS ...

Several readers have written to us concerning screen printing outfits, and it is thought that the set marketed by Reeves & Sons Ltd., Enfield, Middx. will adequately fill the bill for those people in search of a Christmas gift for a boy or girl. In the adult field this press will also serve as an admirable introduction to the craft.

We saw it turning out some effective prints at a recent handicrafts exhibition, and though the demonstrator was, on her own admission, 'a novice', the results proved that with intelligent application the worker could develop from simple motifs to quite artistic definitions. Incidentally, if it is intended to produce a quantity of prints rather than individual ones, it is advisable to incorporate the aid of a couple of friends and work on a team basis.

The Reeves outfit which costs 31/6 includes printing frame, squeegee and pots of various colours, craft knife for cutting stencils, and other necessary accessories. Sets and replacements can be obtained from stockists or direct from 178 Kensington High Street, W.8.

#### Combination file set

The Six in One file set manufactured by J. Stead & Co. Ltd., Manor Works, Sheffield 2, is an obvious gift choice for a keen modeller. So easy to slip into a pocket, these six assorted files are in a plastic container measuring less than 5ins. long, which also forms the handle.



It screws in half and at one end there is a brass socket which holds the selected file securely and ready to do its job. The six file shapes, which will cover any modelling project, are round, half-round, crossing, flat, square and triangular. The price for a set of these quality tools is 10/9 from ironmongers, garages, etc.

#### Model building in stone

The sets of bricks range from 7/2 to 59/6 and each is complementary to the other so that larger ventures can be embarked upon by the purchase of a further box.

Though the main idea is that a variety of model buildings can be set up, in turn the use of an adhesive will give a permanency to any chosen design such as may be needed for a modeller's layout.

For those parents looking for a gift which, besides providing endless amusement, yet has much to commend it on the educational side, a set of Lotts Bricks is recommended. These packs contain components made of solid stone, and an excellent instruction manual very clearly aids the youngster in assembling various projects ranging from a lych-gate to a large country house. Much fun can obviously be had in designing structures 'not in the book'.

### ... AND BOOKS TO CHOOSE

#### Glove Toys

by Margaret Hutchings

THIS is one of the latest issues in the popular Studio 'How to do it' series and it should prove a topical and most interesting addition in view of the growth in popularity of glove puppetry through the medium of television.

The author, herself a skilled dollmaker, explains the making of soft toys which can be stuffed and played with in the normal way by children or left unpadded to provide the most attractive and lovable glove puppets for the entertainment of all ages.

All patterns are full sized and nine delightful toys are the subjects of lucid instructions with additional valuable guidance to the imaginative homeworker in the creation of many further fanciful personalities.

Published by The Studio Limited, Hulton House, Fleet Street, London E.C.4. price 15/-.

### The Secrets of Ventriloquism for Boys and Girls

by Douglas Houlden, A.I.M.C.

MOST readers, at one time or takes to be a ventriloquist and, in all probability, have cherished the secret desire to become one. The answer to the first query lies in this book and, for that secret desire, the path to achieving skill in the art of voice throwing is clearly and sympathetically displayed.

Voice training, the making and manipulation of a new figure and guidance in dialogue and the building up of an act are dealt with in great detail illustrated by many photographs and line drawings.

Written primarily for young people, this excellent work will nevertheless prove informative to all practising ventriloquism.

Published by Nicholas Kaye Limited, 194–200 Bishopsgate, London E.C.2 price 9/6.

#### **Power Tool Woodworking**

by Clifford T. Bower

THIS is essentially a practical book written by an expert in power tools and will help all those owning power tool equipment to get the best service from it. Profusely illustrated with many workshop photographs and written in simple straightforward language this promises to be a great favourite with power tool enthusiasts already possessing or contemplating the purchase of standard power tool equipment.

Published by Crosby Lockwood & Son Ltd., 26 Old Brompton Road, London S.W.7—Price (spiral bound to lie flat on the work bench) 16/-, cloth bound 20/-.

#### The Beginner's Book of Clay Modelling

by Theo Luns

THIS is a well illustrated and clearly written introduction to clay modelling and should prove of great help to the beginner.

From the opening chapter dealing with materials and simple equipment to the final pages covering casting and firing of models each progressing stage of this fascinating hobby is carefully explained.

Published by Blandford Press Ltd., 16 West Central Street, London W.C.1 — Price 7/6.

#### More Fun with Stamps

by Dianne Doubtfire and Kay Horowicz

With Stamps' was inevitable, and with its publication all young collectors have another grand volume to help them in their fascinating hobby.

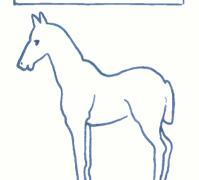
The new work takes its readers several stages further in the philatelic field and, although the fun of collecting is the keynote, there is much serious information and material in its pages.

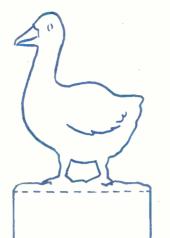
Published by Hutchinson & Co. (Publishers) Ltd., 178-202 Great Portland Street, London W.1—Price 10/6.

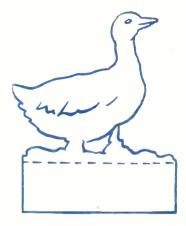
### Be original with these

# **Place Names for the Party**









### CUT SEVERAL AT ONCE WITH FRETSAW OR MACHINE

How much nicer your party table will look if each guest has his or only will it look attractive, but it will create a feeling of importance among your friends.

The figures are traced and transferred to <u>b</u>in. plywood and are cut out with the fretsaw. If you have many guests, four or five figures may be cut at once if you pin the pieces of wood together on the waste portions.

The figures are made to stand by adding  $\frac{1}{2}$  in. triangular fillet at the front.

EDWARD

Clean up and paint in bright colours. A plain all-over coat of paint will be sufficient, adding just a few details as indicated.

The name is neatly printed on a piece of white paper or card and is then pasted to the sloping part of the fillet (M.p.)

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