

HOBBIES WEEKLY

FEBRUARY 12th 1958

VOL. 125

NUMBER 3250

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

FREE design inside

Make this

GRAND PIANO

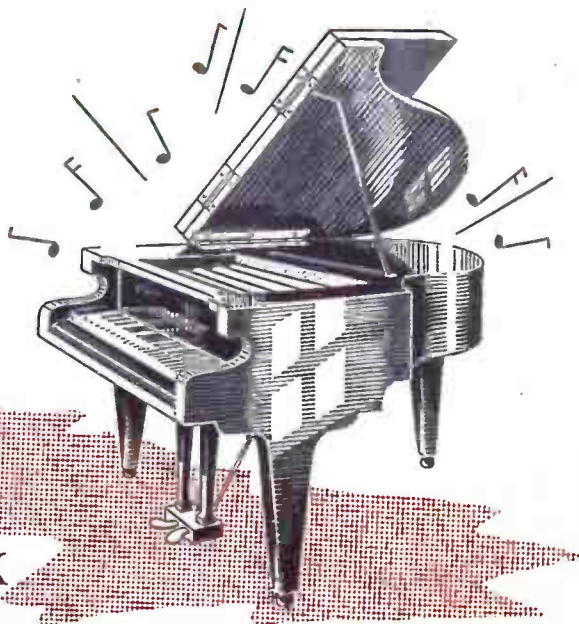
MUSICAL CIGARETTE BOX

THIS charming design for a musical box is intended to hold cigarettes, trinkets, etc. It is based on the authentic lines of a modern grand piano, and makes an excellent choice as a gift which can be put to practical use. When the lid of the piano is raised, the music starts and the compartment for cigarettes, etc., is revealed. The music stops when the lid is lowered again.

In Hobbies kit there is a specially printed plastic keyboard which adds

much to the correctness of the finished article from a modeller's point of view.

The outlines of the various pieces should provide no difficulty to the average fretworker. There is only a little simple shaping to be done with a knife, apart from the fretcutting, the construction of the piano is quite straightforward.



All parts are shown full size on the design sheet to simplify marking out and cutting. It will be noted that piece (9) is cut from the centre of piece (8), and will subsequently be screwed in the same position to piece (7). This is in order to obtain easy access to the musical movement in case adjustments are necessary at any time.

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

World Radio History

4 1/2 D

Trace the various pieces from the design sheet and transfer them to their appropriate thicknesses of wood by means of carbon paper. Make sure that all parts have been accounted for before cutting out with the fretsaw and then clean up well with glasspaper.

Fig. 1 shows the start of assembly

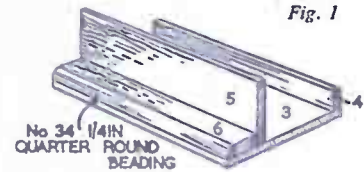


Fig. 1

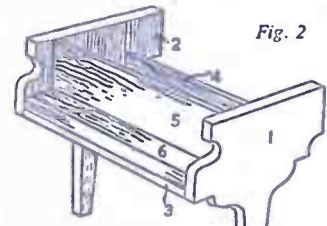


Fig. 2

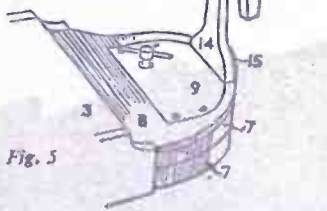


Fig. 5



Fig. 6

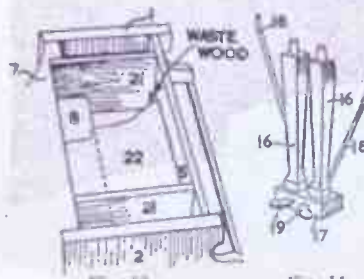


Fig. 7

Fig. 11

and in all cases glue only is used throughout. There is no need for pinning on a model of this type. Now add pieces (1) and (2) as seen in Fig. 2. The portion which accommodates the musical movement is made up next, consisting of pieces 7 and 8 as shown in Fig. 3.

The sections thus far completed as seen in Figs. 2 and 3 are now glued together to complete the assembly as shown in Fig. 4. Note that the rounded portions of pieces (7) are set back slightly from piece 2 to allow for the addition later of a veneer.

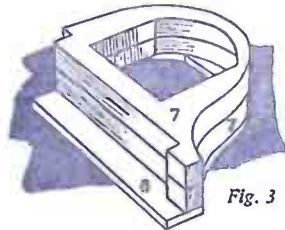


Fig. 3

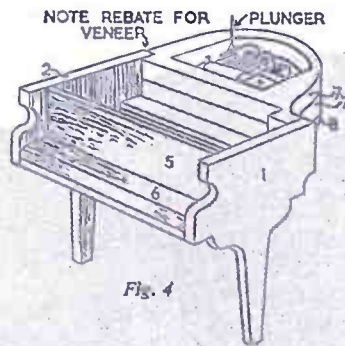


Fig. 4

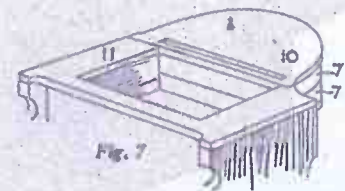


Fig. 7

Fig. 4 also shows the musical movement in position. The movement is screwed to piece (9) with the winder spindle projecting through the hole provided. Dotted lines on piece (9) (seen on the design sheet) show the approximate position of the movement. Piece (9) is now screwed to piece (7) and the underside view is shown in Fig. 5. Make sure that the movement is located so as to give easy and trouble-free working.



The stay in place, holding up the lid. The compartment will hold 15 cigarettes comfortably.

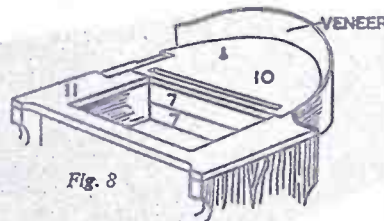


Fig. 8

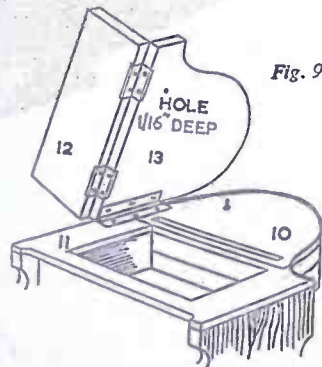


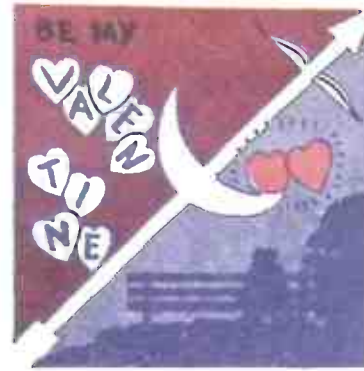
Fig. 9

For the third leg of the piano, pieces (14) and (15) are glued together and shaped as shown in Fig. 6. This is now added as seen in Fig. 5.

Bend the arm of the stop mechanism across the musical movement (Fig. 4), and fit the plunger, which is made from a piece of wire. The loop of this is slipped over the end of the arm as shown, and

Continued on page 323

The Customs of February 14th



By J. A. Chalk

FOR many, February 14th is now just a date on the calendar. Were it not for commercialism Valentine's Day would probably lose its romantic association for all, but against that, because of commercialism future collectors of the cards will have many fine specimens from which to select. Actually the choice should be large for it has been estimated that over eleven million cards will be posted this year. It is interesting to compare this figure with that for the year 1882 — just over one and a half millions.

Through collections — a private collector exhibited over 1,000 nineteenth-century cards in a Bradford museum in 1956 — the modern history of the Valentine card can be traced. But the history of the Valentine traces back much further than that.

Uncertain origin

From the Roman era, men, as well as the maidens, have awaited Valentine morning for the surprises that it can bring forth. Although the day bears the name of St. Valentine, a third-century martyr who died on February 14th, there is no definite connection between this Roman citizen and the custom of exchanging loving greetings and gifts. The custom may well have arisen because it was once widely believed that on that day of each year the birds began to mate, or possibly because on that day Romans used to celebrate in honour of their goddess of love and during their celebrations eligible young men and women were paired off by drawing names from a hat. This tradition reached Britain, of course, with the Roman legions.

The Valentine card, as known today, is poor indeed when compared with the ones that caused the flutters in bygone days. During the eighteenth century

these love tokens were hand-made and of a most elaborate design. Many layers of different paper were used in the make-up and then all were carefully painted. At that time the token seldom contained any words at all. In the nineteenth century, the card, though now more often manufactured than hand-made, was still very impressive. It was frilled and embossed, very sentimental, and included protestations of love. Unfortunately the cards gradually became far too sentimental until eventually the manufacturers went to the other extreme and produced cards that were vulgar, rude and hideous in design. Today the cards sent are often inclined to be humorous, sometimes animated — but the old-fashioned type are returning.

Continued from page 322

Making the Grand Piano

free movement allowed. The plunger should be left 1 in. or so longer than is really necessary until it has been inserted through the hole in piece (10), when final adjustments can be made and surplus wire cut off after the lid has been fitted and the action tested. The exact positioning of the arm and plunger is therefore a matter of trial and error, but location should be such as to give a smooth working of the mechanism at all times.

Pieces (10) and (11) are next glued in place (Fig. 7). Then cut a shallow recess in pieces (10) and (11) to take the hinge which secures the lid (13), as seen in Fig. 8, which also shows the addition of the veneer which covers the edges of pieces (7), (8) and (10). Now recess pieces (12) and (13) for hinging, and hinge this lid assembly to the body (Fig. 9). Notice the groove in piece (10) in which will lay the lid stay made from dowelling.

The interior of the container is finished off by gluing pieces (21) and (22) in position. Notice here the addition of corner blocks to support piece (22) (Fig. 10).

The make-up of the piano pedal equipment is shown in Fig. 11. Pieces (16) are shaped and two rounded tenons at the top are inserted in the holes drilled in the underside in piece (3). Alternatively cut off the tenons and glue pieces (16) in position. At the bottom, pieces (16) are tenoned into piece (17). The pedals are cut from 1/4 in. wide copper or brass strip with a metal-cutting blade

During its history the card has not been the only method of conveying greetings, for in its earlier phase the Valentine was often a useful object that had been delicately hand-carved. They took the form of butter prints, combs, knitting sheaths, snuff boxes (for the men), lace bobbins and the well-known spoons. These articles were quite often sent at any time of the year as a sign of love, and were not sent secretly as is the usual Valentine method, but rather as an addition to the prospective home.

The young men of Wales particularly excelled in carving these gifts, especially the spoons. Usually they were almost works of art and can be found in many museums. As a matter of interest, the term 'spooning' is derived from this practice.

A special boxed kit (No. 3250) for making the Grand Piano Cigarette Box contains wood and all materials including wire, hinges and printed keyboard. Price only 12/6 from branches, etc., or Hobbies Ltd., Dereham, Norfolk (post free). Musical movements are 18/3 extra. Choose from these two titles.

Jingle Bells	Auld Lang Syne
O My Papa	Silent Night
Blue Danube	Limelight
Vienna, City of My Dreams	Moulin Rouge
The Harry Lime Theme	Tales from the Vienna Woods
Brabans' Lullaby	Swedish Rhapsody
Parade of the Wooden Soldiers	Bells of St. Mary's
Auf Wiedersehen Merry Widow	Blue Bells of Scotland
	Irish Eyes are Smiling

in the fretsaw. To facilitate cutting, fix the strip to a thin piece of wood with drawing pins, and afterwards shape with a knife point and push the pedals in place with pliers. The wire struts (18) are pushed in the holes drilled in pieces (17) and (3).

Castors for the legs are formed from Hobbies No. 80 knobs, which fit in holes drilled in the legs. Alternatively they could also be trimmed and glued on direct or made from shaping odd pieces of wood.

For a design of this nature, probably the best finish would be with staining (light or dark as preferred) and a high polish. If paint is used, we suggest cream.

Finally, glue the keyboard in position and line the interior of the cigarette or trinket compartment with flock powder or baize.

MAKING GOOD PRINTS

WHEN activity out-of-doors is curtailed, there is an excellent opportunity for the preparation of good enlargements. It is therefore proposed to cover the more interesting and important aspects of this. Quite a number of the factors involved, such as finding the exposure, using a suitable type of paper, and developing, apply equally to contact printing. The photographer who has not yet built or bought an enlarger can keep this in mind.

In both enlarging and contact printing, the most suitable exposure has to be found. If the exposure (or printing time) is too short, the enlargement or print will be very weak. On the other hand, a long exposure will give a print so black as to be useless. To save time and avoid wasting paper, some method of finding the best exposure is therefore required. The 'test strip' method is suitable for this, and requires no special equipment.

A 'test strip' print is merely one which has been given a series of exposures of different duration. For example, 5, 10, 15, 20, 25 and 30 second exposures may be given, all on one piece of bromide paper. When the paper is developed, one of these times will most probably be

what similar density. For example, if the picture is divided vertically into six sections, as shown, each section will contain dense, middle-toned, and thin areas. The best exposure can thus be decided.

But if the negative were divided horizontally, some of the test exposures would lie on the dense sky (A), some on

seconds, strip 3, 20 seconds; strip 4, 15 seconds; strip 5, 10 seconds; and strip 6, 5 seconds.

(b) The lamp may be switched on with the bromide paper fully uncovered. After 5 seconds, strip 1 is covered up. After a further 5 seconds, strip 2 is covered, and so on, until the whole area has been dealt

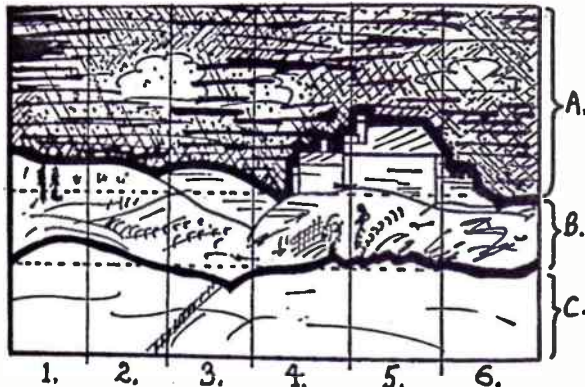


Fig. 1—Exposure tests

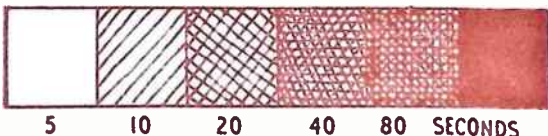


Fig. 2—How density increases

suitable. A complete print can then be made with this exposure.

To secure good results with this method, it is necessary to remember that most outdoor shots have dense skies, and relatively thin foregrounds. A negative of this type is represented in Fig. 1. (A) is sky, and very dense — this will be almost white on the finished enlargement. (B) is the middle distance, which includes roads, street and country scenes, etc. This is moderately dark, on the negative, and will probably be the most important part of the picture. (C) is the foreground, usually thin, with perhaps only a little detail. Because it is thinnest of all on the negative, it will give the darkest part of the finished enlargement.

With actual negatives, the change from foreground to middle distance will often be gradual. However, it is still important to remember that the test strips or test exposures should each contain parts of the picture which are of some-

the central part (B), and some on the foreground (C). As a result, the test exposures could not be compared with each other, to find the best printing time.

When first making such tests, it is a good plan to use a whole sheet of sensitive paper. This sheet is placed on the enlarger baseboard or easel, the enlarger lamp being switched off. A large sheet of card is used to cover up the sensitive paper, a portion at a time, to make the test exposures. A clock with second hand is necessary for timing, and each of the following systems is satisfactory:

(a) The sensitive paper is completely covered, and the enlarger is switched on. The card is then drawn aside to expose strip 1. After, say, 5 seconds, the card is moved to expose strip 2. When a further 5 seconds have elapsed, strip 3 is exposed, and so on, until the card has been drawn completely aside. Strip 1 would thus have received 30 seconds exposure; strip 2, 25

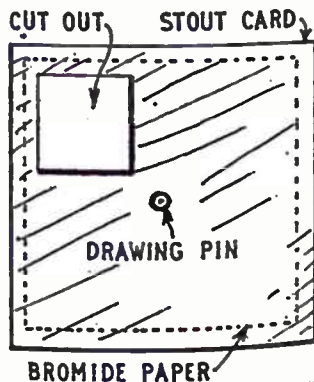


Fig. 3—How to obtain four test exposures

with. Exposure times will then be the reverse of the above — 5 seconds for strip 1; 10 seconds for strip 2; 15 for 3; 20 for 4; 25 for 5, and 30 seconds for strip 6.

(c) Movement of the card can be timed so that each strip receives twice the exposure of the former strip, e.g., 5, 10, 20, 40, 80, and 160 seconds, with six strips. This covers a much longer time (5 to 180 seconds, as compared with 5 to 30 seconds) but is awkward to time until experience has been gained. It is recommended the beginner adopt

method (a) or (b) and keep to it, until practice has been gained. If any negatives are very dense, or the illumination is poor, 30 seconds will be insufficient. This can be overcome by adopting method (c), or by giving each strip 15 seconds instead of 5.

Fig. 2 illustrates how density is built up as the exposure time increases. At the left, 5 seconds is much too short, so that the sensitive paper shows no detail. At the right, 160 seconds was much too great, so that the paper becomes completely black, when developed. Somewhere between these extremes will be a satisfactory section, and a whole print can then be made with this exposure.

When a little experience has been gained, paper may be saved by cutting a narrow piece (say 1/4 in. to 1 in. wide) and laying this along a typical portion of the picture area, as shown by the dotted lines opposite section (B) in Fig. 1. This will give a series of test exposures like those in Fig. 2. One sheet of sensitive paper, cut in this way, will allow a large number of tests to be made. This is a worthwhile saving when big enlargements are made.

When it is desired to use an exposure which is best for some very important feature, such as a person's face, the test strip method is not very convenient. The head itself may not be large enough to be divided into strips, while strips made all along the picture area may include houses, trees, sky, and other items very different in density.

In such cases, a piece of stout card can be cut, as shown in Fig. 3, the aperture or cut-out section being about 1 in. square. A piece of sensitive paper is placed under the card, and a drawing pin is pushed through both into the enlarger baseboard. After one exposure has been made through the aperture, the enlarger is switched off, and the bromide paper given a quarter turn. Another exposure, of different duration, is then made. This is followed by other exposures, the paper being turned between each, so that four different tests are made on the one piece of sensitive paper. A good method is to give 10, 20, 40, and 80 seconds. When the paper is developed, the best exposure will be visible. A full-sized print can then be made, with the assurance that the head will be satisfactory.

As the enlarger head is moved away from the baseboard or easel, the projected picture increases in size. However, its brightness falls, so that longer exposures become necessary. This means that test strips are always made with the enlarger already adjusted to give the size of picture required.

Different kinds of paper are not the same in their sensitivity to light. Test exposures should be made upon the same kind of paper as will be used for the finished print. For ordinary enlarge-

ments, a 'normal' contrast bromide paper will be suitable. For popular use, 1/4-plate, postcard, and 1/2-plate sizes will do well.

For contact printing, a 'normal' contrast of contact paper, or gaslight paper, is required. This is usually sold in packets

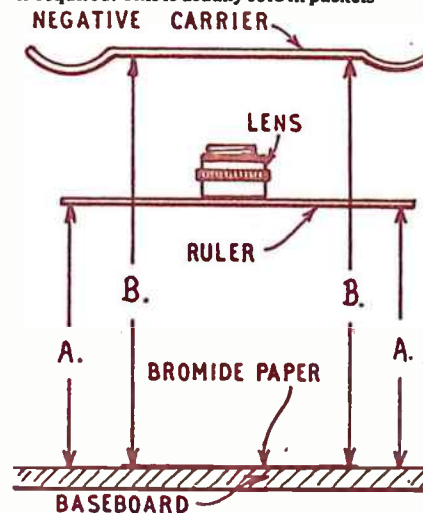


Fig. 4—Checking for accuracy

of 25 sheets, each being 2 1/2 ins. square, for 2 1/2 ins. square negatives, and 2 1/2 ins. by 3 1/2 ins. for 2 1/2 ins. by 3 1/2 ins. negatives. Contact paper is not suitable for enlarging purposes, because long exposures of several minutes will be necessary.

The correct exposure will give a print

with a good range of tones. If the picture itself is hazy, lacking sharp detail, the enlarger may not have been focussed with enough care. If care was exercised, then the negative may be unsharp. It is easy to decide where the fault lies — if the negative is seen to contain detail not produced in the print, then the loss of detail arose in enlarging.

If every care was taken with focussing, then the negative, lens, and bromide paper may not all be parallel. This can be checked as shown in Fig. 4. A ruler, or other straight object, is placed across the enlarger lens mount. The distances (A) should then be measured, and should be equal.

The distances (B) can then be measured, and should also be equal. If not, the carrier or baseboard is twisted or wrongly fitted, and this should be corrected.

If it is possible to focus either end of the print sharply, without the opposite end also being sharp, this indicates that carrier, lens and baseboard are not parallel. It may easily arise in second-hand or home-built enlargers, and it will never be possible to make really good prints until the error has been corrected.

The next article in this series will deal with safelights, developers and other chemicals, and other types of enlarging and printing paper.

COMPETITION WINNERS

READERS apparently had a lot of fun with our Christmas Quiz, 'What's in the Parcel?', and the large number of entries received was very gratifying.

To be quite honest, we had included two or three numbers to which there were possible alternatives in the answers, but the clues were carefully worded so as to give a direct and definite leaning to the official solution.

Some readers submitted ingenious solutions to some of the clues. We particularly liked the answer 'Chess Box' to the clue 'Would this container be used by a bishop?' Bishop and chess are, of course, associated, but so are bishop and mitre — and all handymen know the use of a mitre box — the answer which was called for.

All correct entries were received from eight Seniors and five Juniors. Main award winners were:—

Seniors — David B. Smith, 96 The Greenway, Epsom, Surrey; H. Browne, 36 Airmen's Married Quarters, Royal Air Force, Upavon, Pewsey, Wilts.;

G. W. Berry, 18 Guernsey Rd., Norwich, Norfolk; R. E. Newberry, 29 Rendel St., Bowling Back Lane, Bradford 4; Wm. Hartley, 284 Passage Rd., Henbury, Bristol; J. R. W. Ferguson, 28 Coleshill Bldgs., Ebury St., S.W.1; Arthur Collins, 3 Riding St., White Lee, Batley, Yorks.; S. T. Collins, 'Westwood', Augustine Rd., Minster, Sheerness, Kent.

Juniors — Leslie Holloway, 46 Moor-gate St., Edge Hill, Liverpool 7; David Robson, 48 St. James Rd., Leicester; E. Bannister, The Post Office, Witley, Nr. Godalming, Surrey; Gordon Jones, 57 Byron Ave., New Malden, Surrey; Kenneth Siddle, 71 Anstable Rd., Morecambe, Lancs.; S. Smith, Lodge Farm, Thorney, Nr. Peterborough; J. Atkinson, Bridge House, Par, Cornwall; Brian Charles Morgan, 'Windways', 116 Okus Rd., Swindon, Wilts.; James Crook, 1 Yeomans Close, Stoke Bishop, Bristol 9; John Macnaughtan, 32 Woodlands Crescent, Leven, Fife.

In addition to the main award, there were dozens of ball-point pens for runners-up.

Making Model Buildings

THERE are two basic methods of making model buildings, whether they are for miniature towns or railway layouts, and in deciding which to use, consideration has to be given to the possibility of wear and tear. When the models are made for normal play as with farmyard buildings, the more substantial toy is advisable. On the other hand, lighter models may be constructed for miniature railways, since they are often fitted permanently in position to the layout.

Balsa wood is light, durable and easy to work, and the body of a house or farm may be quickly shaped from the

By S. H. Longbottom

solid wood. The only objections to the use of solid material is that doors do not open realistically, and windows have to be painted.

A combination of cardboard and wood will be found extremely suitable for the more permanent models as mentioned, stripwood being used for bases, reinforcing, and chimney stacks. By using cardboard for the principal structure we are able to cut out apertures for the windows, and, by careful scoring, the doors can be arranged to open.

Among other materials required are brick patterned papers, glue, celluloid or cellophane for windows, paper gumstrip and water colours for painting in various details. Most of these, along with balsa wood and stripwood, may be obtained from any Hobbies stockist.

One of the most important features of model making is undoubtedly, the use of a correct scale throughout the entire construction. This will be appreciated if odd models have been made to different scales, or even no scale at all, for they will never fit together properly, and will appear quite out of proportion. When models are made for miniature railways this matter of scaling becomes even more important, and it is essential to build proportionately to the gauging. For example, there are O and OO gauges, and models made for the former would be entirely out of proportion for the latter. For your assistance the following is a correct guide to scaling for railway layouts.

Actual	O Gauge	OO Gauge
1ft.	7mm.	4mm.
6ft.	42mm.	1in. (approx.)
1 mile	128ft. 4ins.	73ft. 4ins.

When making other models not connected with railways, this factor must still be borne in mind, and if you represent 1ft. (actual) by 1/4in. throughout (in other words, a scale of 1in. to 8ft.) you will achieve a nice proportion in your buildings. A house 16ft. to the roof would thus be 2ins. high, but there must also be some addition at the gable ends

solid balsa wood. There are two pieces, one for the box-like building and one for the roofing. Strips may be prepared and cut off as required. Here we have the basis of a solitary house, extended a little to make a pair of semi-detached houses, or a little longer for a terrace. The roof may be omitted if you wish to design something modern. The same basic shape will serve for station buildings provided it is suitably decorated, and, of course, blocks like this may be painted in cement colour or brickwork red. For pebble dashing you may apply

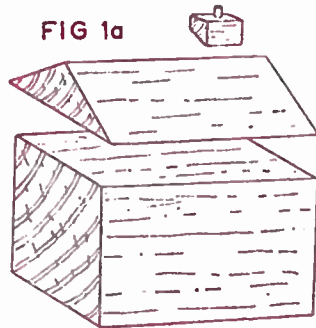


FIG 1a

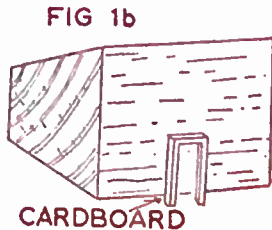


FIG 1b

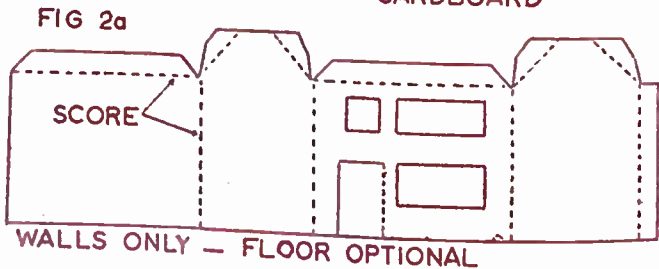


FIG 2a

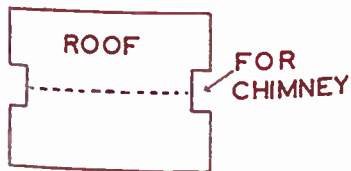


FIG 2b

according to the slope of the roof. It is, of course, impossible to quote exact measurements for our models, since what would be correct for one would be wrong for someone else, yet the basic patterns shown, together with the comments on detail and construction will enable you to design anything of this kind to your own scale. It may be mentioned that the use of the metric system, that is in millimetres and centimetres, will avoid reductions to awkward fractions of the inch, and you are recommended to try this for model making.

Fig. 1a shows the basic pattern for a house of the traditional type, cut from

a coat of glue to the walls, sprinkling on sawdust and finishing with paint. Roofs should be coloured slate grey or tile red, while doors and windows may be hand painted.

A modification of this shape is shown in Fig. 1b, where we have the lean-to type of building, found in cabins for platelayers, sheds and the like, and quite easy to make from the solid wood. Small additions may be made for attaching to the basic house pattern for

sculleries and to add variety. Here you should observe the doorway which, instead of being painted on, is made from a piece of cardboard and glued into position before painting. You may do just the same with windows if you prefer. Sheds are frequently painted brown or green, but this is for personal decision.

The cardboard counterpart of the basic shape is shown in Fig. 2a, where the walls are made from an oblong piece of card scored at the corners for folding, with apertures prepared for windows. For the latter a piece of cellophane is attached inside by strips of

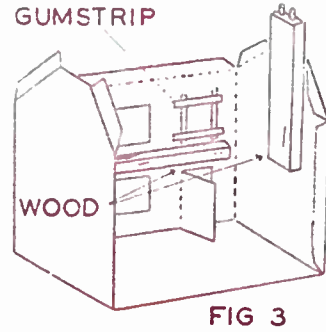


FIG 3

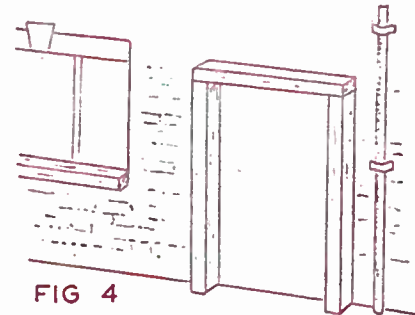


FIG 4

paper gumstrip, which should also be used for reinforcing the corners and the door hinge. You will see that the roof is a separate piece, scored down the centre, and with portions removed for fitting to the chimney stacks. The roof must be made to fit the length of the house shape, and it is wiser to prepare this after the house has been erected.

In Fig. 3 the house portion has been cut out, folded and erected, and you will also observe that stripwood has been attached to the wall for strengthening. Moreover, short strips are attached to the ends for the chimney stacks, where short pieces of dowel rod are fitted for the pots. One advantage of the cardboard model is that roofing of this type may be made to overhang both at the gable ends and sides of the house. If you wish to add an outhouse, or to

extend a building at the back or side, it will be found best to glue stripwood on to the main structure, which will then allow any addition.

Fig. 4 reveals a little more detail of how you may improve the basic pattern. Note that stripwood is used for the doorway and the window sill, while a dowel rod serves as a fallpipe. Brickwork can be painted in with brush or pen, or you may like to add something in the nature of a rambler rose growing up the wall — all done with paint and a little patience.

Station platforms are quickly made as shown in Fig. 5 by using blocks of wood, suitably shaped at the ends in the form of ramps. Care must be taken to observe the correct scale with such models, or

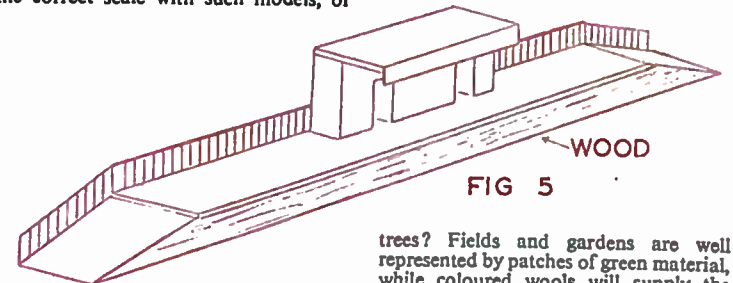


FIG 5

trees? Fields and gardens are well represented by patches of green material, while coloured wools will supply the flower beds. Garden pools and ponds

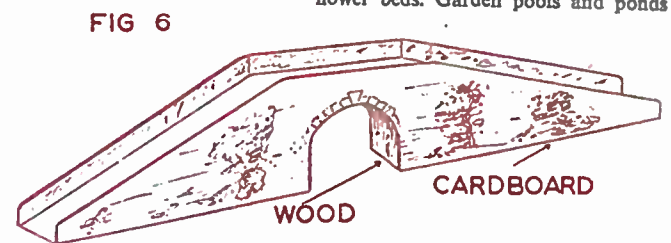


FIG 6

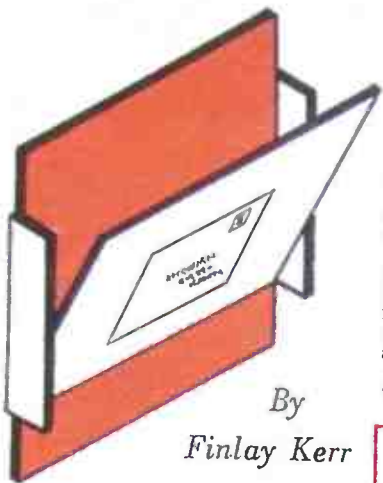
both locomotives and coaches will foul the platform. Whatever buildings are required can be erected on such a basic platform, from a country station to a terminus, and again you may either use the solid wood method or cardboard type, whichever you find the easier. Bridges over the railway are similarly made from blocks of wood, a hole drilled and the waste removed, as shown in Fig. 6. Here cardboard has been added to provide a wall at each side of the road, the masonry over the tunnel painted in along with some shrubbery.

So far we have been mainly concerned with constructional details, but the really patient and ambitious worker will find that decoration plays quite an important part in the appearance. Just think of the station for a moment and you will recall the many advertisement boards on the walls, the clocks, the

are made with small pieces of mirror or glass, with a piece of silver paper behind, while ploughed fields can be made from strips of corrugated cardboard. Many roads in the country are not as smooth as in the town, so why not a coating of glue followed by a sprinkling of sand?

It will be seen that with a little imagination and the use of many common materials we may construct all types of miniature buildings, giving them a finished appearance by the addition of detail work. Whichever method you choose, we must emphasise the importance of selecting a scale and maintaining that scale throughout the construction, for it is only by this means that you will preserve proportion. The cost is almost next to nothing, for you may often be able to purchase bundles of balsa wood and stripwood at remnant prices.

A PERSONAL LETTER RACK



By
Finlay Kerr

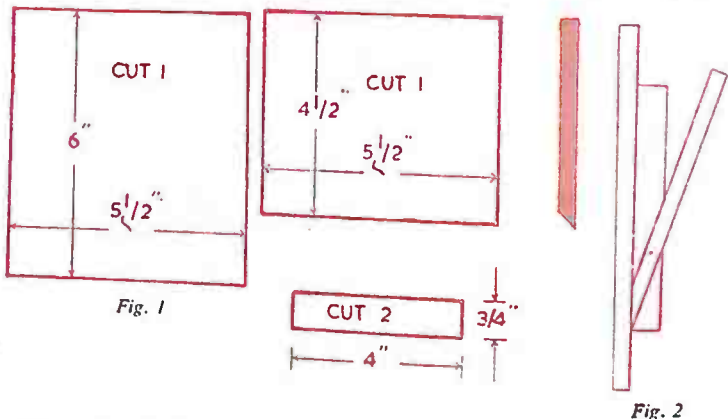
bevelled off a little, so that it will fit tightly against the back piece when the rack is in use.

Once the four members have been cut to their respective shapes and sizes, give the sawn edges a rub over with some fine glasspaper, rounding off the corners neatly to give the rack a more 'finished' appearance.

The next stage is the assembly. Nail the two sides to the back in the position

pins also act as pivots for the swivelling action of the front member. Do make sure that the bevel at the base of the front piece fits accurately to the back when the rack is in the open position.

Finish off by applying a coat of stain and clear varnish. The motif on the front of the rack is made from an ordinary white post card or from a piece of white card cut to size. Glue on a used postage stamp and then write or



shown in Fig. 2. After this, fix the front member in place with two panel pins inserted through the sides. These panel

print the owner's name and address on the face. To complete, glue on to the face of the rack.

THIS handy letter rack has a personal touch about it, for it displays the name and address of the owner on the front. The front member of the rack swivels open to form a V-shape when in use, and closes up parallel to the back piece when not in use. The rack is very simple to make, consisting only of four members, and will make an ideal gift for giving to members of your family and friends. The material recommended is 3/4 in. thick timber but, of course, you may use plywood if this is available. Use either hardwood or softwood as desired.

Start by cutting out the four members, the sizes of which are given in Fig. 1. Use your fretsaw for this job. Note that the bottom edge of the front member is



WHAT is the urge that gets into us and turns us into fervid collectors of this and that? Or into those ingenious people who make things in, or out of, substances which often seem rather unsuitable?

Whatever the cause, we succumb; and out of many collections and hobbies it is surprising how many are based on wood or paper.

A WIDE FIELD

Stamps and cigarette cards still lead in popularity, with matchboxes and their labels following closely. There are numerous collections of matchboxes, one man having a complete box in his possession still holding its original matches — nearly 80 years old, and quite valuable.

Matchbox labels are collected in larger quantities than the boxes themselves, and the philumenist has a wide field. Sweden has issued more than 40,000 different varieties; Japan pre-war had more than 27,000 on the market, and Finland had a large number showing the beauty spots of that country. The most sought after labels, however, are those issued during the war for propaganda, such as that from Australia overprinted: 'Don't give Hitler a rest', and German labels bearing the picture of a cloaked spy and a warning: 'Pst!'

Quantities in the collections vary, but an American woman was said to have amassed a total of 120,000 labels — quite a number! There is no doubt of the keenness of philumenists. When King Chula of Siam visited London in 1910 he was seen to pick up a matchbox with an unusual label, from the pave-

ment, and round about 1920 a Russian prince journeyed to Sicily especially to buy a box of matches made by a small local firm, so that he could add the label to his collection.

Many hobbies are connected with matchsticks and matchboxes, but who would think a serviceable walking-stick could be made from used matches? Yet a newsagent did just that! He collected thousands of spent matches, then glued them together carefully until he had built the 'leg' of the stick. The handle was more difficult, as the matches had to be broken or split to form a curve, but eventually it was all glued together. Then the finished object was varnished until firm and hard — and usable.

An Englishman used matchboxes, too, in his hobby of making miniature houses. A few years ago he made a four-roomed house, fitted with matchwood furniture. His replica of a church, which was sold for over £100, needed 4,000 matchboxes as building material.

Perhaps the most original thing was the full-sized house made of paper a few years ago, built by a family in Massachusetts from newspapers and glue. The walls consisted of layers of paper, folded and pasted together until they were thick and solid. To make the furniture, sheets of newspaper were pasted and tightly rolled in the form of thin logs, then varnished hard, after which the 'logs' were joined together to form chairs, stools, cupboards, a radio cabinet, and even the framework of a piano and a grandfather clock. It had been intended that the family should live in the house when it was completed, but it became such an attraction to visitors, that it was used as a demonstration model instead. (G.P.S.)

Philatelists who intend to take up pen friendships abroad should save all current British stamps, particularly these issued to commemorate the 46th Conference of the Inter-Parliamentary Union. They will then have plenty at hand for exchange.



Have you joined the League of Hobbyists?

If you are a 'collecting' enthusiast you should join the League of Hobbyists, the formation of which was announced in our issue of January 29th. Membership is free to regular readers of Hobbies Weekly and services and advice are available on philately, phillumeny and allied collecting subjects.

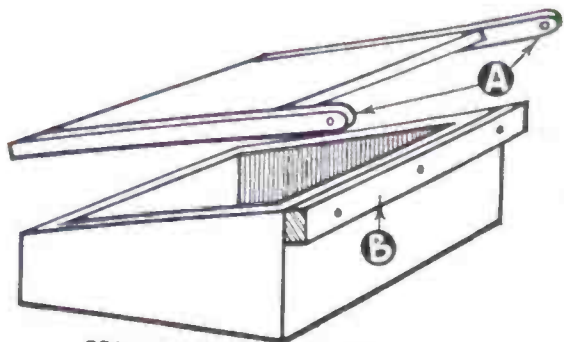
Apply for enrolment by filling in the coupon below, or send details on plain paper and post to:— Raymond Cantwell, Hon. Secretary, 'League of Hobbyists', 48 Fourth Avenue, Slade Park, Headington, Oxford, England. Please enclose a stamp for return postage.

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To save motivation of the magazine, the above details may be submitted on plain paper.

An easy replacement for Bunker Hinges

WHERE a lie-on type of lid is used, and the original metal hinges have become decayed, this is a cheap, effective and easy way of replacing. Strip wood (A) is fastened along the edges of the original lid, projecting out some way at the hinge end as shown. A piece of wood (B) is fastened firmly down to the body of the box or bunker. Two holes are drilled through the ends of the projecting pieces, and then nails or screws run through them into the piece (B). It is important that the holes be large enough for the lid to rise and fall freely when being opened or shut. (P.P.)



Simple science experiments

ELECTRO-PLATING

THE bright parts of the frames and fittings of bicycles and motor-cars are nickel plated or chromium plated. They are really made of steel, but as this rusts very easily when in contact with the air and moisture, it is necessary to cover it with a thin layer of paint or some other metal which does not corrode.

The layers of metal are deposited by an electric current, and the process is called electro-plating. Table forks and spoons are often made of some cheap alloy of metals and then a thin layer of silver is deposited all over their surfaces by means of an electric current. They look like solid silver forks and spoons, but are, of course, much cheaper, though just as serviceable. Cheap jewellery is often made of some base metal upon which a thin layer of gold or silver has been electrically deposited.

By T.A.T.

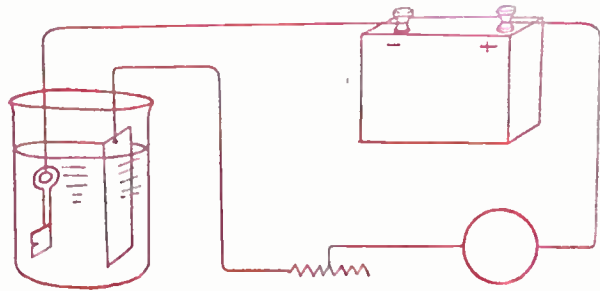
You should certainly try to do some of this electro-plating, and can make a start with copper plating. Perfect cleanliness of the article to be plated is essential and to guarantee this, it should be dipped in hot caustic soda solution (great care being taken not to let any touch the skin), washed in clean running water, dipped in dilute sulphuric acid and washed again. As copper is one of the most easily deposited metals, it is used not only for its decorative effect, but as a coating prior to the deposition of gold, silver or nickel.

A copper-cyanide solution is essential for plating direct on to iron or steel. A hot solution is quicker and yields brighter deposits. This solution is poisonous, so be very careful with it.

You should obtain a small quantity of 'Zonax' copper salts ready for dissolving to make the right kind of solution. These can be obtained from The Canning Electro-Plating Co., 133 Great Hampton St., Birmingham, 18. Dissolve about one ounce in a pint of water to make up the solution.

Place a little of this hot solution in a beaker and connect the object to be plated to the negative terminal of a battery. The positive terminal of the battery should be connected through a rheostat and an ammeter to a copper plate immersed in the solution, as shown in the illustration.

By adjusting the rheostat, send a very weak current through the electro-plating cell for about twenty minutes. It is no



AMMETER

use trying to hurry the deposition of copper on the object to be plated, by sending a stronger current, for if you do, this will simply cause the copper to be deposited in a dark brown amorphous condition, and when you take the object out of the cell, the copper will fall off.

Nickel and silver plating

If you want to nickel plate or silver plate an object you should first copper plate it as just described. The method is exactly the same except that for nickel plating you must use in the beaker a solution of nickel ammonium sulphate, and for silver plating, potassium silver cyanide. This latter solution is very

poisonous, so take great care with it.

The plate through which the electric current enters the solution is called the anode. In the last experiment the anode was of copper. For nickel and silver plating you should really have nickel and silver anodes respectively; if you cannot get these, lead the current into the cell through a carbon rod or plate. You can obtain a carbon rod from an old electric cell.

You could try silver plating a brass tie-pin. You will probably be disappointed with the dull appearance of the nickel or silver; but after the metal has been deposited, the surface requires polishing.

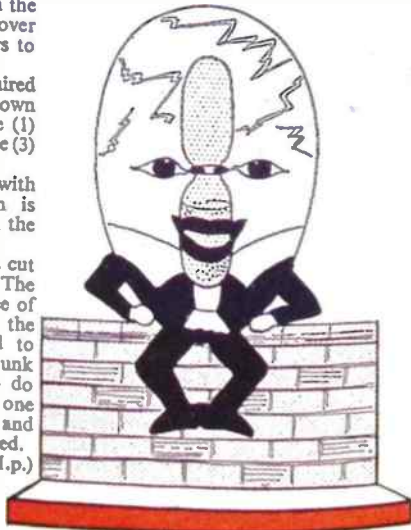
Humpty Dumpty Egg Timer

HUMPTY DUMPTY sits on the wall and when he is turned over to time your egg, he appears to have fallen head first from the wall.

Only three pieces of wood are required and all are 1/4 in. thick. They are shown full size on the pattern page. Piece (1) is the base, piece (2) the wall and piece (3) the figure.

The wall (2) is painted or covered with Hobbies brick paper. The tenon is glued into the base (1) as shown in the detail.

The figure of Humpty Dumpty is cut out and painted in bright colours. The egg timer is held in place by a piece of narrow ribbon inserted through the holes. The figure is then pivoted to piece (2) by means of a countersunk screw in the positions marked. To do this move the egg timer slightly to one side. Finish off by painting the base and adding touches of paint where required. (M.p.)



PATTERNS ON PAGE 335

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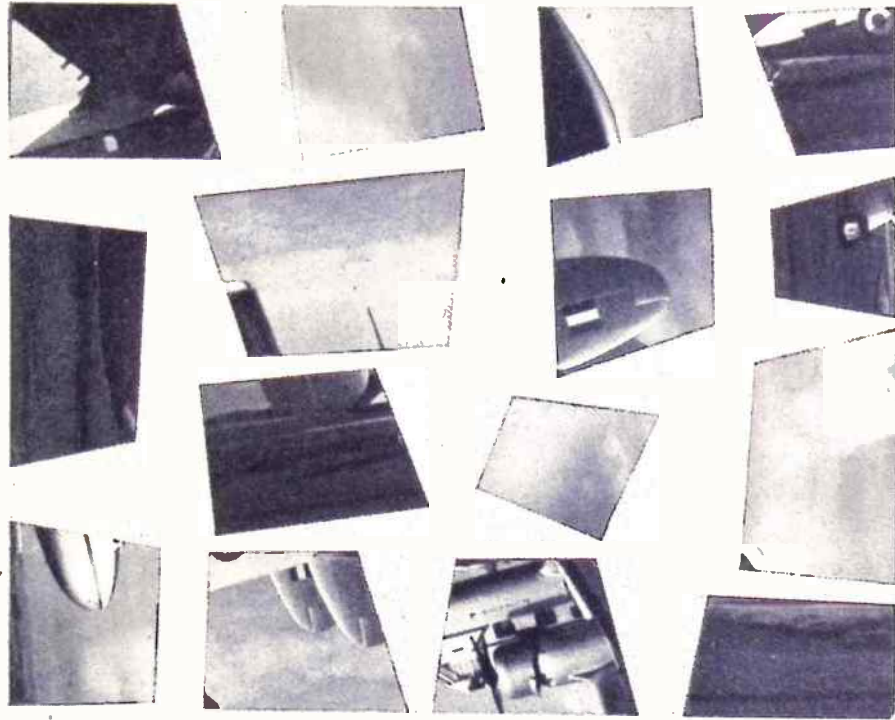


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AIRCRAFT SPOTTING



FOR our puzzle picture this time, we have an aircraft that doesn't hit the headlines in quite the same way as the Viscount or Comet, but which is nevertheless, a most important development in the field of Britain's civil fleet.

The aircraft you have to piece together first flew in 1955 and was quickly followed by three pre-production aircraft, all of which had flown by the end of 1956. It is powered by two Alvis Leonides engines and has accommodation for sixteen passengers. The greatest asset this aircraft possesses is the almost unbelievably short landing and take-off distances that are required. It can perform both these operations in the space of a 100 yards or so. It can, in fact, land at bicycle speed in 100 yards and take off in 80. This for an aircraft 76 feet long and 45 feet wing span is quite an achievement. Coupled with this is the fact that the machine can easily take-off and land on unprepared airstrips. What an advantage not to have to bother about whether there is an aerodrome near where you want to land! You can operate

this particular aircraft from any reasonably large field.

The forerunner of this aeroplane, designed by the same company, first flew in 1947, the major difference being that it had only one engine. It was a slow-

By Gordon Allen

flying military aircraft, capable of carrying four passengers plus the all important pilot and was used by the Royal Air Force. The distance needed for take-off or landing was 80 yards and it had an overall range of 750 miles. Having gained much useful experience in operating this aircraft, the company decided to meet the evident need for a light twin-engined transport of conventional layout, but capable of operating from small, rough airfields. For this reason, it was decided to use small radial engines combined with large diameter propellers for good take-off and climbing performances.

That, briefly, is the story behind the evolution of our aircraft this month. And what of the future? Well, there are plans drawn up for a more advanced version of this aircraft utilizing turboprops. The basic design will remain unaltered though it will embody a retractable undercarriage and will still be able to operate from the smallest of airstrips. This version will be powered by two Rolls-Royce Dart turboprop engines.

SOLUTION NEXT WEEK

★ Radio enthusiasts will welcome details of a transistor amplifier to be given in next week's issue. There will also be fretwork and model making patterns, besides the usual features.

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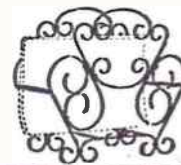
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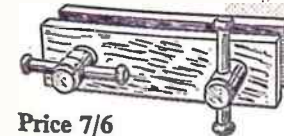
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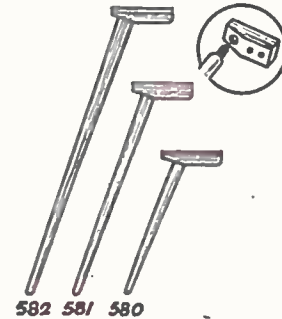
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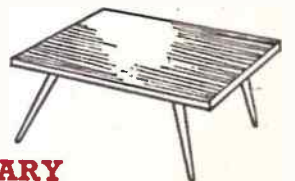
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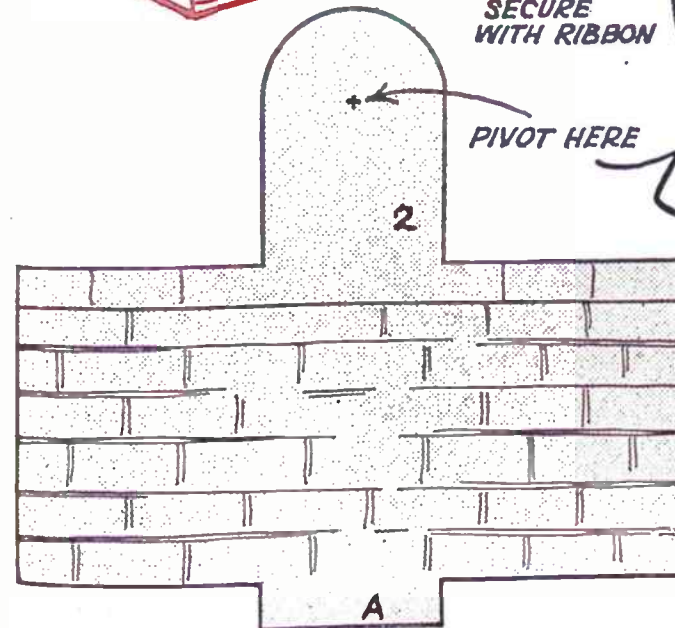
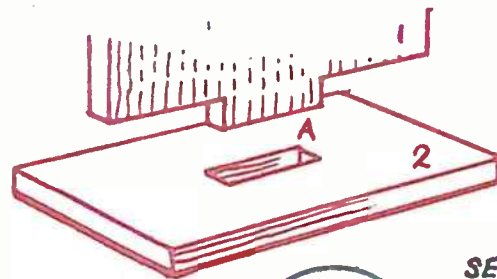
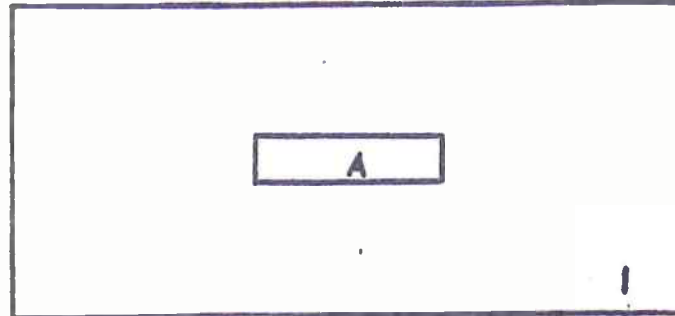
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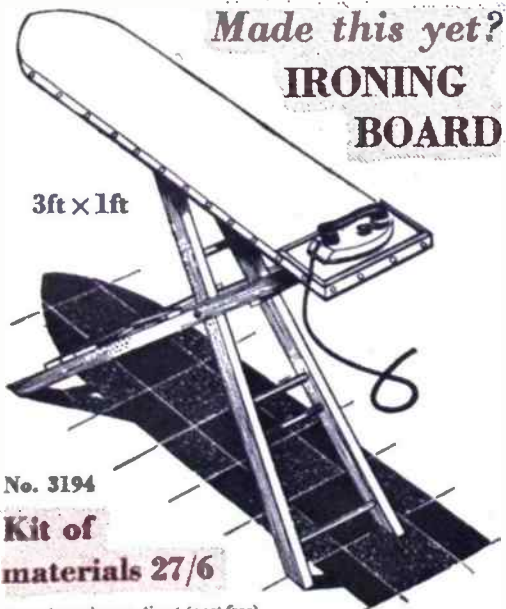
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Kit of materials 27/6

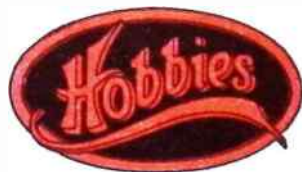
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HOBBIES LTD (Dept. 99) DEREHAM NORFOLK

Paddle Your Own Canoe



... and make
it with the
aid of
full-size
plans from



BUILDING COSTS FROM ABOUT £7

These plans contain all the information needed to build the canoe and its accessories. The main frames and other shaped parts are drawn full size for tracing direct on to the wood. There are plenty of constructional diagrams, with step-by-step instructions, and a detailed material list. Accessory instructions include the making of paddle, spray cover, trolley, rudder, sailing gear, etc.

All of these canoes are of the decked kayak type and are primarily paddling craft, but sail is useful as an auxiliary and can add to the fun of canoeing. If sailing capabilities are particularly required, PBK 20 is the best selection.

A canvas canoe can be built by the novice with limited equipment, and the average handyman can complete the job in about 40 hours. The structure consists of widely-spaced laths on cross frames, covered with a fabric skin. There are no difficult joints or awkward work. Plywood skinned canoes need more skill and a larger tool kit.

Building costs range from about £7 (for the PBK 10). We do not supply materials for building, but addresses of firms who do so are included with the plans.

DETAILS OF PLANS AVAILABLE

RIGID CANVAS-COVERED

PBK 10. Single seat, 11 ft. long, 28 in. beam, normal max. load 300 lb. The shortest satisfactory canoe. Economical in size and building costs. Room for lightweight kit. Price 11/-

PBK 14. A roomy single for the big man, or a two-seater for an adult and child, or two young people. 14 ft. long, 29 in. beam, normal max. load 500 lb. Popular tourer. Price 12/6

PBK 15. Single seat, 14 ft. 6 in. long, 26 in. beam, normal max. load 400 lb. The enthusiast's fast touring craft. Safe and stable. Suitable for any waters. Price 12/6

PBK 20. Two-seat, 15 ft. long, 32 in. beam, normal max. load 600 lb. Stable and seaworthy. Easily paddled and a good performer under sail. Popular with scouts and youth clubs. Price 12/6

RIGID PLYWOOD-SKINNED

PBK 16. Two-seater. 16 ft. long, 32 in. beam, normal max. load 700 lb. Flat-bottomed. Safe and robust. Popular for local hire on sea and river. May be left afloat. Price 12/6

FOLDING

PBK 24. Single seat, 11 ft. long, 28 in. beam, normal max. load 300 lb. Similar lines to PBK 10 but longer cockpit. Only canoe which packs into one bag small enough to go on bus. Price 12/6

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