

HOBBIES WEEKLY

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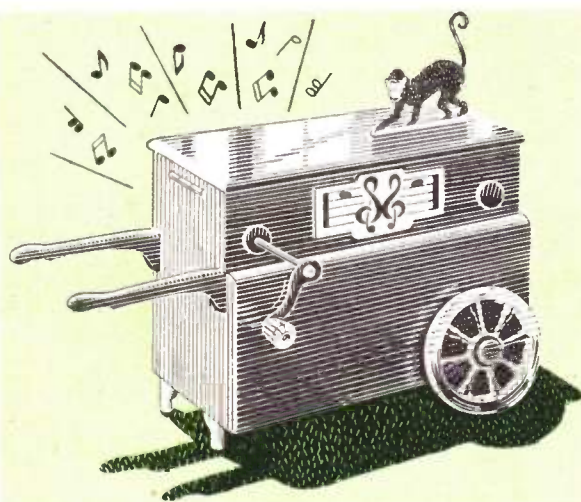
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All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk



FREE design inside MUSICAL BARREL ORGAN

(FOR USE AS A TOY,
CIGARETTE BOX, ETC.)

THIS design for a musical barrel organ should prove very popular. It has been designed for use as a toy for a child, but also incorporated beneath the hinged lid is a small compartment in which can be contained cigarettes, trinkets, etc., thereby making it also a very practical proposition for use in the home.

Incidentally the musical movement is hand wound and has been specially designed to play while turning either backwards or forwards. It therefore cannot easily be broken with mishandling by a child. As a novelty this should

have a very popular appeal, and the make-up is easy if the instructions are followed closely in connection with the various parts indicated on the design sheet.

For a start, trace off the parts from the design sheet and transfer their shapes to the correct thicknesses of wood indicated. Then cut them out with the fretsaw and clean up with glasspaper.

The first step in the construction is the body of the barrel organ, as shown in Figs. 1, 2 and 3. Fig. 1 shows the construction minus the front (piece 1). Note that piece 8 is broken away to show the

shape of pieces 7. Piece 8 consists of thin plywood, which is formed round pieces 7 to make the receptacle for the cigarettes, etc. (as shown in Fig. 2). The position of the musical movement is also indicated in Fig. 2, and in Fig. 3 there are shown the front (piece 1) and piece 9 in place.

The first sequence of assembly is with pieces 2, 3, 4 and 5 of the body, which are glued together. Next remove the handle of the musical movement, locate the shaft through the hole in piece 1, and screw the movement down to piece 5, at the same time adding pieces 1 and 9 in

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

4 ¹/₂ D

position. Finish off the interior by gluing in position pieces 6, 7 and 8 (Fig. 1).

Piece 11 is the top or lid of the barrel organ to which is glued piece 12. The hinge is screwed to piece 12 and the slot in piece 3 (shown in Fig. 4).

KIT FOR 6/11

All the wood and materials needed for making the Barrel Organ are in Kit No. 3212, price only 6/11. From branches or Hobbies Ltd., Dereham, Norfolk (post free).

A special hand-turn musical movement (No. 3) costs 17/6 extra. Tunes available are "Clementine" or "Here we go round the Mulberry Bush".

The monkey is shaped from $\frac{1}{4}$ in. wood. Two pieces of $\frac{1}{4}$ in. wood glued together with the grains running in opposite directions would make a stronger job. The monkey can be shaped if needed, and it is glued into the slot provided in the lid (piece 11). The monkey's tail can be fashioned from a piece of string, cord, etc., stiffened with glue, or from thin wire.

The wheels are cut from $\frac{1}{4}$ in. wood and the spokes shaped. Screw the wheels to the front and back in the positions shown on the design sheet. Countersink the screws and cover them with hub caps (pieces 15). If the wheels are required to move, use longer screws and glue backing pieces of wood inside the front and back to take these screws. In this case, of course, the wheels will be made a loose fit on the screws.

Fig. 1

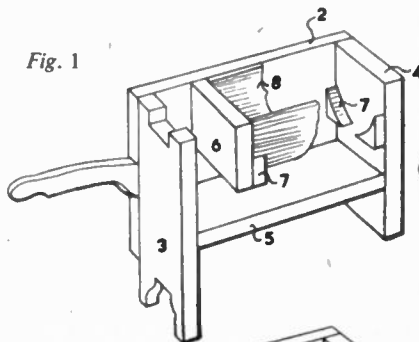
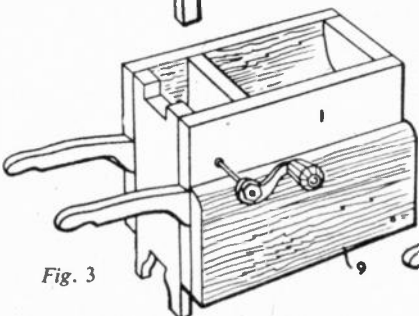


Fig. 3



The musical fret (piece 13) is cut from $\frac{1}{4}$ in. wood and glued centrally on the front panel, and small circular overlays (16) are glued in the positions shown on the design sheet. Note that one of them is drilled to slip over the shaft of the musical movement. Replace the handle and the model is now ready for the finishing touches.

If it is to be used as a toy, the subject lends itself to a bright finish in a combination of colours to suit the individual

Fig. 2

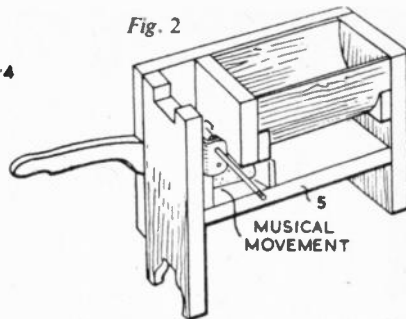
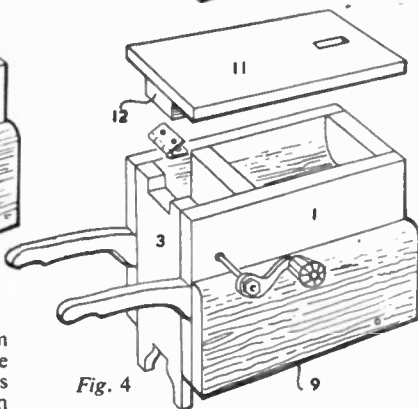


Fig. 4



or the recipient. For instance, if it is intended for a child, bright greens, reds and yellows, etc., should be used. If it is to be made for an adult for more practical use as a cigarette box or trinket box, then a more sober finish is indicated.

Books to Read

Complete Home Improvement Handbook

by M. Evans Associates

WHETHER or not we are prepared to concede the claim that the 'Do-It-Yourself' movement originated in America, we are well aware of the vast and growing practical interest taken by a high percentage of Americans in 'know-how' methods for the handyman, and the number of 'how-to' handbooks is legion. The *Complete Home Improvement Handbook*, however, is not just another addition to the list — it is a complete library in one volume of over 1,000 pages, and is about the most comprehensive textbook the home handyman could wish for. Its wealth of information is designed to save its price many times over in the course of the average handyman's domestic year. There are more than 2,000 illustrations,

covering every job, from roof to basement, and it is put over in the big way we have come to expect from the other side of the Atlantic.

Published by McGraw-Hill House, 95 Farringdon Street, London, E.C.4—Price £2 5s.

Photography

by Eric De Maré

THIS is essentially a book for the amateur, but its scope is so comprehensive — from the history of photography to the latest ideas in colour systems — that it offers as much to the advanced enthusiast as to the veriest beginner. Whilst the technical letterpress is liberally illustrated by line drawings, a most attractive feature of this work is the inclusion of a 64-page section of photographic plates depicting the work of some of the world's most

renowned photographers, past and present.

Published by Penguin Books, Harmondsworth, Middlesex—Price 6/-.

[Pets of Today] Series

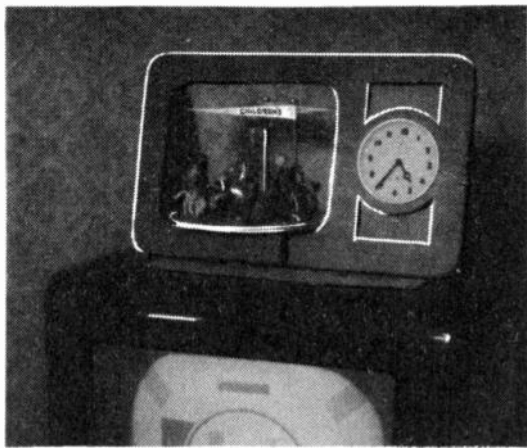
No. 3 – Pigeons, Doves and Pigeon Racing

No. 4 – Town Dogs

by David Le Roi, M.A., B.Sc.

THESE are two very welcome additions to the *Pets of Today Series*, and each contains a wealth of information, from the history of the pet to management and feeding, breeding and treatment for ailments. These excellent handbooks can be highly recommended, especially for anyone proposing to keep a pet for the very first time.

Published by Nicholas Vane (Publishers) Ltd., 194-200 Bishopsgate, London, E.C.2—Price 4/6, fully bound and wrapped, 6/-.



Mechanised Television Roundabout

*Novel setting
described by
T.S.R.*

READERS of *Hobbies Weekly* who have made the charming TV Roundabout from design No. 3179, may be interested in this photograph of a novel and effective display cabinet made to house the TV roundabout alongside a small alarm clock.

The diagram gives back view with measurements of the open-back cabinet and shows positions of components. A simple gadget consisting of a small base piece (B) upon which is mounted wood pulley assembly (P), and wood or metal arm (A) is built up from oddments.

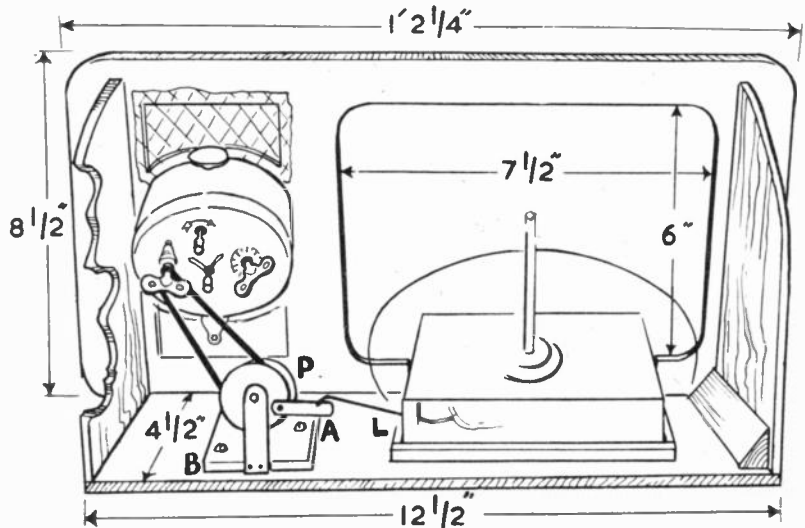
The clock fits tightly into the hole cut out for it through the front panel. The clock slopes back slightly due to the sloping panel. Under and slightly to the right of the clock is screwed the pulley assembly. A rubber band pulley belt is passed around the pulley and brought up and around the clock's alarm winding key. A slot is cut carefully half-way down one of the sides of the musical box nearest to the position of the musical movement's stopper arm. A length of wire is passed through this slot and bound or soldered to the stopper arm inside the box. This lever (L) reaches to the arm on the pulley, as

shown in the drawing. The wire should be easily bendable for adjustments.

The roundabout is wound up in the normal way but temporarily prevented from turning by the lever held up by the pulley arm. The alarm clock is wound

up and set to go off at chosen time. When it does so, the pulley will drop and release the musical movement.

Mahogany 1/4 in. plywood was used in construction, and after being well glass-papered, the natural grain of wood was brought out with wax polish and 'elbow grease'. Radio-speaker cloth was glued behind the frets above and below the clock face. It will be noted from the photograph that the roundabout protrudes at the front of the cut-out 'screen' and is prevented from slipping out of place by a frame of stripwood as shown in the diagram.



This is Hobbies model of the TV Roundabout which has become such a great favourite among children.

All the delightful little figures are authentic as on the B.B.C. Children's Hour version, and their cutting out is a grand exercise for all fretworkers. Kit No. 3179 for making the roundabout costs only 5/-

Incorporated is a musical movement which also rotates the platform. Movements cost 18/3 and tunes can be selected from:—

Jingle Bells
O My Papa
Blue Danube
Vienna, City of my Dreams
The Harry Lime Theme
from 'The Third Man'
Brahms' Lullaby
Parade of the Wooden Soldiers
Some Enchanted Evening
Merry Widow
Auld Lang Syne

Silent Night
Limelight
Moulin Rouge
Greensleeves
Tales from the Vienna Woods
Home Sweet Home
Swedish Rhapsody
Bells of St. Mary's
Blue Bells of Scotland
Irish Eyes are Smiling



SOME NEW ISSUES

By L. P. V. Veale

TWO very kind friends of *Hobbies Weekly* have combined this week to furnish the material for most of the article, and these gifts are the subjects of the illustrations.

The first was sent by Mr. G. Donaldson of Auckland, New Zealand. On February 15th New Zealand issued two stamps to commemorate the 75th anniversary of the first shipment of frozen meat from New Zealand to this Country. The two stamps are the 4d. and the 8d., the former in blue and the latter in red. As can be seen, the design of the 4d. is a lamb astride the map of New Zealand and the 8d. shows the sailing ship 'Dunedin' which carried the first cargo of frozen mutton and also a modern ship, with the dates 1882-1957.

It was a Mr. Davidson who saw the enormous possibilities of trade, if only meat could be sent in good condition across the world from those countries which had plenty of space and few people, to those which had plenty of people but few acres upon which to feed them.

Mr. Davidson was the general manager of the New Zealand and Australian Land Company, and he got the directors of the company to see his point and to grant a sum of £1,000 with which to experiment. Davidson then got in touch with a firm specialising in refrigeration and he got them to fit up the necessary apparatus on board ship. This was to sail out to New Zealand and take on board the carcasses which would have to be frozen on board, as there was no plant available on land to do this work.

The lambs were slaughtered on land, cleaned, frozen, and then stowed away in the special holds prepared to receive them. But this operation was not carried out without mishap, for after some 600 of the carcasses had been put down below, the crankshaft of the refrigerating plant broke and had to be repaired before work could go on. The difficulty was the 600 carcasses already frozen. They would thaw and then go bad, so they had to be thawed and brought up and sold to the local inhabitants.

Unfortunately, the mishap so scared the people who had booked a passage, that most of them cancelled, so that only two passengers sailed. When the ship

arrived in London there was, of course, great anxiety as to how the cargo had withstood the trip and the state of the carcasses, but it is on record that only one of all the shipment was unfit to eat.

These stamps commemorate a most momentous event not only for New Zealand, but also for Great Britain, as it solved to a large extent the feeding problem of the time.



In the same connection one must also mention the 6d. stamp of the 1940 Centenary of Proclamation of British Sovereignty; this shows a map of the world with the route of the 'Dunedin' marked upon it.

In 1932 there was a stamp from the Argentine which also bears on the carriage of food through the tropics and that was the stamp issued in connection with the VIth International Refrigeration Congress. When you look at the illustration it is rather difficult to realise that you are looking at a refrigeration plant, but as the stamp was issued for this, presumably it must be one.

Mr. Gibbs of Hanover, Ontario sends the Official First Day Cover depicting Canadian sports, or, as they call it, the Outdoor Recreation Series — skiing, fishing, swimming and hunting, and readers will at once notice that there is something unusual about this cover. The four stamps, although they are all joined

together are of very different designs. Canadian stamps of the small size are printed in sheets of 400 stamps divided into four panes of 100. These larger stamps are printed in sheets of 200 divided into panes of 50 each. They are so arranged on the pane that when four stamps are ordered it will usually be quite easy to tear off four, giving one of each design. There is also one line in the pane which allows four different stamps to be torn off as a vertical strip. The 50 in a pane are in ten rows of five and the

vertical strip is the middle one.

The stamps were designed by Lawrence Hyde and you can see the initials L.H. generally in the corners — top left for the shooting, bottom left for the skiing, bottom right for the fishing and bottom right for the swimming, and you can see the date 1956, although the first day of issue is the 7th March, 1957. This is shown quite clearly on the cover illustrated.

It is not often that one comes across this type of printing, that is to say four different stamps joined together — and, of course, they should be collected as a block if possible — or as a vertical strip of four different as mentioned above. Denmark in 1924 on the occasion of the 300th anniversary of the Danish Post showed portraits of King Christian IV and also King Christian X on different stamps. The portraits were printed facing, first to the left, and then to the right, so that in this case it was possible.

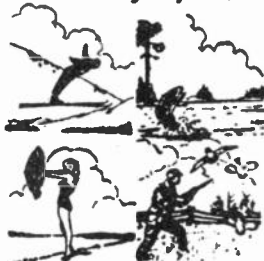
to have a block of four stamps of different design but all joined together.

There is no doubt that stamp collecting keeps one up to date, that is if one is willing to be reminded of events by stamps, and one looks at the designs and takes in what is given. For example how about the independence of Ghana? When was that? How many collectors would remember this if they had not had it put clearly in front of them by stamps? There are two sets to assist in remembering this date, first the special set issued by Ghana, four values 2d., 2½d., 4d. and 1/3. The design of each is the same, a fish eagle flying over the map of Africa with a small dot to show where Ghana is to be found. There is a small medallion portrait of the Prime Minister, Dr. Kwame Nkrumah.

There are also the current designs of Queen Elizabeth stamps overprinted 'Ghana Independence 6th March 1957'.

1957 CANADA 1957

First Day Of Issue



Skiing

Fishing

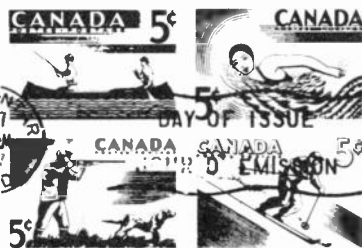
Swimming

Hunting

I-4

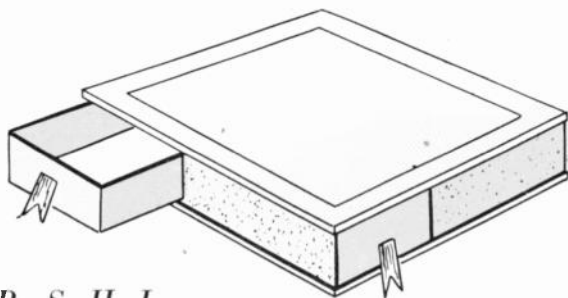
HOB

Scouts will not have to be reminded of the Golden Jubilee, but philatelists



Canadian first day cover.

have an excellent portrait of the founder from the Netherlands Antilles which has issued a set of three stamps to commemorate this.



By S. H. L.

YOU can make attractive little novelty match box holders from two pieces of cardboard and some surplus wallpaper.

Take two pieces of stout cardboard each measuring 4ins. square and cover them on one side only with some fancy wallpaper, so that the edges are slightly overlapped as shown in Fig. 1. Fold over and bind the edges with strips of passe partout to improve the appearance.

With the top and bottom thus prepared, ordinary match boxes are glued

to the covers according to the manner shown in Fig. 2. Fix to the base portion first, then glue on the top, leaving under a weight until firm. It should be noted that in each instance the boxes are attached with the sandpaper sides on the outside.

Take out the drawers (emptying the matches and laying aside for the moment) and affix small pieces of ribbon as draw-pulls. First cover the outside front ends of the drawers with a piece of matching paper or the passe partout binding. After this operation, cut a slit across the

front of the drawer the width of the ribbon. Trim the ribbon as shown in the sketch by folding in two and cutting across to a corner. This will avoid fraying. Push the other end of the ribbon through the slit with the tip of your knife, fastening by glue to the inside surface of the drawer and further strengthening with a strip of passe partout. The matches may then be returned and the holder is complete.

Instead of cardboard, hardboard may be used for the top and base of the holder, finishing with paint and decorative transfers, the edges being treated with a coat of gold paint.

A picture or a photograph may be attached to either the cardboard or hardboard type, but do not forget that the harder substance may scratch table tops unless a piece of baize is attached to the bottom. Another detail to note with hardboard holders is in the finish at the corners. It is advisable to file to a rounded corner to improve the appearance.

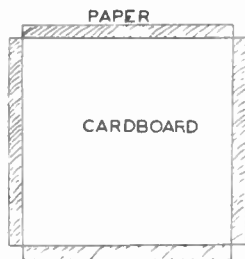


FIG 1

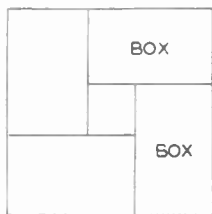


FIG 2

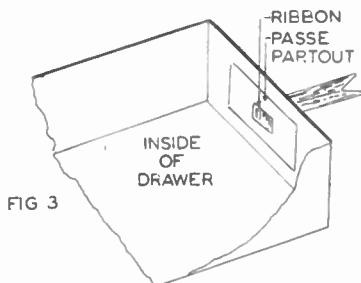
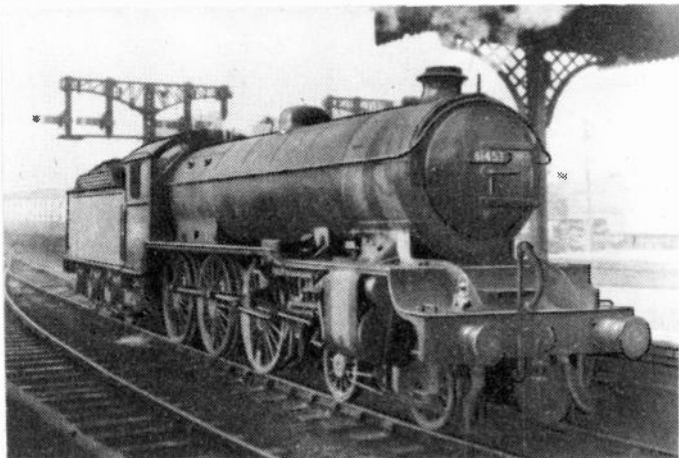


FIG 3

WITH A CAMERA

TRAIN SPOTTING



An engine snapped while slowly entering the station and taken from the end of the platform in full light.

HAVE you ever thought of train spotting with a camera? You do not need any expensive instrument for first class results, and there is a lot of fun to be had from exchanging snaps with pen friends in different parts of the country.

Do not expect to snap an express in motion at something like 60 miles per hour, especially if it is moving across the path of the camera, but there are slow goods trains you can capture while in movement.

With a platform ticket you will be able to establish a position in the station for the photography of all kinds of engines, but make sure that you select a good observation point. To obtain a view of the full length of an engine, showing valve gear and coupling rods you will find the best viewpoint on the opposite platform. And usually all out-bound trains face into the light, making your task quite easy. At such points there are also ample opportunities for snapping incoming trains which enter at a slow pace.

Vantage points

Outside the stations you will find many good vantage points on bridges, or footpaths alongside the railway, but here you are strongly recommended to select a position where there is an up gradient. There are two reasons for this. The trains are never travelling quite so fast on the rising gradient for one thing, and the other reason is that the engine has to work much harder, emitting lots

of steam and smoke, making your pictures very spectacular. Smoke from the chimney, formed in a billowy line, also breaks the sky area of your picture.

It is not at all difficult to take a 'head on' picture of a moving train. Keep the camera quite still, resting it on the fence, press the trigger gently, and you will be really surprised at the good results.

Taking a picture with the train travelling across your line of vision is quite another matter, but not impossible. Frequently you will have seen pictures of motor cycle racing, or motor car racing. These are taken by a photographic technique we term 'panning'.

The camera is held in position and swung in an arc with the movement of the train, so it will be appreciated that your camera must have a type of view finder enabling the motion to be followed through. As a trial of this, place your hands to your eyes as though holding a pair of binoculars. Look at some approaching car and keep it in your vision as it gradually approaches to close range. You will find that this demands an even, steady movement from first sighting to the finish. And it is almost the same with photography.

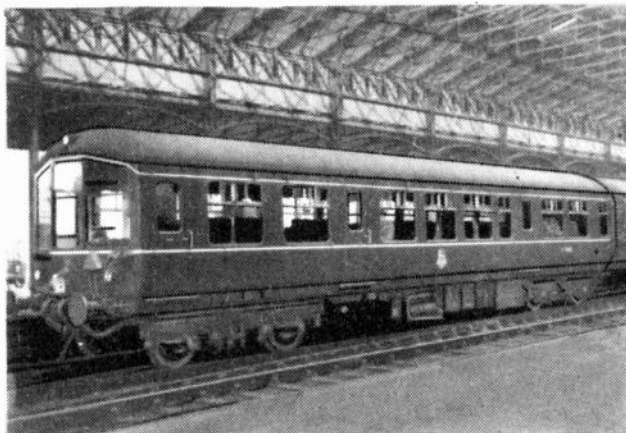
By S. H. Longbottom

Admitted, it is wise to practise a good deal, but it is a trick worth trying. Start on something a little easier at first like a bicycle or a motor car not travelling too fast, until you have acquired the knack.

An approaching train is sighted in the viewfinder when it is about 200yds. away, and you follow it up with the camera until that moment when you press the trigger and a moment or so after. That is, until you have completed the arc. Or in other words, the camera is swinging round with the motion of the train and the trigger is pressed during that swinging and when the train is nearest. This swinging must be even and constant — never jerky or you will only get a blurr.

If you act correctly, the engine will appear quite sharply defined in your picture while all the background is blurred.

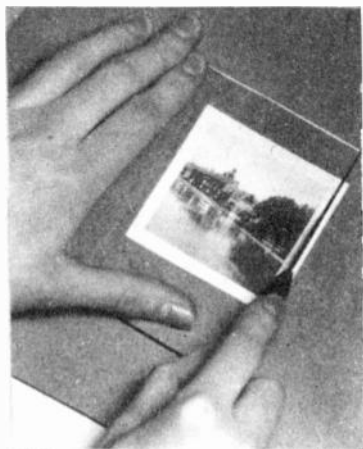
● continued on page 167



This interesting picture shows one of the first diesel coaches in use between Bradford—Leeds—Harrogate. Similar coaches are to be expected in other parts soon.

TRIMMING YOUR PRINTS

DO you like your prints to have a really neat border? Just like the ones produced by the commercial finisher? Then here is a simple and easy method to ensure the best possible appearance of your pictures.



Trimming the print with a knife held close to the edge of the glass

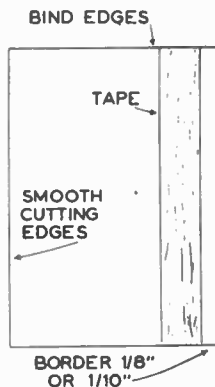
It does not matter how careful you may be when printing your own snapshots, they always seem to have uneven borders, or are a little out of square. This simple method will give good results.

We require a piece of clear glass about 4½ ins. by 3½ ins. (larger if you wish to deal with bigger prints), which will be suitable for the majority of snapshots. Two of the edges must be smooth, mainly to avoid the danger of cutting your fingers when handling. This smoothing may be done by rubbing the edges with a carborundum stone, plus carborundum powder, using turpentine as a lubricant. Do not work on the glass so vigorously that the straight edge is damaged. The intention is to remove the sharp edge where the glass has been cut. Treat the two long sides in this fashion, so that you have two working edges. It is also a wise precaution to smooth off the corners. The other two sides may be bound with strips of Sellotape for protection.

We now require a guide line for our borders, using a strip of Sellotape attached to the glass on one side either 1/10 in. or ¼ in. from, and parallel with, the edge.

The best way of achieving this is to take any newspaper where the columns are separated by long, vertical lines.

Rule a line parallel with such a vertical at one of the selected distances, that is, either 1/10 in. or ¼ in. The glass is now laid on the newspaper with its edge in perfect alignment with the printed line



and you have only to stick on your strip of Sellotape so that it coincides with the prepared line. This gives us our guide line.

In the foregoing it has been suggested that two edges of the glass were prepared, one of which has been used for a narrow border. You may prefer to make a border slightly wider on the other edge, or leave it free until the occasion arises, but if you wish to make, say, a ¼ in. border, follow the same routine.

Two methods of cutting are available, and it is up to you to choose the one which suits you or produces the better results — it costs no more to try both!

We take a print in the left hand, superimposing the glass so that the edge

of the Sellotape on the glass coincides exactly with the edge of the picture area. Holding the two quite firmly, the print underneath, the waste paper is quickly trimmed away with the assistance of a pair of scissors, as shown in the illustration. Keep the blades in close contact with the edge of the glass while making the cut.

The second method calls for a sharp knife or a razor blade and is, perhaps, more useful when the waste material is very slight. If a razor blade is used it is much safer to invest in one of those small razor-blade holders. Alternatively, you may buy the type of razor blade having a piece of steel down the spine and only one sharp edge.

With the knife or blade, the print is laid on to some old cardboard — never on the unprotected table top or wood, not only because of the danger of damage but because you cannot produce a clean cut owing to the grain. The glass is laid on top of the print, with the Sellotape guide line again in alignment with the edge of the picture area. Hold the glass gently, but firmly, while the surplus is trimmed away with the knife. It may also be mentioned that it is a good plan to allow the knife to slant inwards, making a sloping undercut on the print. This also helps to keep the blade against the glass. Each side is similarly treated and on completion you will find that there is an even border all the way round your picture.

There is just one other point. Remember that the face of the glass which is in contact with the print must be kept quite clean, and if you keep the trimming guide in an envelope it will last for many years. (S.H.L.)

● continued from page 166

Train Spotting

Always keep a careful eye on backgrounds, or you may find a telegraph pole emerging from the engine boiler.

A shutter speed of 1/50 or 1/100 second is quite adequate for pictures of trains moving towards you, or for trains entering and leaving stations, providing you use a panchromatic film like HP3 or Super XX.

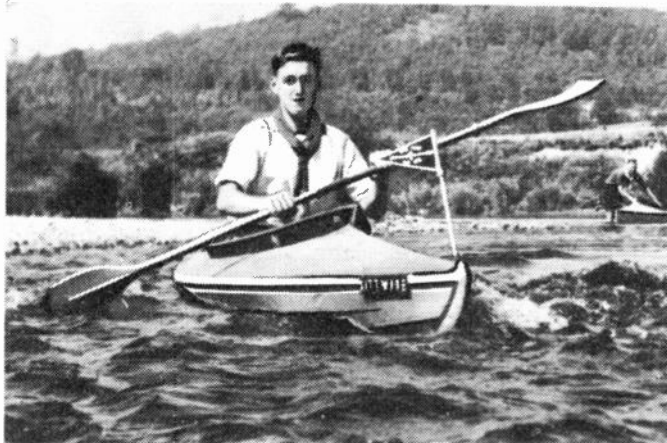
Train spotters are not now exactly unwelcome visitors to railway stations, and a platform ticket will allow access to many suitable places, yet you must be warned against climbing railway fences or stone bridges. Trespassers are likely

to invite trouble and danger. Moreover, you can often use a fence for keeping the camera steady. Stay on the right side of the fence and you will also be on the right side of the law!

SOLUTION TO CROSSWORD NO. 6 PUBLISHED LAST WEEK

Across: 1. Emma. 4. Frill. 9. Sole. 10. Oily. 11. Inch. 12. Opium. 13. Dime. 14. Net. 17. Pelts. 19. Raven. 22. Raise. 23. Medal. 25. Bar. 26. Soap. 28. Rouge. 30. Upon. 31. Glum. 32. Over. 33. Spate. 34. Edit.
Down: 2. Manager. 3. Ashanti. 4. Float. 5. Rep. 6. Loud. 7. Limited. 8. Tyres. 15. Esse. 16. Lama. 18. Lazarus. 20. Verdure. 21. Nairobi. 24. Usage. 25. Breve. 27. Pomp. 29. Got.

USING YOUR CANOE



*A Sea Scout uses feathered paddles as he enters a small rapid.
The canoe is a P.B.K.10.*

IF you have built a decked canoe, you will want to get the most out of it. A canoe of this type is a surprising craft which will go just about anywhere wet, and there are several points about its equipment and management that will help you to take advantage of all its possibilities.

If you are going touring you will soon find the value of good painters. The one on the bow should be rather longer than the canoe, then you can turn the craft right round from the bank after launching if necessary. If you tackle rivers with shallow rapids and have to wade frequently, the best stern painter is quite short, with a loop to grasp as you step out (A). Loop the painters to their fittings so that they are easily removed (B), then if you need an extra length on the stern you can remove the bow painter and tie it to the stern one. Strip brass hooks on the coaming keep your painters ready for use (C).

The double bladed paddle

The only satisfactory paddle for a decked canoe is a double-bladed one 8ft. long, either bought or made according to the instructions with the canoe plans (D). Bought paddles usually have brass tubular joints at the centre, but nothing is provided to locate the two parts correctly. This can be done by putting a round-head screw partly into the inner piece and filing a notch to fit it in the other piece (E).

The obvious way to have the paddle blades would seem to be with the blades in line (F), but most enthusiasts have

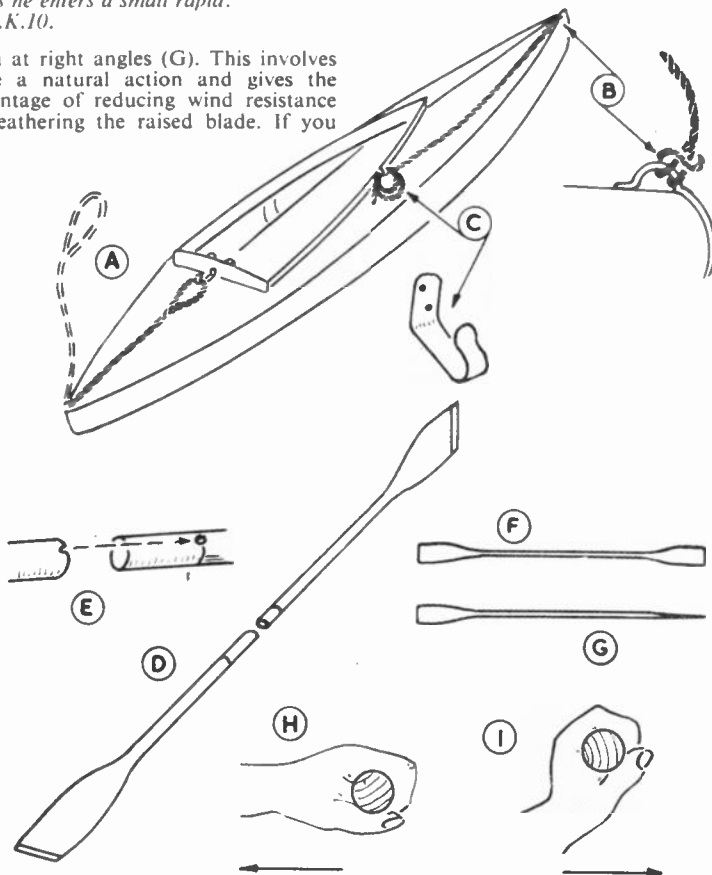
them at right angles (G). This involves quite a natural action and gives the advantage of reducing wind resistance by feathering the raised blade. If you

have spooned blades you will have to discover for yourself which way you prefer the twist.

If you wish to pull anything, you have your wrist straight. If you wish to push a stubborn door you bend your wrist back. The difference between these two positions is about a right-angle and the

By P. W. Blandford

amount you wish to twist the paddle. You use this action with one arm and let the loom of the paddle twist in the other hand. Suppose you twist with the left arm: when the left blade is dipped your wrist is straight (H), after the blade



is lifted from the water you dip your wrist before the other blade is immersed (1) and keep it like this while pushing forward that side and pulling back the other.

Hold your paddle with your hands rather more than the width of your shoulders apart. Dip each blade just below the surface and keep the angle of the loom of the paddle as low as you can without touching the cockpit coaming. Beginners tend to dip too deeply, and as they get tired, their hands come close together and the paddle rubs the coaming.

Pace and time

In a two-seater, the front person sets the pace and the rear one keeps time. However, the rear one is the skipper, because he is in the best position for steering, which he does by pulling harder one side or the other while keeping in time with his mate. If that does not have sufficient turning effect, both pull one side only, or one pulls forward while the other paddles backwards.

You will have to experiment for yourself to find your natural length of stroke,

but for touring a long slow stroke is less tiring and actually more effective than a short fast one. Give a good thrust forward with the raised hand as well as a pull back with the other one.

Avoiding a ducking

When you are sitting in a canoe there is very little fear of capsizing unless you do something really silly — it is getting in and out that fun has been known to happen! The easiest way to get in is from wading in shallow water. Put one foot centrally in the canoe, well forward of the seat, reach across to the other coaming and flop into the seat, letting the water from the plimsoll drain over the side before bringing in the second foot.

When getting in from a bank avoid sharing the weight between the canoe and the bank — an attempt to do the splits over an ever-widening gap may be the prelude to a splash. If there are two of you, one holds the canoe while the other gets in. Face the way you are going, and put one foot in centrally, reach down to the far coaming, well forward, and hold the bank with the other hand, while you put the second

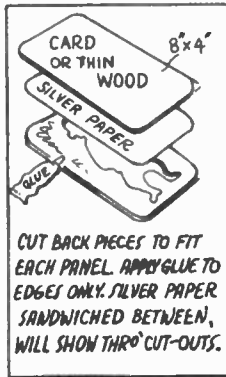
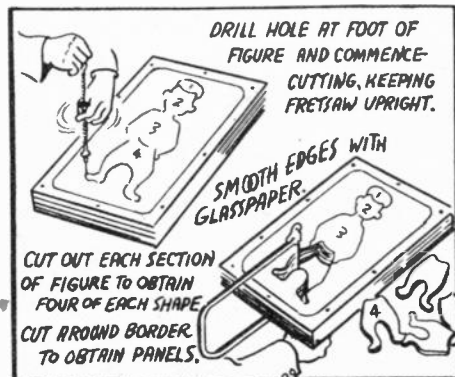
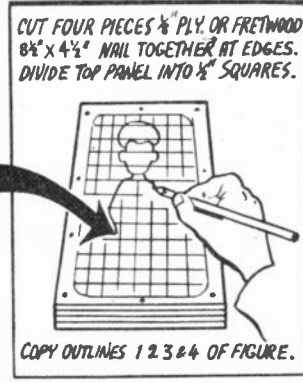
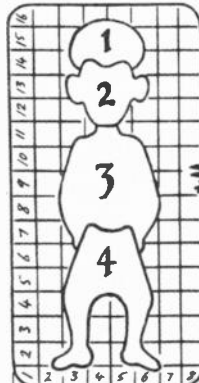
Next week's issue will describe an easy way to make a portable picnic table. Also competition, ships model pattern and 'Use of transistors in radio.'

foot behind the first and sit down. Do not lean on the bank, and make sure both feet go in centrally.

Canoeing in bad weather need not be uncomfortable. Spray covers should be used, as supplied with the canoe or made according to the instructions with the canoe plans. The normal canoeing clothing below the waist should be shorts, bare legs and old plimsolls, in any weather. The best waterproof garment above the waist is an anorak — anything which fastens down the front tends to leak, although there are some good short plastic or oilskin coats. Whatever is worn should come outside the coaming and spray cover, so that rain runs on to the decking. If there is no hood to the coat, a sou'wester makes the best head-gear. For wear ashore a pair of waterproof trousers completes the outfit.

COMIC T

Strip by T. S. Richmond



EXPERIMENTS ON PAPER

MARBLING EFFECTS

YOU can make all kinds of fancy coloured papers by means of the marbling method. As implied by the name, the resulting effects are similar to the grain in marble, but with a little modification we can produce other original patterns, and after making, the paper can be used for book-binding or for the production of many novelties.

We need two reasonably large trays of

with a pint of warm water, stir until dissolved, then slowly add another quart of cold water. This makes the size to be poured into the marbling tray. The other tray is required to hold water for a rinse after marbling. It will be appreciated that smaller quantities of solution must be mixed in the same proportions.

Cover the table top with sheets of old newspaper to avoid transfer of the colours to the table. Place the marbling

mixture, gradually lowering until the entire surface is in contact with the colours which will be transferred. Fig. 2 shows how the paper is laid on top of the solution. After a moment remove the sheet, transfer to the rinsing bath, where it is placed face upwards underneath the water, agitated for a moment to remove surplus colour, removed, drained and laid to dry on a sheet of newspaper ready at hand.

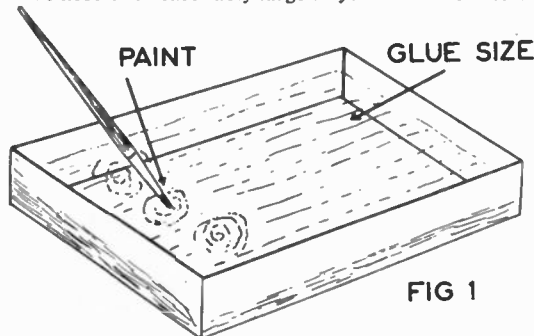


FIG 1

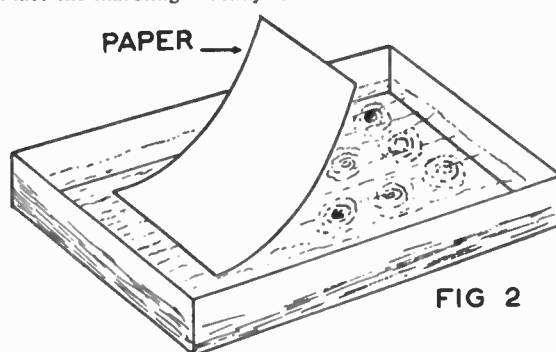


FIG 2



FIG 3

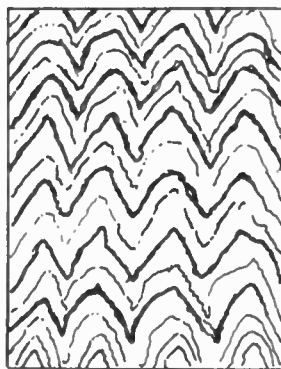


FIG 4

some description, and if you have no suitable pie dishes, biscuit tin lids are ideal for this work.

Other materials required are glue size, water, small painting brushes, a comb, oil colours, turpentine and white paper, preferably glazed on one surface. The latter can most often be procured at any artists' materials shop in sheets measuring 20ins. by 25ins. Note that while ordinary household paint can be used, the modern synthetics, lacquers or varnish paint will be unsatisfactory and it is better to purchase small tubes of artists' oil colours.

Mix two tablespoonfuls of glue size

the oil paint is thinned with a little turpentine to such a consistency that it will drop from the brush with a gentle shaking. When properly mixed it should float on the size mixture, spreading very slowly. To produce multi-colour effects several colours will be required, so use a separate brush for each colour, but remembering to place one or two drops of the same colour in different parts of the tray.

The paper is cut to a suitable size, and we are ready to start our marbling. Take up a sheet of paper in the right hand, with the other end held by the left hand. Lay the left edge on the surface of the

tray on your left, with the rinsing tray on your right. Now fill the first tray with the glue size solution which should not be allowed to jelly — if it does, add a little more cold water. Pour plain water into the rinsing tray.

The marbling tray is prepared for the work merely by dropping oil colours on to the surface with the aid of a small paint brush, as shown in Fig. 1. The

It will be appreciated that the foregoing describes the method of producing what is termed a marble finish, the product of merely dropping oil colours on to the size solution. The modification of the arrangement of these drops in our marbling tray makes considerable difference to the result.

If you drop in the colours as just described, and taking a stick, move it *slowly* through the colours, you will produce a pattern as shown in Fig. 3. You must be warned not to stir the mixture too vigorously, or to break them unduly, or you will lose the swirling pattern.

Finally, we may produce a combed pattern as revealed by Fig. 4. Here you are recommended to make a simple comb by hammering nails through a piece of wood. Keep the nails at least ½ in. apart, or, again, the colours will mingle. Drop the colours into the tray as before, stir very gently as for the swirl pattern, then draw the comb slowly through the mixture. Draw the comb once only and be ready to take the transfer on to your paper immediately, since the pattern is on the move all the time.

It will be realised that quite a few prints may be made with the same preparation, although they will differ a little, but after the first half dozen, the transfers will become fainter. You may

●Continued on page 172

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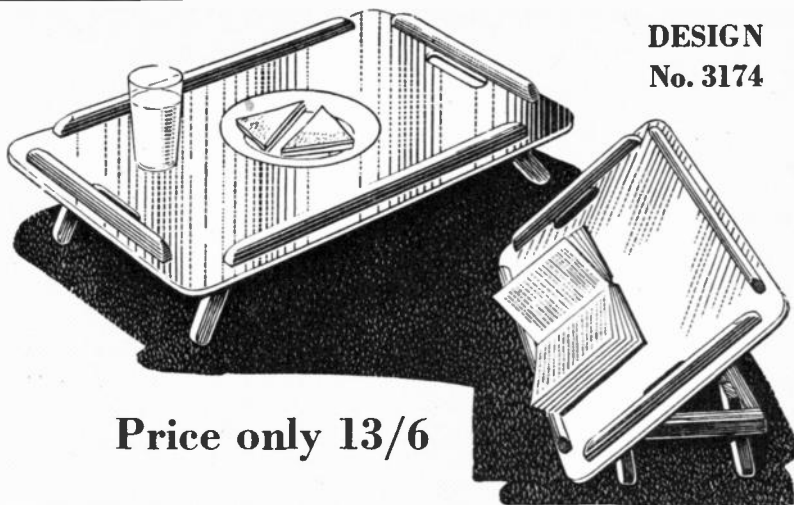
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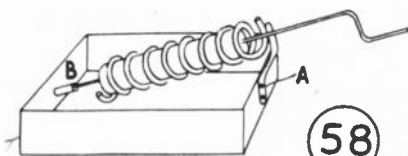
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MODEL ARCHIMEDEAN SCREW

ONE of the earliest mechanical methods of raising water was by the Archimedean Screw, a model of which is shown in Fig. 58.

The trough consists of a shallow tin. The spiral is made from $\frac{1}{4}$ in. diameter copper tubing which can be pulled into shape round a wooden cylinder, about $1\frac{1}{2}$ ins. in diameter, and held at one end in a vice. The axle and handle are made from $\frac{1}{4}$ in. diameter brass rod which passes through a length of Meccano strip (A) fixed to one end of the trough with Meccano nuts and bolts, and then



through the centre of the wooden cylinder which holds the spiral tube. This wooden cylinder is part of the cylinder on which the spiral was formed. The other end of the rod rests in a length of brass tubing (B), which is soldered to the inside of the other end of the trough.

The trough should be partly filled with water, so that the open end of the spiral dips into the water each time it is turned.

Model hydraulic lift

The transmission of pressure by liquids is made use of in the hydraulic press, the principle of which is illustrated in Fig. 59. If the area of the piston (B) is 100 times larger than that of the piston (A), a small weight on (A) will balance a weight on (B), which is 100 times greater.

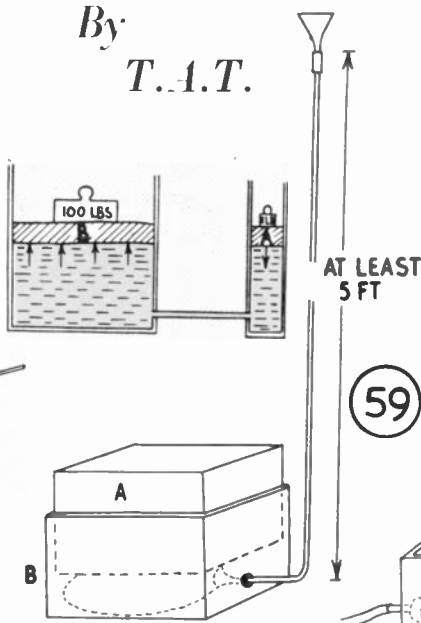
Find a wooden box (A) with a lid that is a fairly smooth sliding fit inside another wooden box (B) as shown.

On the bottom of the box (B) place a football bladder, partially filled with water and through a hole in one end of the box fix a long glass tube into the neck of the bladder. Stand gently on the upper surface of the box (A) and you will be able to raise yourself up before the eyes of your amazed audience by pouring water from a beaker into the funnel and so into the long glass tube.

A water turbine

You can drive your working models with this model water turbine (Fig. 60).

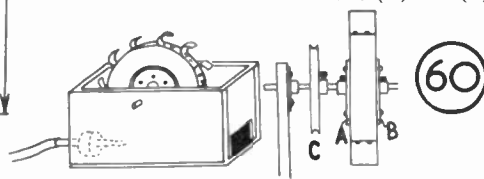
By
T.A.T.



You will require a circular piece of wood about 1 in. thick and 6 ins. in diameter, with a hole about an $\frac{1}{4}$ in. in diameter through its centre; twelve pieces of tinplate, 1 in. by 2 ins., each curved at one end and drilled with two holes near the other end; four Meccano

bush-wheels; large Meccano pulley and axle rod; $\frac{1}{4}$ in. brass round-headed screws; rectangular wooden box with the inside well covered with shellac, a circular hole in one end, a longer rectangular hole in the other end, and small holes for the Meccano axle on the sides; glass tube, one holed rubber ring; rubber tubing.

Divide the circumference of the circular piece of wood into twelve equal parts and fix each of the pieces of tin in position with two screws. Fix with screws a Meccano bush-wheel at the centre of each face of the wooden wheel and a Meccano bush-wheel over each of the small holes in the sides of the wooden box. Push the Meccano axle-rod through the bush-wheel and sides of the wooden box, placing the large Meccano pulley-wheel on the rod as you do so. Fix the bush-wheels (A) and (B)



and the large pulley-wheel (C) to the axle with the fixing screws, place the glass tube in position through the rubber ring and connect this tube with rubber tubing to a water tap. Adjust the glass tube so that the water jet impinges on the curved surfaces of the tin.

● Continued from page 170

Marbling Effects

then replenish with more drops of paint in the same positions as before.

When the colours are stirred or combed there is a tendency for them to mingle, and any subsequent additions of colour may give drab effects. It is better to empty the tray, clean with newspaper, refilling with the size solution for a completely new start.

You will be aware that the three primary colours, red, yellow, and blue will combine to form almost any colour you will desire. If you have to buy small tubes, which are only a few pence each, these three will suffice. Moreover, there is always a tendency for the edges of the colours to merge a little in the solution, and this factor should be considered when forming the arrangement.

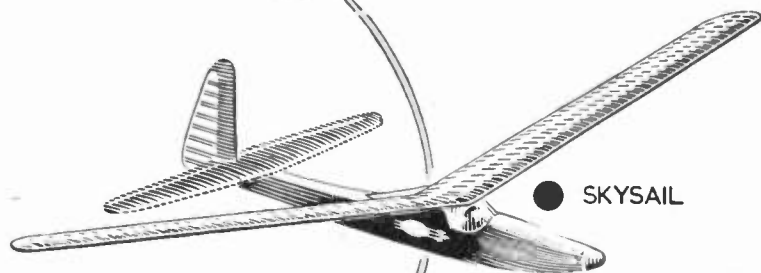
Avoid extremely violent combinations

of colour if you wish to produce tastefully patterned papers. For example, autumn tints are best produced by using only red, yellow and a little green. On the other hand it is often better to have a contrasting colour when making the combed pattern, particularly where the pattern repeats, as shown by the thicker lines in the diagram. You should also remember to arrange the colours in a regular order for the full length of the tray for this method as for example, a repetition of, say, yellow, red and blue in the same order.

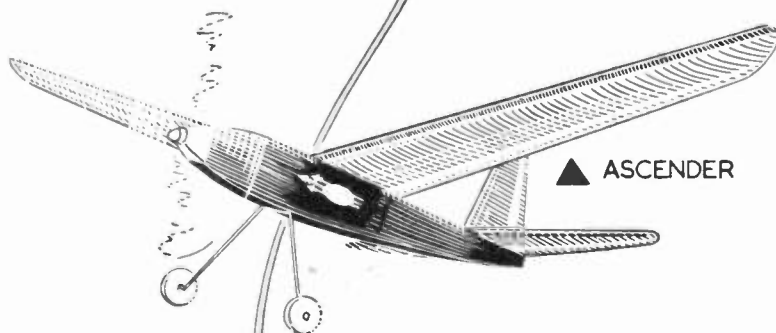
Always allow the papers to dry thoroughly before stacking away under a weight, or before using. Although the water may dry out, it may take a little longer for the oil colours to become perfectly dry. (S.H.L.)

OUT of the BLUE

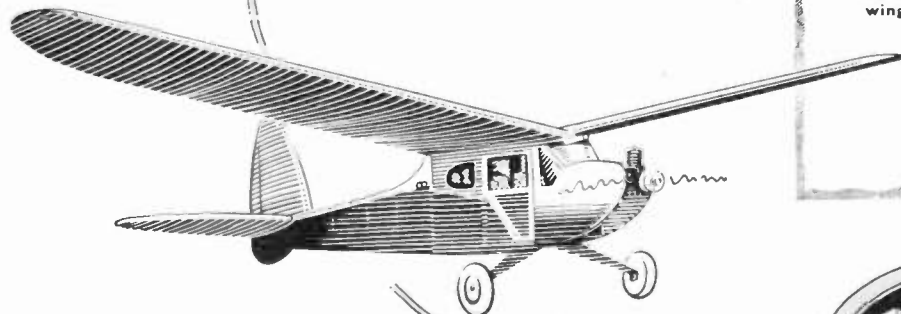
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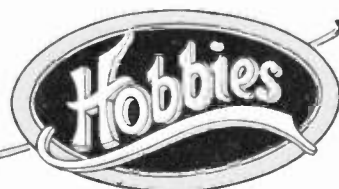
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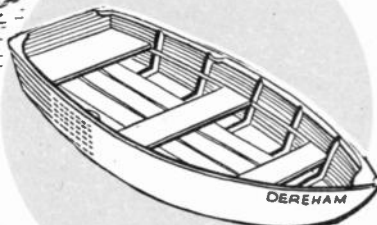
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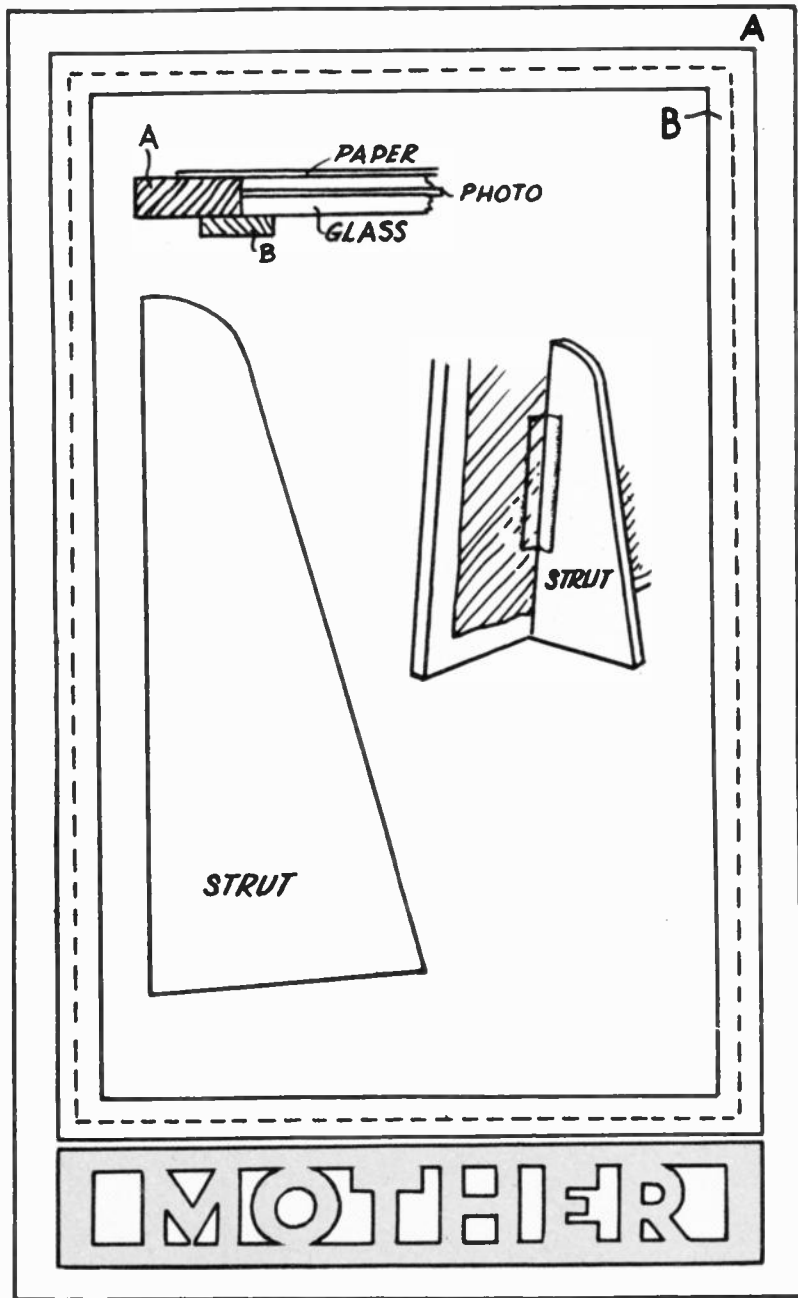


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The glass, which is $5\frac{1}{2}$ ins. by $3\frac{1}{2}$ ins. goes behind piece (B), then comes the photo, a piece of thin wood as a backing, and finally a piece of brown paper pasted over to keep out the dust and hold everything in position.

The strut at the back is glued in position and strengthened by means of small pieces of tape, as shown in the detail. Alternative method of fixing is to hinge to the thin wood backing by means of two $\frac{1}{4}$ in. hinges. Use small countersunk screws and file flat where they protrude.

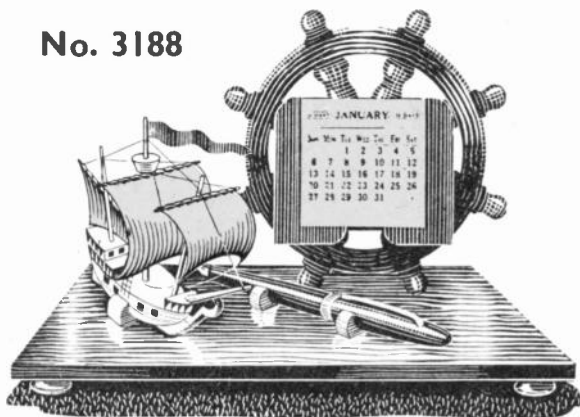
The overlays MOTHER and FATHER are cut from $\frac{1}{4}$ in. wood, and are glued to the front of each frame to make up the pair.

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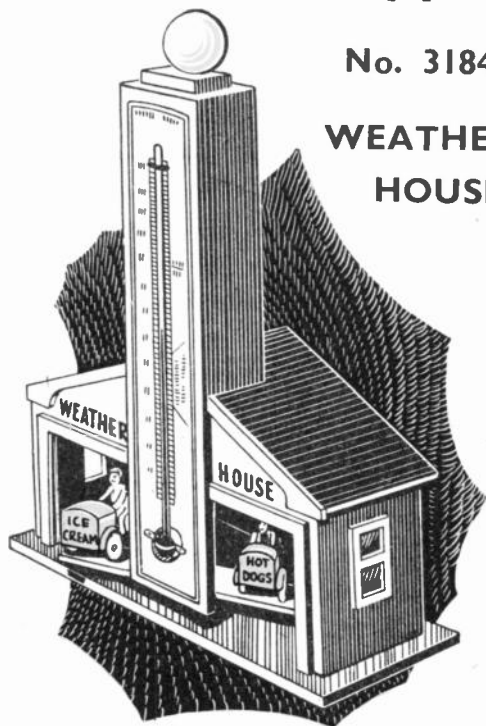
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