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



Project for the handyman!

PARTITION FOR DINING RECESS

THE lounge with dining recess is so popular today that many of our readers will welcome this idea for screens or partitions. To save space they make use of the sideboard, preferably of contemporary design, and provide shelves for ornaments or potted plants. The idea need not be confined to the lounge; it is equally suitable for the kitchen, where a dining recess may be even more acceptable.

The high partition forms a complete screen and may be secured to the floor by means of screws and Rawlplugs. It may be extended at either end as required. The lower partition comprises a set of shelves at each end of the sideboard. These are separate pieces, but can be connected at the back if desired. Pegboard or hardboard can be secured to the back if this is to be converted into a screen.

●Diagrams on next page

SUITABLE FOR LOUNGE OR KITCHEN

209

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

4 1/2^D
2

MAKING A DINING-ROOM PARTITION

A list of thicknesses and measurements is provided for each fitment, and these should be read in conjunction with the letters on the diagrams. A 4ft. sideboard was used in the illustrations, but it will only be necessary to alter the length of the top rails (B) and hardboard (C) if your own sideboard differs from the original.

Butt joints were used in the construction, the idea being that the handyman need only use hammer and nails or screws. Glue may be added on all the joints to give extra strength.

The tall partition is made up as detailed in Fig. 1, securing the shelf supports (G) to the uprights (A) before placing the top rails (B) in position. The lower rails (D) are drilled and secured to the floor by screws. Alternatively these screws may be omitted and the hardboard back (C) extended down and screwed to the back of the sideboard.

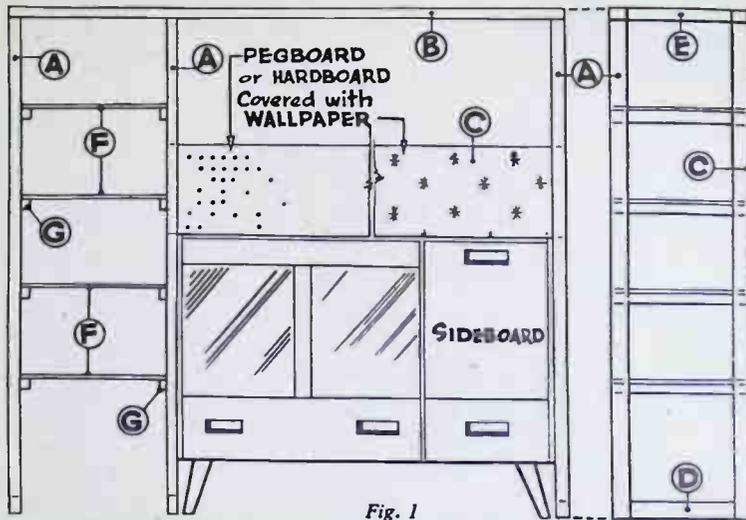
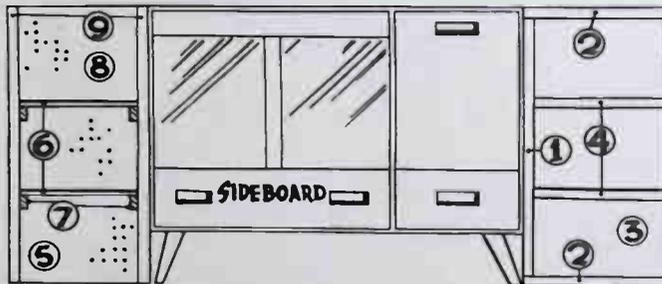


Fig. 1



FITMENT-Y

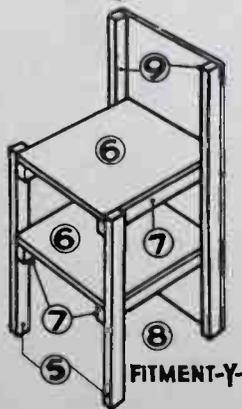
Fig. 2

FITMENT-X

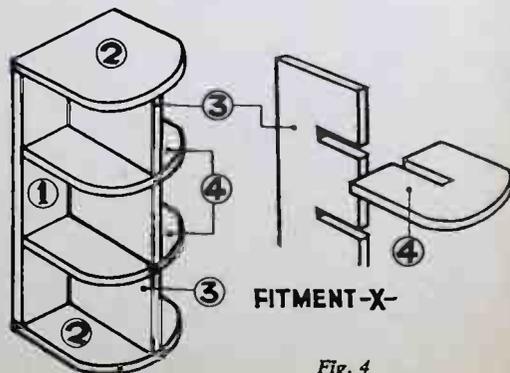
The shelves (F) consist of $\frac{1}{2}$ in. wood and should be secured to the supports with screws. The hardboard back (C) and the shelves (F) may be covered with wallpaper or Marleyfilm. The latter may be obtained from Hobbies Ltd., Dereham, Norfolk, or from Branches. It gives a lasting finish and can be easily cleaned.

The low partition is shown in Fig. 2. It consists of three units including the sideboard. Here again butt joints are used and details of construction are shown in Figs. 3 and 4. There is an alternative method of making the shelves (4) shown in Fig. 4. They can be halved into the upright (3) if desired. Otherwise make the upright (3) in three separate pieces and secure with glue and with nails through piece 1.

A painted finish is recommended, and the colour should blend with the existing scheme. Joints and blemishes may be filled and rubbed down. (M.h.)



FITMENT-Y



FITMENT-X

Fig. 4

CUTTING LIST

HIGH PARTITION

- (A). 1in. by 1 $\frac{1}{2}$ in. stripwood. 5ft. 6ins. long.
- (B). 1in. by 1 $\frac{1}{2}$ in. stripwood. 6ft. long.
- (C). Pegboard or hardboard. 4ft. 3ins. by 12ins.
- (D). 1in. by 1 $\frac{1}{2}$ in. stripwood. 16ins. long.
- (E). 1in. by 1 $\frac{1}{2}$ in. stripwood. 16ins. long.
- (F). 2 $\frac{1}{2}$ ins. by 19ins. by $\frac{1}{2}$ in.
- (G). 1in. by $\frac{1}{2}$ in. stripwood. 19ins. long.

LOW PARTITION

- (1). 37ins. by 18ins. by $\frac{1}{2}$ in.
- (2). 18ins. by 18ins. by $\frac{1}{2}$ in.
- (3). 36ins. by 17 $\frac{1}{2}$ ins. by $\frac{1}{2}$ in.
- (4). 18ins. by 17 $\frac{1}{2}$ ins. by $\frac{1}{2}$ in.
- (5). 1in. by 1 $\frac{1}{2}$ in. stripwood. 25ins. long.
- (6). 18ins. by 16ins. by $\frac{1}{2}$ in.
- (7). 1in. by $\frac{1}{2}$ in. stripwood. 18ins. long.
- (8). 37in. by 18in. by $\frac{1}{2}$ in. pegboard.
- (9). 1in. by 1 $\frac{1}{2}$ in. stripwood. 37ins. long.

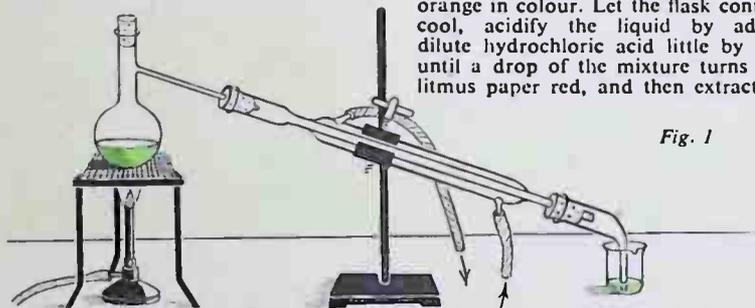
CHEMISTRY IN THE HOME

BY acting on dimethylaniline with sodium nitrite we obtain par-nitrosodimethylaniline (usually written p-nitrosodimethylaniline) and this is a starting point for the preparation of not only Methylene Blue, but of several other dyes and interesting chemicals.

Mix 24 c.c. of strong hydrochloric acid with 50 c.c. of water in a beaker and stir in 10 c.c. of dimethylaniline. When the latter has dissolved, stand the beaker in cold water. From a dropping funnel,

the flask pour a solution of 4 grams of sodium hydroxide in 150 c.c. of water and boil it. The beaker contains 10 c.c. of dilute (about 10 per cent strength) hydrochloric acid.

A little at a time, add 3 grams of p-nitrosodimethylaniline hydrochloride to the sodium hydroxide by momentarily removing the cork from the flask. The substance melts and must be allowed to disappear before more is added. When the addition is complete, continue boiling until the liquid is orange in colour. Let the flask contents cool, acidify the liquid by adding dilute hydrochloric acid little by little until a drop of the mixture turns blue litmus paper red, and then extract the



add drop by drop with thorough stirring a solution of 6 grams of sodium nitrite in 10 c.c. of water. Each drop will cause effervescence and this should be allowed to subside before adding more sodium nitrite. This part of the operation is best done in the open air, since the gases which are produced in small amount are harmful if breathed in any quantity. An orange-brown colour also appears with each addition of nitrite and this, too, must be allowed to disappear and change to yellow before adding more.

When all the sodium nitrite has been added, the liquid will be found to be full of a yellow solid. This is p-nitrosodimethylaniline hydrochloride. Let the mixture stand half an hour and then filter off the yellow solid, preferably using a filter pump. Wash it on the filter with two lots of 10 c.c. of methylated spirit, each containing 1 c.c. of strong hydrochloric acid. Remove the substance to an evaporating basin and dry it in a warm place.

Before we convert this into p-nitrosodimethylaniline, first let us make two other chemicals and two dyes from it. Let us start with the two chemicals. Rig up the apparatus shown in Fig. 1. Into

liquid by shaking with three lots of 10 c.c. of ether. Use a separating funnel for the last operation, running off the lower layer for retreatment with ether each time. Decant the upper ether layer into an evaporating basin.

Put the combined ether solution in the open air to evaporate. No flame should be allowed near the ether during any of the foregoing operations owing to its high inflammability. When the ether has all volatilised you will find a brown residue in the basin. This is par-nitrosophenol (p-nitrosophenol).

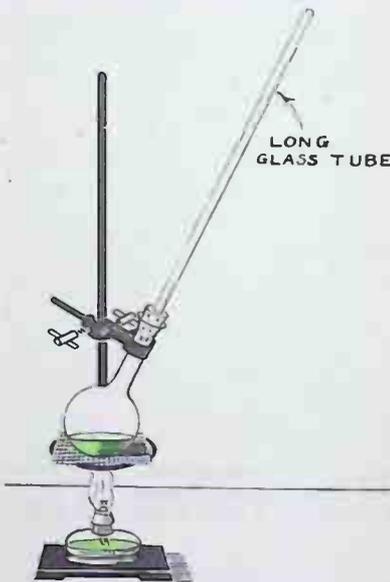
Nitroso compounds give an interesting colour reaction which serves to identify them. The test used is known as Liebermann's nitroso reaction. The compound we have just prepared serves well to illustrate the test. In a dry test tube, melt together a little p-nitrosophenol and phenol. Add a few drops of strong sulphuric acid (take care whenever using the strong acid and wash off at once any coming in contact with the skin) and warm gently. A blue colour appears. Let the liquid cool and pour it into about 20 c.c. of cold water. The colour changes to red. Slowly run in sodium hydroxide solution, stirring well. The liquid suddenly changes back

EXPERIMENTS WITH DIMETHYLANILINE

Part 3

to blue.

Having bottled the rest of the p-nitrosophenol for your stock, let us examine the dilute hydrochloric acid in the beaker which served as a receiver in the preparation. Evaporate this down to dryness on the water-bath. A white solid will remain. This is dimethylamine hydrochloride, having been formed from the acid in the beaker and the dimethyl-



amine which distilled over from the flask. We therefore, know that p-nitrosodimethylaniline hydrochloride on boiling with sodium hydroxide solution splits up into p-nitrosophenol and dimethylamine.

Dimethylamine itself can be liberated from its hydrochloride in the following way. Dissolve the solid in a little water in a test tube. Add some sodium hydroxide solution and boil. You will note a smell resembling both ammonia and fish. This is dimethylamine, which is a gas at the ordinary temperature. Hold a damp red litmus paper in the mouth of the tube. It will be turned blue, showing the alkaline reaction of the gas. While the liquid is boiling hold

● Continued on page 213

Made from scrap

Delicate Chemical Balance

CHEMICAL experimenting often calls for the weighing of minute quantities of material and to do this at all accurately, a delicate balance is needed. To buy an instrument of this type can be quite expensive, but it is a simple matter to construct a very efficient balance from odds and ends to be found in the junk box.

The balance consists of a small pan suspended by silk cord from a piece of flat spring. As material is added to the pan the spring is displaced and its progress downward is recorded on a scale fixed behind it. The length and also the strength of the spring determines the power of the balance and how much it will weigh.

A piece of thin watch mainspring is capable of measuring in grains, and if carefully made and calibrated, even to fractions of grains. Increasing the thickness or width of the spring or decreasing its length will enable you to weigh a greater mass.

Owing to the ease with which this balance can be made, it is a good idea to have several different sizes to cover the range of weights mostly used for one's particular requirements. Those capable of measuring just a few grains will probably be found the most useful, and it is not advisable to use this particular type for anything above 1 ounce.

The Apothecaries' and Troy ounce contains 480 grains, while the Avoirdupois ounce is only 437½ grains. If, however, you prefer the Metric system, you can calibrate the balance in grammes, and there are 15.43 grains to 1 gramme.

The sizes quoted in this article are for the smallest size balance to weigh a few grains, and it will be necessary to increase these slightly as the capacity of the instrument is increased.

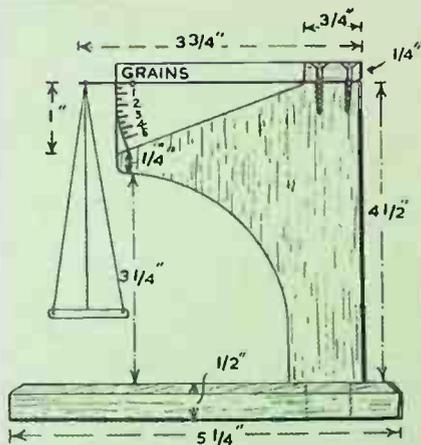
Mahogany is the wood generally used for scientific instruments, but walnut or some similar hardwood is quite suitable. Cut the baseboard 5½ ins. long, 2½ ins. wide and ¼ in. thick, and bevel or round off the top edge slightly.

The upright will not have to carry much weight, but it should be firmly fixed to the baseboard, so that it does not wobble about and give a false reading. It is best, therefore, to let it into the baseboard by making a mortise and tenon joint, although for the lightest balance it may be glued and screwed from the underside.

The shape shown in the diagram is cut with a fretsaw from a piece of wood 5 ins. long, 3½ ins. wide and ¼ in. thick.

The measurements given will enable the piece to be cut fairly accurately to the pattern. The arm projecting to the left acts as a stop and prevents the spring from getting strained unduly.

Pieces of old watch mainspring can be



obtained in various strengths from most watchmakers who would only charge a few pence or might even give them to

you. The springs will be coiled up, but they are easily straightened by pulling them through the fingers several times.

A little experimenting will be needed to determine which strength is most suitable to meet requirements. It is easy to change the springs — they are just clamped down tightly by a piece of wood ¼ in. long, ¼ in. wide and ¼ in. thick screwed on top.

The ideal pan for the smallest balance is a metal milk bottle top, which, owing to its lightness, will put very little strain on the spring. If this is too fragile, a small lid may be used, preferably of aluminium or a similar light-weight alloy. It is suspended from the spring by three lengths of fine silk.

To complete the balance a scale is fixed behind the spring as shown, and this can be a piece of white card, or, better still, a piece of thin plywood 3½ ins. long and 1½ ins. wide covered on one side with white paper.

The scale is easily calibrated by placing standard weights in the pan and marking the position of the spring with indian ink.

Before screwing the spring in position the woodwork should be given a coat of varnish or french polish to preserve it and also to give it a professional appearance. (A.F.T.)

● Continued from page 212

Experiments with Dimethylaniline

the mouth of the tube to the flame. The dimethylamine will take fire and burn. This and its fishy smell distinguish it from ammonia, which does not burn and for which dimethylamine could be mistaken on first examination. Dimethylamine is found in the brine which has been used to preserve herrings. It also exists in sugar beet.

Now for the dyes. Nigrisin (not to be confused with the better known dye Nigrosine) is made as follows.

Into a 250 c.c. round bottomed flask put 1 gram of p-nitrosodimethylaniline hydrochloride and 25 c.c. of water and attach a condenser, as shown in Fig. 2. Put a small piece of broken pot in the flask to promote steady boiling. The substance dissolves to a deep yellow solution. Boil the solution. It soon begins to darken to deep red and later to a red-black colour, showing dye formation to be taking place.

After two hours the boiling may be

stopped. Make a saturated solution of brine by shaking ordinary domestic salt (sodium chloride) with water until no more will dissolve. To the dye solution in the flask add an equal volume of brine and let the mixture stand for half an hour. The Nigrisin is precipitated as a black powder. Filter it off, preferably with the aid of a filter pump, and dry it in the oven.

Nigrisin will dye cotton without the aid of a mordant. Dissolve a little by heating with a few c.c. of water in a test tube, so that you have a full reddish-violet solution. Wet out some cotton yarn in warm water, squeeze it and put it into the dye solution and warm for a few minutes, at the same time turning the cotton about with a glass rod. The cotton will almost decolourise the dye solution, so readily does it take up the dye. Remove it, rinse in water and dry it. It will be dyed a full violet-grey shade. (L.A.F.)

Fit up a Camping Coach

AN interesting model railway feature which makes use of some otherwise discarded vehicle (or vehicles) and becomes a 'lineside' effect, is the 'camping coach'.

Camping coaches are found in quiet sidings near seaside resorts and beauty spots, where they are permanently 'anchored' and let off as accommodation to visitors.

The coaches shown in the photograph were found by the writer last year at Rhuddlan Station, North Wales.



By H. A. Robinson

Normally the vehicles used for the purpose are bogey and so refitted inside that only one set of steps is required from ground level, this being placed against a central door of one or other side.

Use 'square' characters (Fig. 1) as far as possible, which helps the work considerably. Draw the words out on paper first to get spacing and shape correct. Then copy on to the side of the vehicle. It is a good idea to draw the letters thin to start with and then 'fatten' up the lines with the finest of brushes.

Windows of camping coaches are curtained, a feature that can be copied with some kinds of model coach, while another effective item is the rubbish bin set beside each vehicle. As well as being

and the rungs (b) being glued in position and trimmed. The flight should be brightly painted in buff or sun colour yellows. It adds to the effect if rather more flights of steps than shown in the photograph are used.

For the best result on the model railway, set your camping coaches on some siding that runs rather away from other tracks and comes up against a picture frieze (Fig. 5). One or two small figures standing around also help, as does an open space in front. In fact, if carefully

CAMPING

SQUARE LETTERING FIG 1

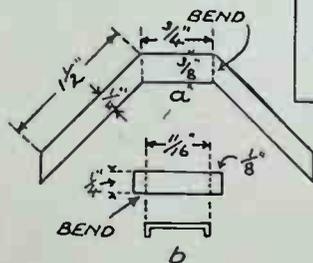


FIG 4

COMPLETED STEPS

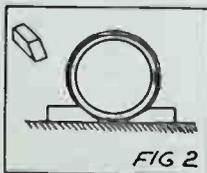
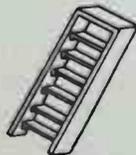


FIG 2

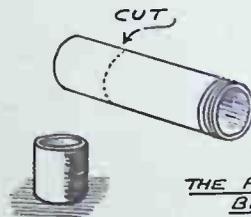
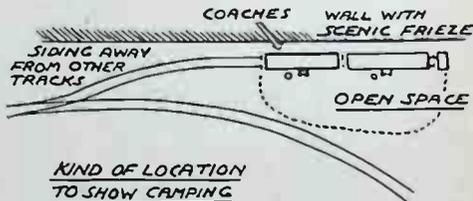


FIG 3

THE RUBBISH BIN



KIND OF LOCATION TO SHOW CAMPING COACHES TO BEST ADVANTAGE

FIG 5

The first feature of camping coaches which the model railway owner can easily copy is the inscription 'CAMPING COACH' in large gold letters along the side panelling. The size of the letters makes their putting on to gauge O stock fairly simple. They can be larger than on the coaches shown, with advantage; indeed, the writer has seen actual examples of much larger lettering.

braked, some of the wheels of camping coaches are usually scotched with wedges of wood to further prevent danger of movement (Fig. 2). The bins can be of card or the ends cut from the metal tubes in which medical tablets, 35 mm. film, etc., are cased (Fig. 3).

The approach steps can be made of card (see Fig. 4) with the $\frac{1}{16}$ continuous pieces (a) creased on the inside and bent

arranged, a camping coach 'scene' can be a very effective set-piece on any model line.

Tracing Tip

When using tracing paper to copy designs from *Hobbies Weekly*, keep the paper firm and secure with Sellotape along the sides. This will later easily peel off the tracing paper.

USES FOR DOWEL RODS

WE too often overlook the real value of the common dowel rod by merely regarding it as a medium for jointing. Made in various diameters, of differing strengths, it can be utilised for many purposes, usually reducing the cost of a job.

A simple example is shown in Fig. 1 where dowel rods have been used to form a shelf. It should be noted that this method is not only much cheaper than using shelving, but is actually better in some instances. When used for a pan shelf, the pans may be inverted, allowing air to circulate freely and any remaining moisture may drain away. Construction is extremely simple, too, for you only need a rail at each end, drilled for the rods and with two smaller holes for

tion of the measurements it could easily be made larger. The dowel rods are of graduated lengths, with the largest in the centre and made from rods $\frac{1}{4}$ in. in diameter.

By S. H. Longbottom

The base should be drilled before bevelling, marking out so that the pegs are $\frac{1}{2}$ in. apart, starting $\frac{1}{4}$ in. from each end, using a piece of waste material on the underside. It is quite a simple matter to prepare one or two bases at the same time if you wish to make a few gifts. The base and pegs should be thoroughly cleaned up after preparation, but left

unpolished. A touch of waterproof glue will keep the pegs in position.

Figs. 3 and 3a show an easily constructed book trough. Two end pieces of $\frac{1}{4}$ in. material are required, measuring 9 ins. by 4 ins., and these are worked together as shown in Fig. 3a. Note that four dowel rods are fitted to take the books and the centres for the holes are clearly shown. You will need dowel rods about 15 ins. in length of $\frac{1}{4}$ in. diameter. The design shown is quite simple to produce and, no doubt, you will appreciate that there are many possible variations if you wish to design something distinctive of your own. The trough may be stained and polished, or may be painted in gay colours to match your particular scheme.

All these articles are very quickly made, and require little material. Often there are lengths of dowelling left over from some other job that will be sufficient to make something of this character, yet give a sturdy finish equal to solid material.

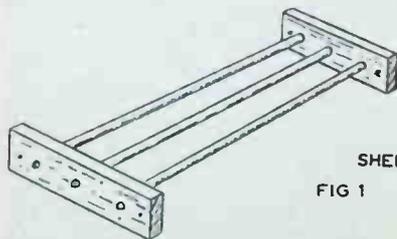


FIG 1
SHELF

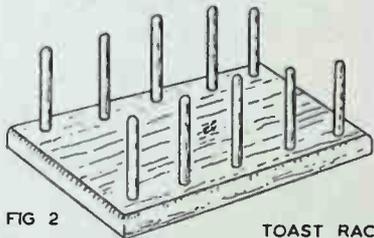


FIG 2
TOAST RACK

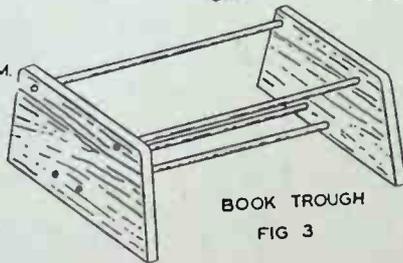
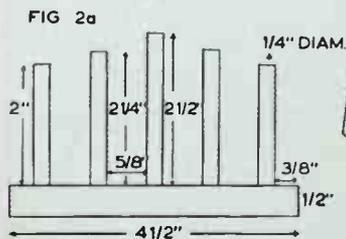


FIG 3
BOOK TROUGH

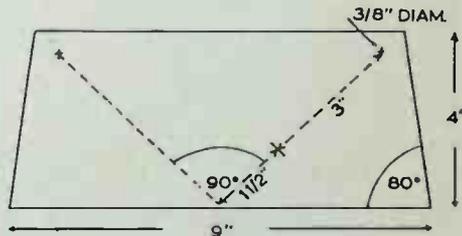


FIG 3a

screws. In most cases, providing the shelf is not too wide, $\frac{1}{4}$ in. rod will be quite suitable. The rails, with rods fitted, can be fixed inside a cupboard and an airy shelf is very quickly made.

The chief point to remember when making articles from dowel rods, is that the supporting sides should be drilled together and a piece of waste material cramped underneath to avoid any splintering. The bit must be kept perfectly square while boring the holes and a try square placed on the material will serve as a good guide.

Next we have a simple toast rack as shown in Figs. 2 and 2a, requiring a small base of $\frac{1}{4}$ in. plywood, bevelled and rounded at the sides, and measuring 3 ins. by 4 ins. This rack allows for four pieces of toast, but with a little modifica-

THE jigsaw shown full size on page 223 is intended for the baby of the family, and the animals are cut out in one piece, so that they can be used apart from the puzzle. You will be quite surprised to see how quickly the youngsters learn to fit the pieces together.

Transfer the shapes, by means of carbon paper, to $\frac{1}{4}$ in. thick plywood. Cut them out with a fretsaw, leaving each animal in one piece. Clean up the edges with glasspaper and paint with plastic enamel. The animals should be coloured as realistically as possible, and the other shapes should be bright. Use reds, blues and yellow for preference.

An 'Animal' Jigsaw

The whole puzzle can be fitted into a shallow tray made from plywood and stripwood. If it is intended as a present, the puzzle and tray can be enclosed in a clear plastic wrapping. (M.p.)

- ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
- ★ Next week we shall give a free ★
 - ★ design for making a model fort — ★
 - ★ an ever-welcome gift for youngsters. ★
 - ★ Also making a 3-valve radio for ★
 - ★ £2! ★
- ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

A page for photographers

MAKE A UNIPOD

ADAPTER BUSH IF
REQUIRED

$\frac{1}{4}$ " DIA. WHITWORTH
BOLT

DRILLED $\frac{3}{32}$ "

UNIPOD APPROX.
4" 6" BY $\frac{7}{8}$ " DIA.

similar cameras with a viewfinder of the reflector type, but not cameras with an eye-level finder only, which would require an inconveniently long support.

By *F. G. Rayer*

The top of the upright is drilled to be a secure fit for a 2in. by $\frac{1}{4}$ in. Whitworth bolt. The thread on this is suitable for cameras with an English thread tripod bush. To convert for the larger bush sometimes found, the usual adapter, available from any photographic shop, is screwed upon the bolt.

In use, the unipod is screwed into the camera tripod bush, the camera being held in a comfortable yet steady position. The additional support thus provided largely removes camera wobble, and is particularly helpful in very poor light, when exposures of $1/10$ th or $1/5$ th second may be required. It also gives the opportunity of using smaller apertures in good light, thereby increasing depth of focus, so that objects at a range of distances may be rendered sharply on the negative. With a telephoto lens on the camera, for nature photography, it provides the additional support needed to secure a steady image, and can be moved or brought into use immediately, when the camera is attached.

The unipod is not suitable for long time exposures, unless the back of the camera can be rested against a wall or other support, or the base of the unipod thrust firmly into the ground. In such cases the shutter should be operated from a flexible cable release, to avoid shaking the camera.

Signing Portraits

HOW nice it is to be able to give photographs of yourself or your friends signed photographically in yours or their own handwriting. It is really quite simple. No special apparatus is required except a portrait attachment for the camera.

The usual place to sign a portrait is in the bottom right-hand corner, but all photographs are not portraits. Again you may not wish to disfigure the picture, so you could sign in the white margin. It is better, therefore, to have several signature negatives giving a range of positions.

First obtain a piece of white cardboard about eight times the size of your negative; thus, if yours is a $3\frac{1}{2}$ in. by 2 $\frac{1}{2}$ in. camera, you will want a sheet of cardboard 28ins. by 20ins. Now very lightly draw a line in. up from the bottom edge. This will represent the white margin on your contact print. Now sign your name as large as possible in the in. margin at the bottom right-hand corner. Also in any other position desired, e.g., top left-hand corner or in the sky area.

Photograph the signature, focusing the whole size of the cardboard on to the one negative. Develop and fix in the usual way. You now require several pieces of opaque card the same size as the negative, each with a cut-out portion in the same position as the signature on your negative. Cut the holes only slightly bigger than the size of the signature and cut up the negative allowing enough film all round for the negative to be fixed to the underside of the opaque card with sellotape.

In use either for contact prints or enlargements, print the signature first, then the picture. Develop and fix in the usual way and you have your personally signed photographs. Don't forget to print the picture with an ordinary mask if the signature is in the margin and an appropriate mask for any other position.

(T.M.)

WHEN using shutter speeds of $1/25$ th second or longer it is very necessary that the camera be held quite motionless. Though a tripod is best for this, there is the difficulty of carrying, erecting and moving it, especially in crowds. This can be overcome, and a good measure of steady support provided, by using a unipod, or single upright which is fixed rigidly to the camera at the top, and rests firmly on the ground.

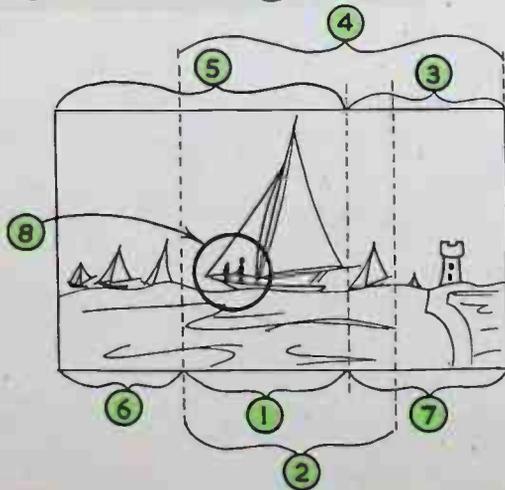
The unipod illustrated is extremely simple to construct, and is carried like a long walking stick. The upright itself is about $\frac{7}{8}$ in. in diameter, though this is, of course, not very critical. The length is such as to bring the camera at a convenient chest height. This suits reflex and

'Splitting' the Negative

WHEN taking photographs of open scenes, always endeavour to get more into the picture than you actually envisage using. Then, on an enlargement at home in your leisure time try to make up several different pictures. You will require two large white cardboard 'L'-shaped pieces, and with these, mask the enlargement and mark with pencil lines any desirable picture area. Then enlarge as required.

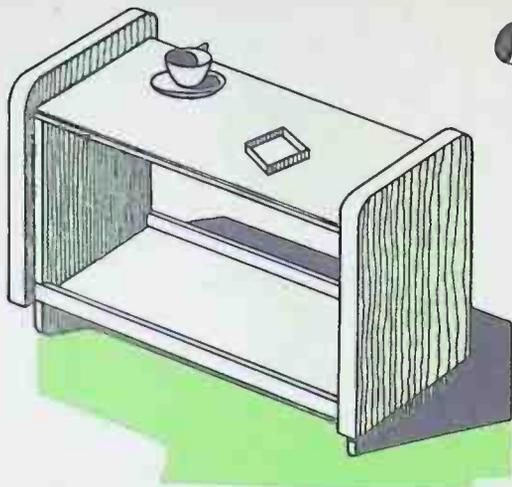
In the picture illustrated you could actually make at least eight different prints and enlargements. Masks made from opaque paper can be used for both contact prints and enlargements.

(T.M.)



Chair-side Stand

Handy for
that cup
of tea and
ash-tray
says
A. Fraser



THERE are many occasions when one feels the need to relax in an easy chair with a cup of tea and a cigarette. However, the arm of the chair (especially if it is an expensive model) is not the place to deposit cups and ash-trays. Before the accident happens, recognize the right solution — a chair-side stand.

The stand described here is extremely handy for that cup of tea and the ash-tray. Moreover, it serves another purpose. The tray or trough which forms the bottom of the stand provides a perfect receptacle for magazines and newspapers.

In making the stand, start with the sides. The first piece to cut out is that shown in Fig. 1. This should be 18ins. by 12ins. 2ins. from the bottom a groove should be made to house the bottom board of the stand. This should be $\frac{1}{2}$ in. wide and $\frac{1}{4}$ in. deep. If you have no grooving plane, use a saw and a chisel to clear out the wood.

This end piece is 1in. thick. The wood can be ordinary board or plywood. Ordinary common wood would do if this is later veneered on the inside and round the edges. Note that the bottom corners are rounded off.

Next, make a piece as in Fig. 2. This consists of two pieces of $\frac{5}{32}$ in. plywood, separated by 1in. by 1in. square stripwood round the edges. This should be fixed with glue and pins. Before doing so, however, one should glue and pin the inside plywood to the other side wall which has just been made. Then complete the outer side and glue veneer strip right round the thick section edge. The completed side of the stand should then appear as in Fig. 3. Two of these will be needed, one for each end of the stand.

Now saw out the bottom of the stand. This should be 12ins. by 22ins. by $\frac{1}{2}$ in. thick. Plywood is best. See that it is truly rectangular. Test it in the grooves cut in the stand sides, to ensure that it fits properly.

Next, cut the plywood for the top of the stand. This will be 12ins. wide by

After having glasspapered the parts, they can be assembled. First glue the grooves in the sides and fix in the bottom of the stand. Then attach the top, using glue and nails or screws (countersunk) into the top edge of the inner section of the sides.

Next, attach the rails using glue, and pin through into the edge of the side section. Pins and glue are also needed to fix the plywood bottom to the under edge of the rails. Drive the pins well down and fill in with plastic wood. Then chamfer and round off the plywood bottom edge so that it is unobtrusive.

Make sure the structure is standing well and true, then leave the glue to set.

A piece of Marleyfilm would be ideal for fixing to the top. Clean up the whole stand with the glasspaper block. Try to get the bottom edges of the ends (on which the stand rests) as smooth as possible. Half-round metal strip, fixed with countersunk screws, will make a good job and leave carpets undamaged when the stand is thoughtlessly dragged over the carpet.

The finishing of the wood is left to the

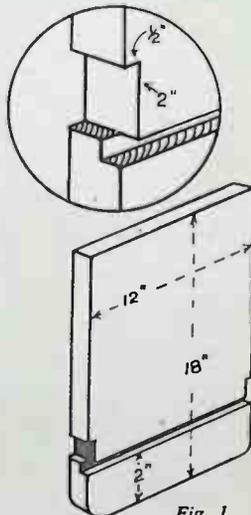


Fig. 1

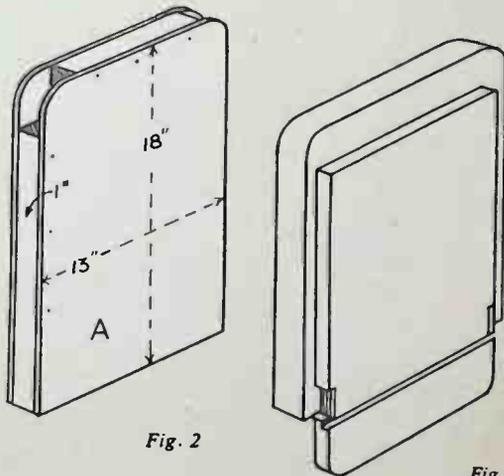


Fig. 2

Fig. 3

23ins. long. Note that it is longer than the stand bottom.

The bottom rails are made next. These should be of good quality wood (not plywood), 2ins. by $\frac{1}{2}$ in. by 23ins. long. Chamfer and round off the outer upper edge, except where the rail engages into the side. Make another similar rail for the other side of the stand.

reader. The wood may be stained or unstained, and the surface a dull one or a high-gloss one, according to taste.

If veneering has been used in connection with the woods, as recommended, and the stand given a careful finish, then a very attractive and useful piece of furniture will be the result.

Thought-Reading Trick

THIS is another card trick where the performer can quickly find a card chosen by a member of his audience without needing any special apparatus.

A pack of cards is fanned out, held face downwards, and presented to a volunteer from the audience, who is asked to take out one card, retaining it and noting its value.

This done, you reassemble the cards into the full pack, remarking that it is

three cards as stated, then withdraw, say, four aces and four kings — or you may use other picture cards — placing one of these groups at the top of the pack and

By S. H. Longbottom

the other group at the bottom. Fig. 1 shows how the cards are arranged before presenting them to a member for his choice.

can make it appear even more difficult. For example, suppose we said we could find four selected cards! This is not very difficult at all, in fact, it makes things easier for we do not have to remember to remove any cards before commencing the performance. You may ask one friend to remove four cards, or four friends to remove one card each. You must make certain that they lay them on top of the piles of four, and it does not matter if two are placed on the same pile, for they will always reappear between the two picture cards.

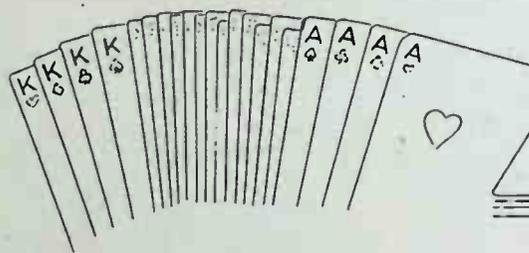


FIG 1

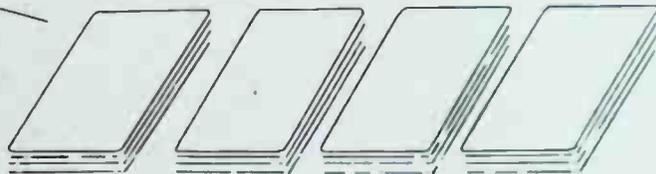


FIG 2

some time since they were well shuffled and you think this may be an appropriate time. Actually, this is part of the trick, and to accomplish it, you deal out four cards from the top of the pack, laying on the table from left to right. Now continue to make four piles of cards, using the same order.

When the four piles have been made, ask your victim to place his card on top of any one of the four piles. He may then place any other pile on top, and another until there is only one stack remaining.

Take up the full pack from the table, asking him to repeat to himself three times the value of the card, when you will endeavour to find it. Looking through the pack you will quickly find the chosen card, which is withdrawn and passed to a surprised friend for confirmation.

Here is the solution

First of all, three cards must be removed from the complete pack. You will remember that your volunteer takes one, and by removing another three we may be perfectly sure that we can deal out four piles with an equal number of cards.

This is important, for we also want four selected cards at the bottom and four selected cards at the top of each pile. So before starting the trick, remove

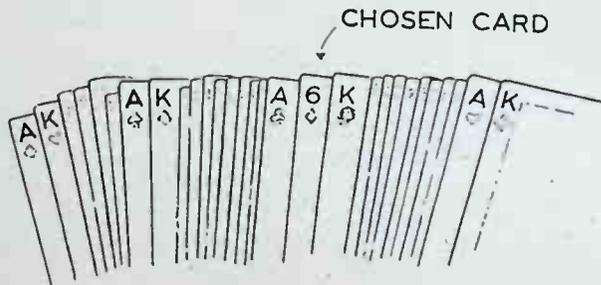


FIG 3

When dealing out the four piles, as in Fig. 2, the first four dealt will form the bottom of the piles and will all be aces. On completion of the dealing, all the top cards should then be kings.

Your member places the chosen card on any pile, followed by a pile on top, and it should be obvious that the card is now sandwiched between an ace and a king. When you look through the cards you will see three pairs of aces and kings, but the fourth pair will have the chosen card between as in Fig. 3, and, of course, the patter is only intended to baffle your audience.

Having mastered the elementary principle of this trick, let us see if we

You may also do the trick by finding three cards — when one card should be removed at the start, or finding two chosen cards — when two should be removed. It is essential that the packs be dealt out with our arranged picture cards at the top and bottom of each pile. As a further modification, it is sometimes advisable not to use two picture cards, for they may appear too obvious if the pack is afterwards examined. Why not have four picture cards at one end of the pack and, say, four five-spots at the other end?

You are often advised not to repeat your tricks at the same performance, but in this instance you cannot repeat the trick without rearranging the groups of four.

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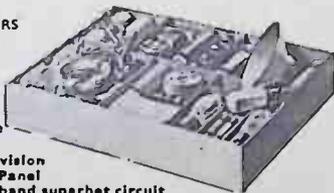
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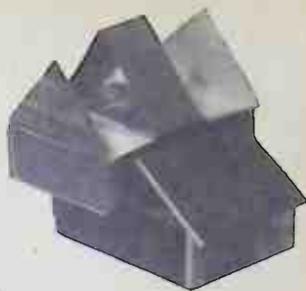
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Reviewed by
the Editor

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Caravanning and Camping for Motorists

by John Yoxall

THIS is a book of essentials and is written in practical language, clearly indicating the author's experience. Despite its practical approach, however, and the author's avoidance of any temptation to overwrite or highly colour his theme, the pages convey a glow of enthusiasm for the fresh air of the open countryside which cannot fail to leave a strong impression upon the reader, whether or not he may be the proud possessor of a car and caravan.

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by H. Banus

WITHIN recent years lightweight versions of industrial electric tools have become increasingly available for the home handyman and this book sets out to show him how to make the best use of these invaluable aids. All functions of the portable power tool are fully dealt with, from drilling to turning and a valuable chapter on safety precautions and maintenance is included.

This book, which is well illustrated, should prove most welcome to the many handymen and hobbyists now possessing some form of power tool.

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The British Journal Photographic Almanac 1957

THE appearance of this comprehensive authority on all the latest aspects of the photographic world will

be welcomed by all camera minded. The high standard of presentation, information and editorial review is fully maintained and the pictorial supplement is, once again, an outstanding contribution.

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Kuklos the Cyclists' Annual 1957

THE appearance of the 1957 *Kuklos Cyclists' Annual* reminds us that many will shortly be a wheel for the summer tour, and this hardy annual is published in time to give all wheelers its usual excellent service in the furtherment of cycling as an interesting, cheap and healthy pastime. Its fund of information is large and comprehensive — from advice on the choice of a bicycle to over 1,500 recommended and up-to-date holiday addresses.

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Radio Control Mechanisms

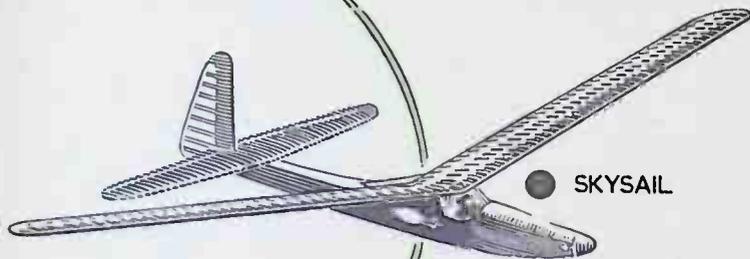
by Raymond D. Stock

UNLIKE the majority of text-books on Radio Control, this work ignores the purely radio side of the subject and deals solely with the mechanical coupling mechanisms between the radio gear and the controls of the models — a section of the subject usually dealt with in brief terms. It explains in the most lucid style and with many diagrams and illustrations how relatively simple radio equipment can be used to produce a multiplicity of controls. Because of its treatment of an aspect of radio control hitherto denied specialised publication, all radio control enthusiasts will need this addition to the available literature on the radio control of models.

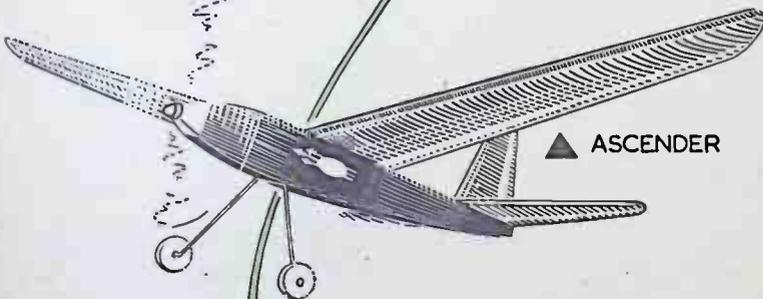
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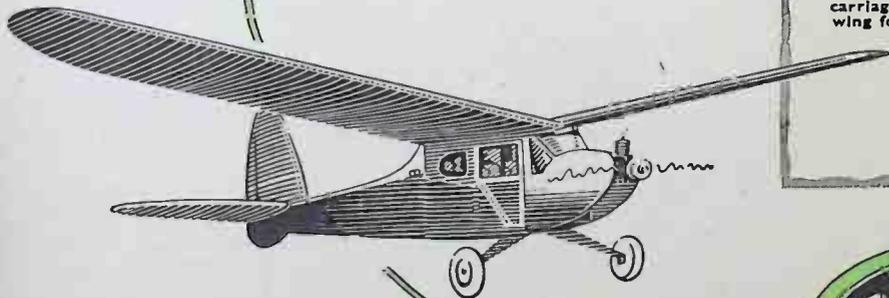
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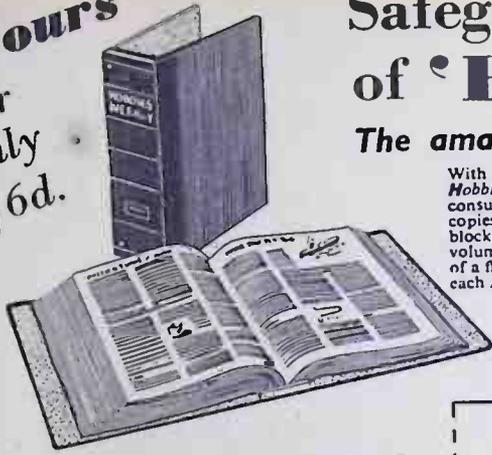
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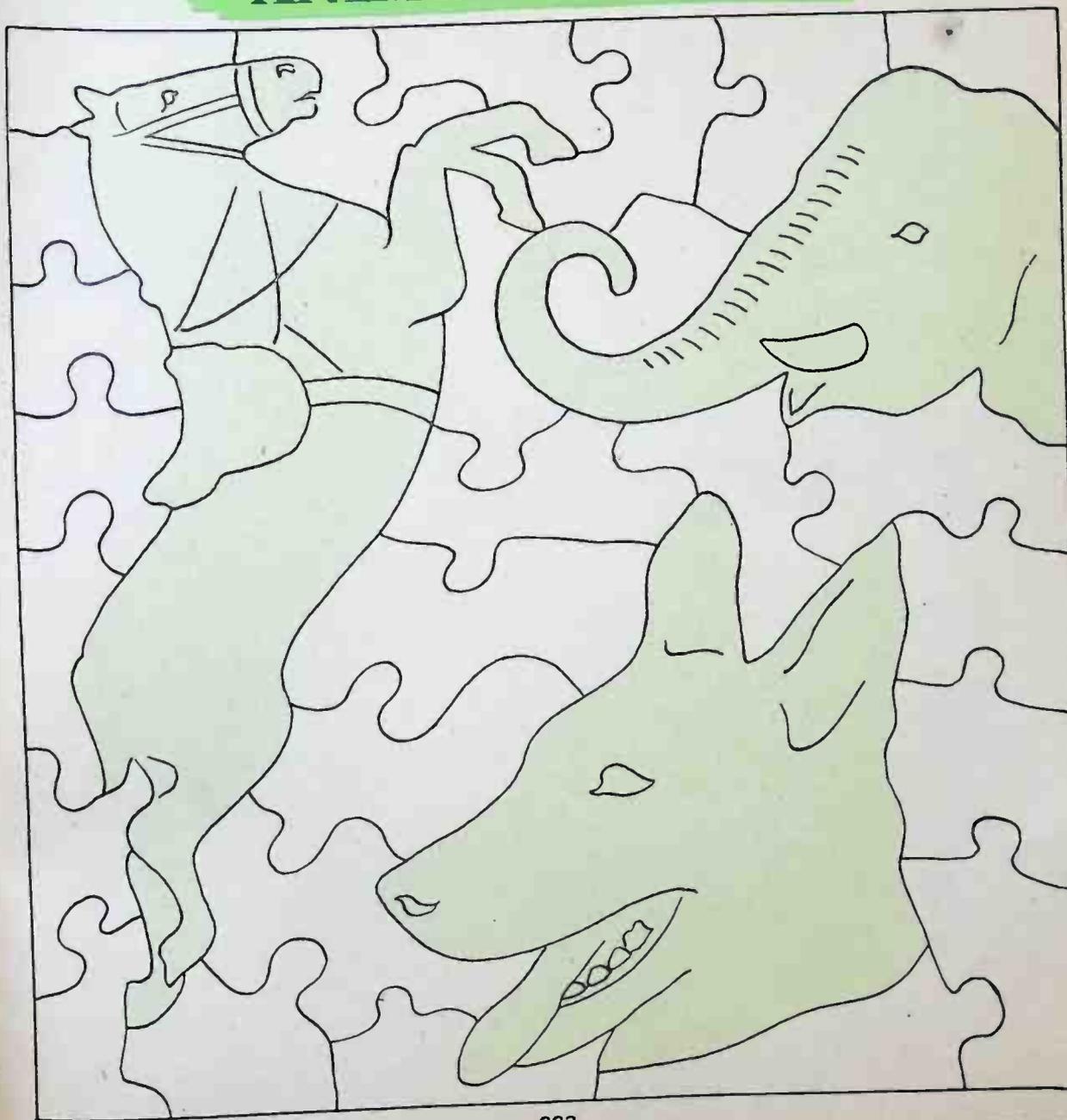
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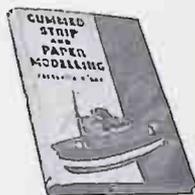
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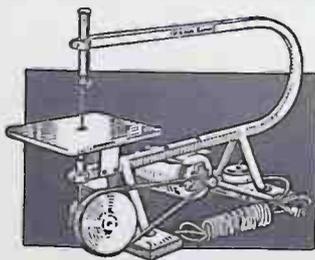
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