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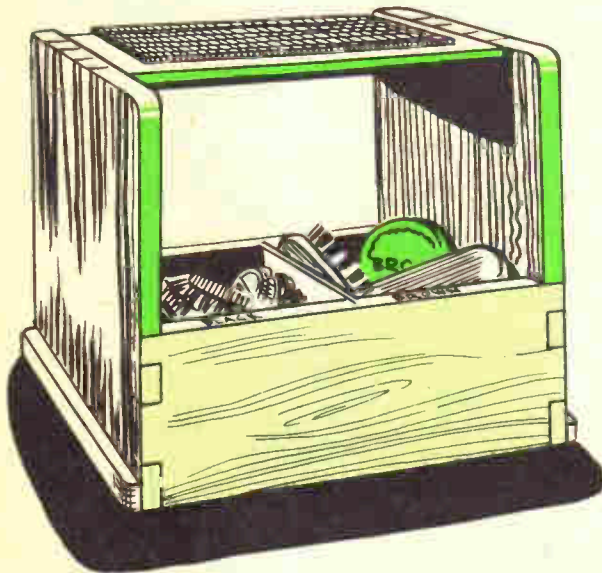
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All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk



By A. J. Ritchie

SHOE-CLEANING is not the most popular household job, but it can be so much better when one has a proper footrest and the right brush can always be found in the right place.

This shoe valet has been designed with this in mind, and although simple in construction, it is very sturdy. In fact, the one in use in the writer's household is also used as a handy step for reaching the top shelf in the larder.

Overall dimensions are: height 12ins., width at base 8ins., length 12ins.

At each end of the top piece cut two dovetails, starting $\frac{1}{2}$ in. in and sloping outwards and downwards (see Fig. 4).

Shape the four end pieces as shown in

Fig. 2, then cut mortises to receive dovetails of top piece.

Cut two straight dovetails at each end of each side piece, making mortises in end pieces to correspond. Chamfer off the top of each side (see Fig. 5).

Make a $\frac{1}{4}$ in. groove down the centre of the high side of each side piece to receive the 7in. by 4in. partition of

MATERIALS REQUIRED ARE:

- | | |
|--|--|
| 4 pieces of wood 12ins. x 4ins. x $\frac{3}{8}$ in. | } can be cut from
one 7ft. 6in. plank
of 4in. x $\frac{3}{8}$ in. wood |
| 3 pieces of wood 11ins. x 4ins. x $\frac{3}{8}$ in. | |
| 2 pieces of wood 8ins. x $\frac{1}{2}$ in. x $\frac{3}{8}$ in. | |
| 1 piece of hardboard 12ins. x 12ins. | |
| 1 piece of rubber 9ins. x 3ins. x $\frac{1}{4}$ in. | |

hardboard. Cut two strips of wood 8ins. by $\frac{1}{2}$ in. of the $\frac{3}{8}$ in. stuff, and make holes to take screws as in Fig. 2. These strips are then used to hold together each pair of end pieces.

● Diagrams overleaf

ASSEMBLING THE SHOE VALET

To assemble the shoe valet, secure the end pieces by the strips as described above, and fit the top piece dovetails into the end piece mortises. Drill holes through the dovetails and screw through down into the side pieces. This makes a strong heavy-duty joint. Before securing the side pieces, fit the partition across

the middle of the box and glue in place in the grooves of the side pieces. The dovetails in the side pieces can also be secured with screws.

Secure a piece of hardboard 8ins. by 12ins. to the base of the box with panel pins.

A strip of fluted rubber nailed to the top piece will prevent accidents if the valet is used as a step.

The whole thing can now be painted or stained to suit any colour-scheme. The colour of the polish and brushes can be written on the chamfered edges of the sides of the box.

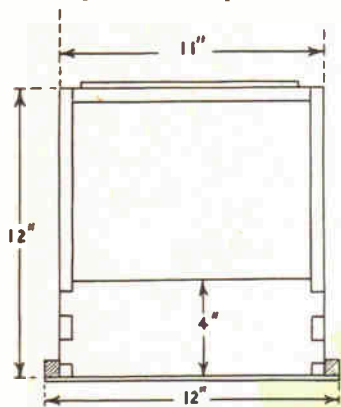


Fig. 1—Side elevation

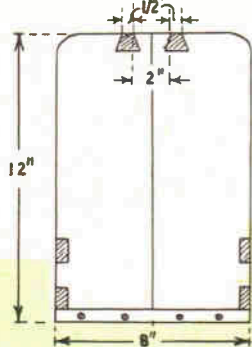


Fig. 2—End elevation

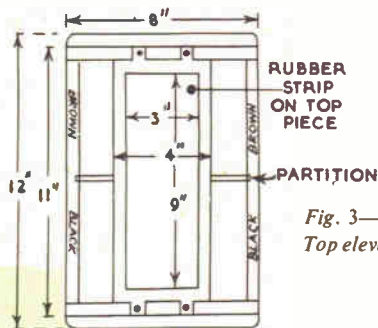


Fig. 3—
Top elevation

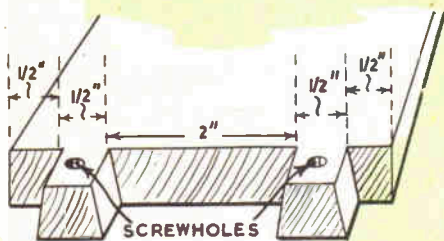


Fig. 4

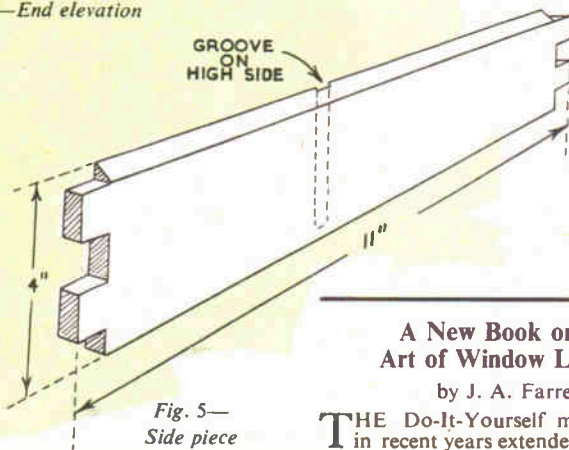


Fig. 5—
Side piece

A New Book on the Art of Window Leading

by J. A. Farrell

THE Do-It-Yourself movement has in recent years extended to the art of creating home-made leaded windows, and, to meet the ever increasing demand of home decorators, this first text book on the subject has now appeared.

Profusely illustrated and written in lucid style it contains all the information the handyman will need to make a professional looking job of all window leading, whatever the contemplated task, be it merely a panelled firescreen or all the windows of his house.

A study of this book will give even the beginner the confidence to undertake any project in this field.

Published by the manufacturers of Decra-Lead Window Leading Products (The North Western Lead Company Limited), Hyde, Cheshire—Price 2/6. (Obtainable from Hobbies branches and Hobbies Ltd., Dereham, Norfolk.)

HOBBIES' MODEL AIRCRAFT KITS

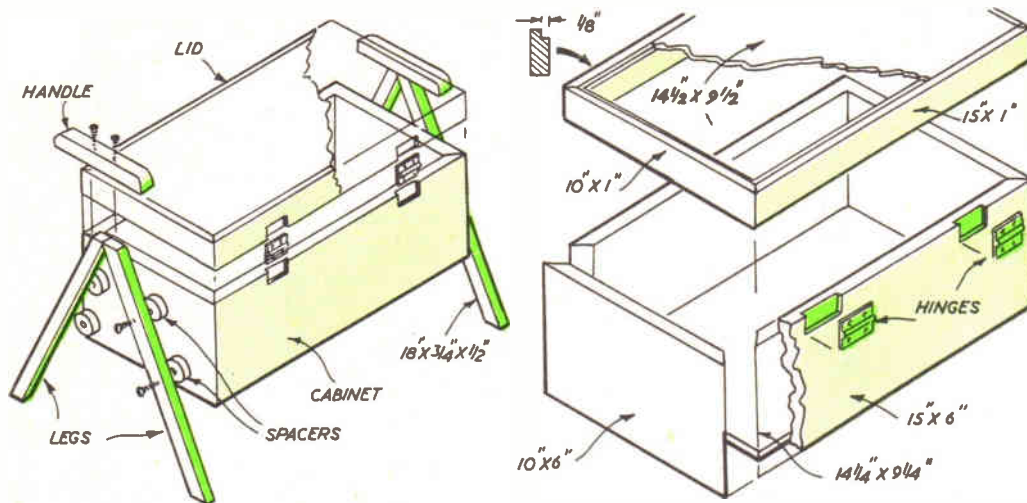
On the back page of this issue are detailed aircraft kits just introduced by Hobbies Ltd. which will keenly interest all modellers and those who follow the sport of model aircraft flying.

The designing of these three types was carried out by R. H. Warring, a well-known authority on the subject, and many exclusive features have been introduced. The easy-to-follow plans contained in the kits make it a simple job to ensure success with each model—be it glider, rubber duration or power.

Attractively boxed and competitively priced, these kits will solve many a gift problem and the connoisseur will welcome the designs, which are calculated to give top performance in their separate classes.

For a handyman's handy wife

PORTABLE SEWING BOX



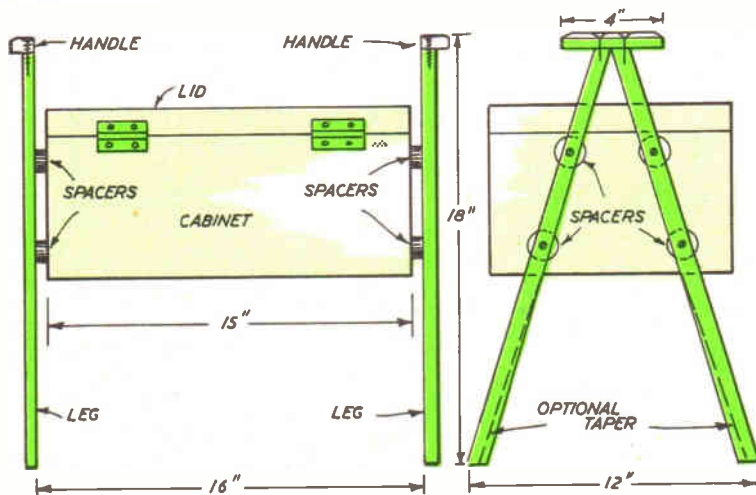
THIS sewing box is more portable than the usual design for such an item. It has carrying handles fitted to each end which can readily be grasped to lift the box and so carry it from room to room, as necessary.

Plywood about 3/8 in. thick is recommended as the material for the cabinet part. The base can be plain ply but veneer faced ply can be used for the sides and ends, if preferred.

The base is cut first, dead true and square, and the sides and ends assembled round it with glued up mitred corner joints. The side and end panels can be pinned through to the base for strength. If in doubt as to the strength of the glued corner joints, glue in quarter-round section fillets.

The lid consists of a frame assembled from 1 in. by 3/8 in. strip, again with mitred corner joints. A rebate is planed on the inner edge of each frame piece, so that the ply top panel fits flush. Again by cutting this panel dead square and true to size it will assist in lining up the frame perfectly true when glued in place. Lid and cabinet are then mounted with conventional hinges, as shown in the drawings. When so assembled, the whole box should be rubbed down perfectly smooth all over with glasspaper and the sharp edges slightly rounded off.

The four legs are 18 in. lengths of 3/4 in. or 7/8 in. by 1/2 in. strip, attached to the ends of the cabinet with woodscrews but separated from the cabinet with circular spacers. The latter should be about 1 in. diameter and 1/2 in. thick. They may be cut from ply or sliced off a



length of broomstick. The handles which secure to the tops of the legs are 4 ins. by 1 in. by 1/2 in., well chamfered on the outer edges and all sharp edges rounded off with glasspaper.

It is suggested that the legs be assembled temporarily over a flat surface, spaced 12 ins. apart at the bottom and touching at the top and the correct chamfer at each end then marked and cut.

Drill the handles and spacers to take the fastening screws, finish smooth and fill the grain, then enamel them black. Fill, stain and polish the cabinet and legs individually before finally assembling all the components.

The legs are assembled to the cabinet ends with 1 1/4 in. woodscrews, drawing the screw heads down flush with the wood. Do not drive too far home, otherwise the points of the screws may emerge inside the cabinet. Should this happen, however, the points should be trimmed off flush with a file. A similar length of screw should be used for fastening the handles to the tops of the legs (two screws for each handle), locating in drilled holes to reduce the risk of splitting the legs. All these joints should be glued as well as screwed, but use only the minimum of glue to avoid smearing the finished wood surfaces as the joints are tightened up. (R.H.W.)

CHEMISTRY IN THE HOME

Making Metals Part 2

EXPERIMENTS with gold sound beyond the resources of the home laboratory. If you have a broken gold fountain pen nib, this need not be so. By using a few drops of a gold solution on a watch glass for each experiment, many of the reactions of gold may be seen for oneself.

regia. On the third treatment with aqua regia the solution is usually only pale yellow and the nib residue may then be thrown away.

Filter the combined solution from the second test tube, and run a little water through the filter paper to remove gold solution which has been absorbed by it.

An immediate brown precipitate of metallic gold powder separates. Leave the mixture overnight and then wash the gold by decantation several times with warm water. Filter it off and dry paper and gold in the oven. If you rub the brown powder with your finger nail or a glass rod, it at once shows the gleam of gold.

For trying out its reactions, gold is suitably employed in the form of a solution of gold chloride. To make this, place the gold powder in a small evaporating basin on a water-bath and add aqua regia a few drops at a time until enough has been added to dissolve all the metal. Evaporate the solution to dryness on the water-bath and dissolve the yellow residue of gold chloride in 5 c.c. of water. Filter from any yellowish-white insoluble matter and run 5 c.c. of water through the filter. The combined filtrate is a dilute solution of gold chloride and may be bottled for use.

You have only to dip a penknife blade in copper sulphate solution to see how copper may be isolated from its salts. The copper is precipitated on the iron and is then washed off and melted into ingots. The water which occurs in copper mines often contains much dissolved copper and the metal is recovered in the same way.

In the laboratory, zinc is a better

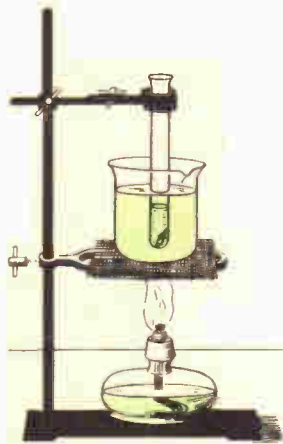


Fig. 1—Dissolving gold in aqua regia

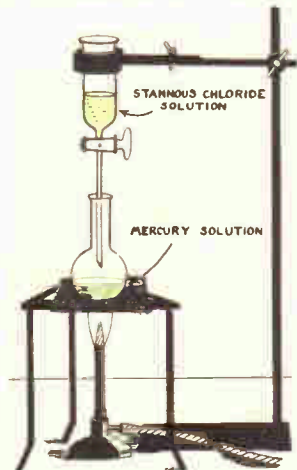


Fig. 2—Preparing mercury in the wet way

First scrub the nib clean with warm water. The gold must now be dissolved from the nib. Gold is one of the so-called noble metals, because unlike most metals the ordinary acids will not attack it. Hence we must use aqua regia, which, appropriately enough, means 'royal water'. To make aqua regia, mix 3 volumes of strong hydrochloric acid with 1 volume of strong nitric acid. As these acids are corrosive to the skin, flush off with water any coming in contact with your fingers. You will need about 12 c.c. of aqua regia.

Put the nib in a test tube, pour on 4 c.c. of aqua regia and set the tube in a beaker of boiling water, as shown in Fig. 1. The liquid soon becomes greenish yellow. The greenish tinge is due to copper being present in the gold alloy used for the nib. A solution of unalloyed gold in aqua regia is pure yellow. We shall see how to separate the two metals later.

When the colour does not seem to deepen further, pour off the solution into another test tube, and repeat the operation with another 4 c.c. of aqua

BRANCHES BARE

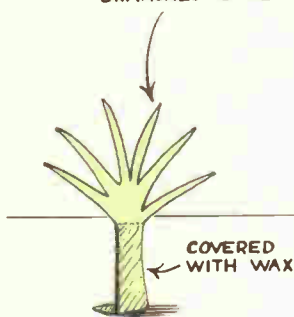


Fig. 3—The magic tree

Evaporate the filtrate to dryness on the water-bath. Dissolve the residue in a little water, filter from any insoluble matter, once again run a little water through filter paper to remove adhering gold solution and evaporate the combined filtrate to about 5 c.c. on the water-bath. To this liquid add a cold solution of 2 grams ferrous sulphate in 4 c.c. of water.

metal to use for the precipitation. A zinc rod left in copper sulphate solution quickly receives a crumbly coating of copper which you can purify by washing with water and drying.

Copper powder is sometimes needed for experiments. An easy way to prepare it is to make a solution of sodium hypophosphite and add some to copper

sulphate solution. On warming, red-brown copper hydride is precipitated, but if the temperature rises above 80 degrees centigrade this splits up and forms copper powder. Therefore by boiling the mixture the copper is obtained in powder form. This should be well washed till free of adhering sodium sulphate, which is also formed in the reaction solution. To ascertain this, test each wash water with lead acetate solution; when no white precipitate of lead sulphate is formed, the washing may be stopped and the powder dried for stock.

Finely divided metallic lead is easily made by clamping a zinc rod in a solution of 10 grams of lead acetate in 200 c.c. of water. The zinc blackens at once owing to deposition of lead and when, after a few days, no more forms, detach it from the zinc, wash well with water and dry it on a porous brick.

Mercury may be separated from its compounds in various ways. Perhaps the most convenient in the laboratory is to reduce it from solutions of its salts by means of stannous chloride solution. In a small flask place a solution of either mercurous nitrate or mercuric chloride (caution, both are poisonous if swallowed, so be sure to wash your hands before eating anything) and add a little

stannous chloride solution — preferably from a tap funnel, as shown in Fig. 2 — and warm the mixture.

A white precipitate of mercurous chloride (calomel) appears. To the warm liquid continue adding stannous chloride a few drops at a time. The white mercurous chloride gradually turns grey. When it deepens no more, stop adding stannous chloride. The grey precipitate consists of metallic mercury in a finely divided form. Wash it several times by decantation, and drain off as much as possible of the wash water. The finely divided metal may now be made to aggregate into a globule by adding enough strong hydrochloric acid to cover it and warming. Wash again by decantation and pour the mercury into a filter and leave it to dry there.

Making silver

Silver can be made directly from silver nitrate solution, either by the now familiar method of dipping a zinc rod in it, when it is deposited on the zinc, or by precipitating it by means of formaldehyde (formalin). To try out the second method, add clear household ammonia to silver nitrate solution until the precipitate which first forms redissolves. Add about an equal volume of formaldehyde and place the vessel in a boiling

water-bath.

The silver is precipitated as a grey-black powder and if the vessel is chemically clean a mirror-like film also lines the vessel walls. Push a $\frac{1}{2}$ in. length of rubber tubing on to the end of a glass rod and rub the silver off the walls, filter off the metal, wash it well with water and allow it to dry.

By clamping a zinc rod in stannous chloride solution, crystals of metallic tin begin to form at once on the zinc. These crystals are, indeed, a beautiful sight, being brilliant and silvery. Later, the deposit is apt to become dull and powdery. After about six hours, the tin may be detached from the zinc, washed in a filter until the wash waters are no longer acid to litmus and then dried in a warm place.

This experiment can be varied so as to give the family a few hours interesting entertainment. Cut a sheet of zinc so that it looks roughly like a bare-branched tree, cover the trunk with a thin layer of wax and stand it in a beaker of stannous chloride solution as shown in Fig. 3. The branches quickly grow 'leaves' of metallic tin, the effect being most spectacular and convincing. Since the trunk is covered with wax, no solution can react with it, and it thus remains, as it should, bare.

An Easy-to-make Toast Rack



ANY close-grained hardwood can be used to make this attractive toast rack; beech or sycamore are ideal. For the base and handle you will need a piece of wood 11 ins. long, $3\frac{1}{2}$ ins. wide, and $\frac{1}{2}$ in. thick.

Plane up the wood carefully with a smoothing plane, finishing it to 3 ins. wide and $\frac{1}{2}$ in. thick. Then mark out as shown in Fig. 1. The groove in the base is centrally placed. Gauge the depth of the groove to $\frac{1}{8}$ in. Saw on the waste side of the lines, and remove waste with chisel.

Now saw the wood into the two parts required, and mark the shaping on the base (Fig. 2). The waste can be removed with the smoothing plane, working in the directions indicated by the arrows. The shaping on the handle is the same as that on each half of the base.

The positions of the holes for the cane are marked in the following way; draw lines parallel with the sloping sides of the base, and $\frac{1}{4}$ in. away from them. Starting from the groove, measure off along these lines $1\frac{1}{2}$ ins., and then a further $1\frac{1}{2}$ ins. These points mark the positions of the holes, which are drilled vertically with a $\frac{3}{8}$ in. drill.

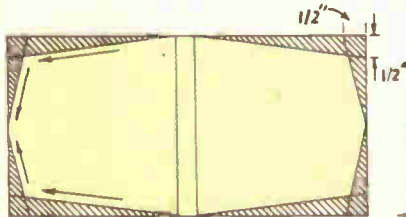


Fig. 2

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Clean up the pieces of wood with a finely-set smoothing plane, and finish with glasspaper. Remember that, if a thick shaving is removed from the handle, the fit of the joint will be spoiled. Glue in the handle, and remove any surplus glue when it is dry. The joint can be strengthened, if necessary, by driving in three 1 in. panel pins from the underside.

From a length of No. 15 cane, cut two 6 in. pieces, and two 7 in. pieces. Soak these in clean water for ten minutes or so to make them pliable, then push the ends into the holes. When the lengths of cane have dried out, remove them from the holes and put a dab of glue on the ends before replacing them. (K.B.)

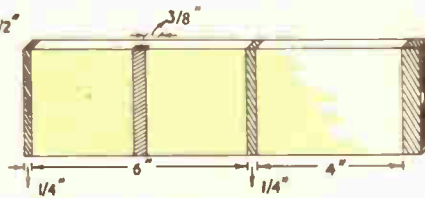


Fig. 1

A. Sharp describes an exciting sport

ROCK climbs afford the strenuous hiker plenty of scope for adventure. It is for those who desire grand fun, with risks to be taken, but the fellow who is strong and athletic and sound of wind and limb, need not fear a moderate crag climb.

There is always a risk in doing even an easy climb. Dozens of accidents occur every year, summer and winter, for climbing is popular even during the latter period. Rock climbing is somewhat hazardous, being a sort of modified Alpine mountaineering, and as such is fascinating to the hardy ones who aspire to master the steeper slopes of the hills, negotiating narrow ridges, or scaling pinnacles hundreds of feet up. There may be formidable peaks to conquer, or a 'chimney' that calls for a degree of skilful climbing, but, on the whole, the mountains of England, especially, have little about them to deter the tougher hikers, unless specially difficult climbs are selected.

In some popular mountain areas the tracks are now so improved that they are easy to follow and to conquer — the constant usage of many paths has made them clear enough for the merest tyro to tramp over, and even in a mist one cannot go far wrong, provided one sticks to the trails.

It is not necessary to be a skilled mountaineer in order to explore the hills of the English Lake district, the range of Snowdonia, the ridges of Kinderscout and the Peak Country, or the more attractive mountains of Scotland, yet it is very advisable to know something about the sport before the novice attempts anything big.

What the Rock Climber needs

Training is one of the first needs. Going straight from an office or factory on a climbing or strenuous walking holiday is asking for trouble. Off goes the holiday-maker with a rush on the first day — on the second day he is definitely whacked. He should prepare by fairly rigorous tramps at week ends over rough lands, hard-going farm tracks, and hilly districts.

Nailed boots are a 'must' — if not special climbers' nails, treble hob nails. But see that your boots for the rock climb are fitted with hobs and side-nails. It is necessary to 'break in' such footwear. It is a good idea to wear a pair of rock-climbing boots on several cross-country walks before attempting to climb in them, so that your feet may become accustomed to their 'feel'.

A compass does not tell you where you are when you get lost, but it is a

very useful aid to your direction in conjunction with your map, and to check your position with the landmarks around you. The Ordnance Survey Lin. map is very convenient for the hiker. This shows the countryside in detail, and with the aid of a compass, will save you from getting hopelessly lost when in remote areas.

An alpenstock is of help when rock climbing, and you may carry a length of good sound rope in the rucksack, to connect you with your companions when negotiating difficult and dangerous ridges and pinnacles. Usually, the leader of the party (it is wiser to go 'rockin' with an experienced party) who should be fully experienced, carries the rope, and he should know when and where its use will be needed. It is foolish for a novice to start crag scaling or rock climbing with other tyros — there should be at least one expert in the party.

To 'Play Safe'

Carry in your haversack or jacket pockets emergency rations such as a few sandwiches, chocolate, dates, an apple, etc., and, if a small party, take a picnic stove and small kettle in order to brew something hot on the spot to drink. Don't forget the water. Useful, too, will be a pullover, and a Mack, or cape in case of rain.

When on your route, set a steady pace and keep to it as much as possible.

ROCK CLIMBING

If a rest seems to be essential, have a good spell, but don't get into the habit of indulging in too many rests. Take matters easy, and never start running down a steepish slope, unless you can see all the way to the bottom and are certain there are no loose rocks or pot-holes. It is advisable to carry a whistle in case of accidents.

When on a rock climbing excursion it is better to dress in knee-breeches, which will be found an advantage, rather than shorts, which afford no protection against abrasions, cuts, bruises, and knocks. Fairly thick woollen stockings are recommended.

For rock work wear your oldest clothes, for they are bound to meet with rough usage. Some climbers wear gloves when tackling sharp-edged rocks.

Attractive Climbs in Britain

Some attractive climbs are to be found in Britain, particularly in Scotland — on the Cairngorms, on Ben Nevis, in the Isle of Skye, and other areas. The Mountaineering Club issue booklets on various climbing districts. Likewise there are guides and books on climbs in England, including those on Scafell, Great Gable, Pillar and Buttermere Crag. Then, in Wales, we have the Snowdon range of splendid hill climbing. In a lesser degree we find scope for this sport or pastime in the Peak Country of Derbyshire, especially on Kinderscout and around Castleton.

For young fretworkers

'Crown' Letter Rack

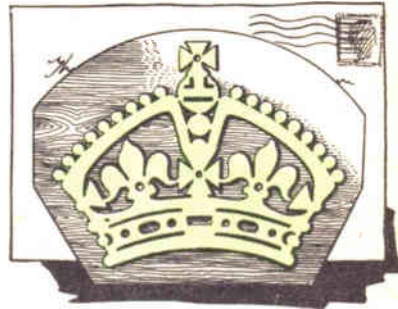
THE young fretworker should try this advanced piece of cutting. It will be a test of skill with the fret-saw, and if carefully cut, will look particularly attractive when finished.

The main parts of the rack are two pieces (A) and the base (B). Cut them out, clean up with glasspaper and glue together. Wipe off any excess glue before it has time to dry.

Cut the crown overlay from 1/4 in. wood. The cut-away portions should first be drilled and the saw inserted through the drill holes. Cut all interior frets first and then cut round the outline. The overlay is simply glued in place on the front.

Do not attempt to paint, just give three or four coats of brush polish.

(M.P.)



Full size patterns
are on page 95

One way to make photography self-supporting is to sell pictures to the Press, and among the easiest to place are photographs of oddities.

MANY amateur photographers who find their hobby expensive can help to offset the costs by selling some of their work to newspapers and magazines. Scores of publications pay for pictures suited to their needs, and it is not necessary to undertake high-speed Press photography to get a share of this cash.

By Arthur Gaunt

Indeed, the amateur is wise to avoid the urgently topical news picture, concentrating instead on the less ephemeral type of subject. There is a worthwhile market for curiosity pictures — photographs of oddities in town and country — and although no big income is to be made by supplying such illustrations to the Press, the total sum earned in a year will probably go a long way towards meeting general camera expenses.

The cyclist and motorist, in particular, have good opportunities for making their camera pay for its upkeep. Singular things seen during runs are usually worth snapshotting, with the idea of selling prints for reproduction.

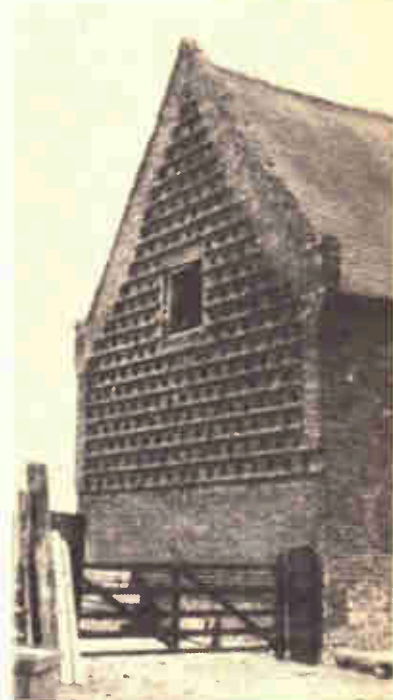
The same picture can be sold to more than one publication, provided the accompanying write-up is different. The

CASH FROM SNAPS



Old instruments of punishment, such as this whipping post and stocks, make worthwhile curiosity pictures for submission to the Press

photograph of the highwayman's sign near Putney, London (shown here) has been placed several times, both singly



A farming paper and a country magazine have both published this picture of a barn with scores of pigeon-holes in its gable end

and with other pictures of oddities connected with old-time footpads.

The most vital need in selling photographs in this way is to study the markets carefully. An examination of the various journals in public news-rooms will show the picture each publication favours, and probably reveal several hitherto unsuspected markets.

Some papers (the *Field* and *Country Life*, for instance) pay for photographs reproduced with letters. Subjects illustrated in that way range from medieval dovecotes to modern inn signs, and from curious memorials to ancient market crosses. Illustrated letters stand the best chance of acceptance if they point out something which is little-known, or which adds to the information given in a recent article in the magazine.

Apart from illustrated correspondence, very short articles with a photograph are used by some of the motoring and outdoor magazines. The market is especially useful for the photographer who feels unable to compile a full-length MS. but who has less difficulty in preparing 100-200 words describing the subject of a single curiosity picture.



Oddities like this sign, near Putney Heath are good subjects for profitable photography



This picture of an old Railway Co. crest, at Rotherham, has appealed to the editors of several publications

The *local* newspaper market should not be overlooked. There is no worthwhile opening for oddity snaps in the national newspapers (except an occasional lucky opportunity), but the editors of local daily and weekly papers are often pleased to receive such pictures, always provided the subject is of direct local interest.

Interesting and profitable

Some enthusiastic amateur photographers have collected series of pictures of local curiosities and sold them in batches, under a general title such as 'Loamshire Oddities', each picture showing one such subject within the circulation area of the newspaper. Gathering a series of that kind can be interesting as well as profitable, since it is necessary to vary the subjects as much as possible and to avoid limiting them to just one part of the area in which the newspaper sells.

Curiosity photographs for reproduction should show the subject as large as possible. The object must fill as much of

the picture area as possible, and this usually means getting fairly close, entailing care in focusing. Great care is also needed to avoid a confusing background, the aim being to make the subject stand out from its surroundings.

Enlarged prints are essential, too. They should not be smaller than post-card size; halfplate size (6½ins. by 4½ins.) is better. The prints should be black-and-white and should be on glossy paper, but special glazing is unnecessary.

Photographs which are to be submitted for correspondence columns should have the accompanying letter typed on a separate sheet of paper, but the title of the subject and the sender's name and address should also be quoted on the back of the print. It is better to give this information on a slip of paper securely attached to the print with mounting paste, than to pencil the details on the back. Unless the pencil is used very lightly, the wording will be impressed into the paper and will be visible on the front.

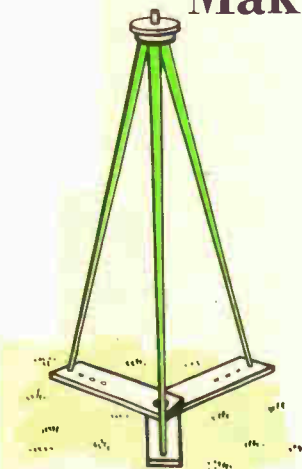
Pictures which are to be submitted with only a brief description, and not for a correspondence column, can have the caption attached in the same way. As full a description as possible, but concisely expressed, is called for.

Through the post

Stout envelopes and a protective piece of cardboard are needed if the photograph is to go through the post without damage. One envelope (slightly smaller than the other, but large enough to hold the photograph) is for the return of the picture if it is not used. The cardboard should be inserted in this, and the envelope correctly stamped.

It is wise to mark both envelopes plainly **DO NOT BEND OR TIE**, to ensure safety in transit. Some editors return reproduced prints after use; others destroy them or file them for possible further use, which means an extra fee for the photographer when they are reproduced again!

Make a Bracer for your Tripod



By S. H. Longbottom

HAVING told one of my young photographic friends how much better his pictures would be if he bought himself a tripod, he came to me very distressed recently, saying that the tripod was no good because it slipped. He had tried to tighten-up the nuts, but this had proved ineffective, so I asked him how it was slipping. He then informed me that he had been trying to take pictures of church interiors and the feet had slipped on the shiny floor.

Of course, the tripod feet cannot obtain a good grip on shiny surfaces such

as marble, polished linoleum and similar materials. Again, sandy beaches will often prove quite a problem, although just the reverse of the hard floors. As an emergency you may always lay down a raincoat if the floor is dry and reasonably clean, but the only proven remedy is a tripod bracer as shown in the sketch.

This accessory is laid on the floor, opened out to the width of the legs, the feet of which are inserted into small holes drilled along the bracer arms. A wing nut at the centre of the bracer will keep the arms perfectly rigid, while the legs cannot open out further, causing the tripod to slip.

The device is made from three pieces of thin plywood, ⅜ in. thick, each 1ft. 6ins. long. If you can obtain any thin strip steel, so much the better, but if plywood is the only material available, it will be quite suitable.

Cut the strips of plywood 1½ins. wide, clamp together and smooth off the sides with a file and glasspaper. The three strips are finally fastened together by means of a wing nut and bolt, for which

a hole is drilled through the strips 1in from one end.

Before fastening together, holes are drilled to accommodate the tips of the tripod legs which must be examined to decide a suitable diameter. These holes are then made at distances of ⅓ in., starting from the free ends and progressing to the halfway mark of each strip. It will be appreciated that these holes allow for many different positions of the legs when they are extended.

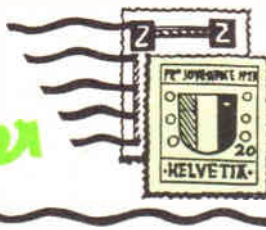
The ends may be rounded off with a file and the question of a finish remains. You are strongly recommended to give the bracer one or two coats of paint, especially if you intend to use it on the sea shore or on damp grassland. The paint will act as a preservative besides giving a good finish, and the most suitable colour is black. Painting is imperative in the case of steel bracers, which would rust very quickly if used under damp conditions.

The device can be very quickly made, folds quite flat when out of use, yet is equally as portable as the tripod itself.





Stamp Collector's Corner



DURING the late Bronze Age when men dwelt in wattle villages beside lakes and streams, canoes were in common use for water transport and of the greatest importance in the daily life of early man. Roughly constructed, for only primitive tools were available, these canoes were sometimes as much as 40ft. in length. They were propelled by paddles, the larger ones being fitted with wash-boards lashed one to each side of the canoe along the upper edges in order to give protection from the water. This greatly improved the stability and general efficiency of the craft, and the introduction of wash-boards may well be regarded as the first step towards the development of the built-up boat.

On the west coast of Africa nearly all the native canoes are made from the trunks of large trees hollowed out by means of fire and shaped by a primitive tool known as the adze, a kind of axe with a curved blade at right angles to the handle for cutting away wood. Some appropriate stamps: 'Fiji 1938, ½d. green — Natives' Sailing Canoe (1d. mint), 1½d. red — Native Canoe (5d. used), 3d. blue — Canoe and Arms of Fiji (4d. mint). Canada 1955, 10 cent purple-brown — Eskimo Hunter and Canoe (2d. used). Ceylon 1951-54, 50 cent indigo — Outrigger Canoe (3d. used). Nauru 1954, 6d. orange — Nauruan Canoe (7d. mint). North Borneo 1950, 30 cent olive — Native Sea Craft (1/- used)'.
Egyptian stamps of 1926 depict an 'Ancient Egyptian Ship', typical of those which went on the famous expedition to the 'Land of Punt' about 1480 B.C., under the orders of the then Egyptian Queen Hatshepsut. It is now generally thought that this 'Land of Punt' lay on the Hadhramaut coast of Arabia, for the ships returned deeply laden with gold, ivory, apes and spices.

These ships with their thirty oarsmen, must have been at least 70ft. long. In order to provide the necessary longitudinal strength — Egyptian ships had neither keel nor interior framework — they were provided with a 'hogging truss', a rope extending from bow to stern and kept taut with kingposts.

In the 2nd century A.D., the sailing

ships used for the corn trade between Egypt and Rome were some 90ft. long, with a capacity of about 250 tons. An 'artemon' — half mast and half bowsprit — projected over the bows. This spar with its square sail set below, made it possible, for the first time in history, for a ship to make progress against headwinds. But during the Dark Ages this valuable invention disappeared entirely, nor was it revived until the end of the 15th century, when it reappeared in the form of the spritsail.



Triangular lateen sails were introduced into the Mediterranean soon after the Arab conquests of the 7th century A.D., while the double rudders — one on each quarter, like those of Roman corn ships — survived in that sea up to the end of the 15th century.

As is common in lateen-rigged vessels, the mast rakes considerably forward, making it easy to shift the yard when the vessel goes about; for in a lateener, the sail is always set to leeward of the mast, while the lee shrouds are cast off to provide room for the belying sail.

During the reign of King Henry VIII small ships were used for carrying goods between England and the ports of Northern Europe. At that time the three-masted rig was so far developed that in small ships there was little further alteration until the introduction of jibs and staysails nearly two hundred years later. In the design of the hull, the old round stern had been replaced by a square transom stern which provided much greater cabin space. The planking was laid on 'carvel'-wise, with planks set edge to edge and not in the older overlapping fashion known as 'clinker'.

Old and modern ships are illustrated

A STORY OF NAVIGATION

By R. Cantwell

on anniversary stamps of Monaco, 1953 (set of 3, 1/1 used), and — Loading a Ship — Nauru 1954, 3½d. red (5d. mint), Nigeria 1936 — Cargo Ship — ½d. green (2d. mint), Paraguay 1944 — Ships in Harbour — 1 cent blue (4d. mint), Canada 1934 — Ancient Sailing Ship — 2 cent brown (2/6 used).

Queen Elizabeth's fleet, which defeated the Spanish Armada in 1588, contained a number of large vessels of about 800 tons burden. Each of these was fitted with four masts, of which the after-most was known as the 'bonaventure' mizzen. These galleons were very serviceable. 'Spain 1930, 1 cent brown — Galleon (3d. mint)'.

The schooner-rig originated in North America, where it was found to be particularly convenient for small coasters and vessels trading to the West Indies. The rig was not introduced into the British Navy until 1764, after our conquest of Canada from the French, when the need of additional small craft resulted in the purchase of numerous schooners of French-Canadian origin.

In the 18th century all schooners, except the smallest, were provided with one or two square topsails on the foremast, while many carried square topsails on both masts. 'Cayman Islands 1938, 2½d. blue — Schooner (6d. mint)'.

On the occasion of his great and final victory over the French and Spanish fleets off Cape Trafalgar in 1805, Lord Nelson flew his flag in H.M.S. 'Victory' and it was on her quarter deck that he received his mortal wound.

The 'Victory' was a three-decker of 100 guns, built as far back as 1765, but she had been considerably altered even before the battle, while during the next century her appearance was further modified to meet the prevailing fashions in ship-building. The ship is still preserved in Portsmouth Dockyard — and also depicted on the following stamps: Great Britain 1951, 2/6 green (9d. used). Antigua 1932, 2/6 purple.

Collectors who are interested in this thematic sideline will find hundreds of ancient and modern ships shown on stamps. And apart from ships, there are many maritime themes worthy of investigation; for example, Reign of the Jolly Roger. Lairds of the Pirates. Story of the Spanish Main. Buried Treasure. Story of the 'Bounty'. Round the Coasts. Charting the Sea. The Seashore. Sailing the Seven Seas. Round the Mediterranean.



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Replies to Readers

Is this YOUR Problem?

Marks on a Sink Unit

HOW can I eliminate small marks and scratches, caused by saucepans and grit, from a cream sink unit? (E.B.—Norwich).

IF the marks and scratches are not too deeply impressed in the enamelled surface, a good household cleanser containing any gentle abrasive may remove much if not all of the marks. Considerable rubbing will be necessary, no doubt. If this treatment fails, a more drastic attempt may be made, such as a vigorous application of medium pumice powder on a felt pad, dampened with water. As this may dull the polish, rub over with a soft duster, or if the polish has gone, apply a coat of any clear lacquer, heat-proof if possible. A final tip — lay an asbestos mat on the unit for cooking vessels to stand upon with no damage to the enamelled surface.

Casting Lead Soldiers

I HAVE cast lead soldiers from moulds, but found that although they turned out very good, they have been too soft and bend very easily. Can you advise me as to what other metal (low melting) I could use with lead to harden it? (J.B.—Darwen).

THERE are many compositions with lead that are used for small castings. One consists of 80% lead, 20% tin; another substitutes zinc for the tin, which would probably be the most convenient for you. The addition of 2 to 5% of antimony toughens a lead base mixture, while one comprising 20% lead, 30% tin, 25% antimony and 25% bismuth, is particularly hard — tending to brittleness.

Renovating Moquette

I HAVE two chairs covered in uncut moquette which have become faded, and I wonder if you could tell me if there is any way I could dye them a deeper shade. (G.R.—Paddington).

THE operation suggested is a job for an experienced professional dyer. In the first place, the material would have to be removed from the chairs and warp and weft fibres tested for identity. A suitable dye or mixture of dyes would then have to be selected and a dyebath made up containing a definite percentage of dye on the weight of the cloth. The present fading could very materially affect the evenness of the result. For an amateur, the only course would be to

remove the cloth from the chairs, wash it thoroughly in a warm solution of a household detergent, rinse thoroughly in several changes of warm water and then to dye with one of the packet dyes obtainable from the shops, turning the material constantly in the dyebath, so as to attain the maximum evenness of dyeing, then to rinse off in the usual way. The cloth will, of course, dry lighter in shade than it appears when still wet, and this should be allowed for. While you might achieve a satisfying result by this method, you should be prepared for an indifferent and even a poor one. So much depends on the condition of the cloth.

Broken Walls

THE kitchen of the house we have just bought has broken plaster on the walls and an old wooden floor with large holes in. Will you please advise the best thing to do with the floor, and should the walls be plastered first before we lay red tiles? (M.E.—Basingstoke).

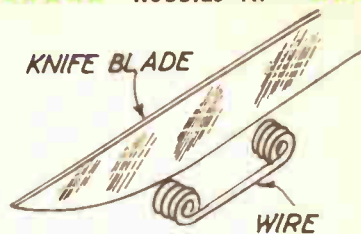
THERE is only one thing to do as regards the floor, and that is to take the whole up and replace with new boards. Creosote the underside of the boards, and it would be wise to creosote the joists also. The walls can be repaired with a 1 cement to 3 of sand mixture. As to the tiles, you can now purchase plastic tiles which can be laid in position with a special cement supplied by the makers. A dead flat surface is necessary for the tiles, otherwise the job is quite a simple one for any handyman.

Cellulose Finish

HOW can I finish a piece of furniture with the same glaze as that of wire-less cabinets and sideboards, exposing the grain of the wood or veneer beneath? (D.M.—Dowlais).

A CLEAR cellulose varnish is probably the finish you desire. This is best sprayed on, and quite a good sprayer can now be bought at a reasonable price. There is a brush-on variety also available, but if this is chosen it must not be applied as ordinary varnish — that is — brushed each way, but flowed on with a full brush and no portion gone over a second time. Cellulose varnish has the quality of smoothing itself, and leaves no brush marks, but a smooth glossy surface.

HOBBIES TIP



SLICING SPACER

A GADGET bent from wire to the shape shown fits over a knife blade and regulates the thickness of slice when the knife is used for peeling potatoes, etc. Just press the blade of the knife into the appropriate coil. Use stainless steel wire for the guide.

(R.W.)

Staining the wood beforehand is often not necessary, especially if it is desired to show the full beauty of natural grain.

Finish to a Violin

PLEASE inform me the best way of staining and polishing a violin? (P.M.—Liverpool).

WE advise you to remove old stain and varnish by rubbing over with No. 1 glasspaper first, and then No. 0 grade. A good spirit varnish is made as follows:—Colour $\frac{1}{2}$ pint alcohol with turmeric and a little red sanders. Dissolve 2 ozs. gum sandarack (juniper) in $\frac{1}{2}$ pint alcohol. Put the two mixtures together and add two tablespoonsful of venice turpentine and 2 ozs. white shellac. When dissolved filter through cotton wool. Before varnishing, first size the violin with a mixture of 3 parts best copal varnish and 1 part turpentine applied hot with a rag and well rubbed in. Remember that several coats of varnish may be necessary for good results.

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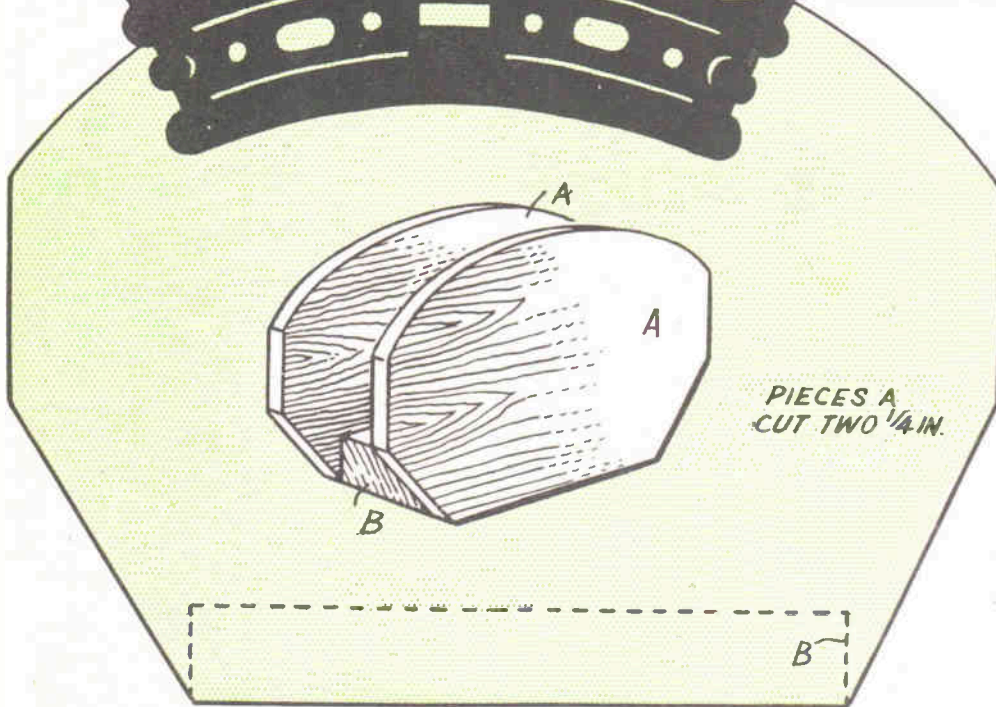
'CROWN' LETTER BACK

SEE PAGE 86



PIECE B
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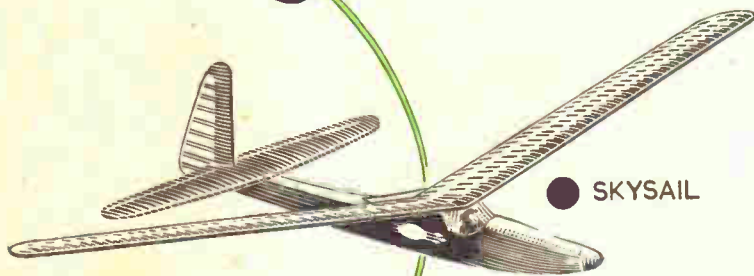
OVERLAY. CUT ONE 1/8 IN.



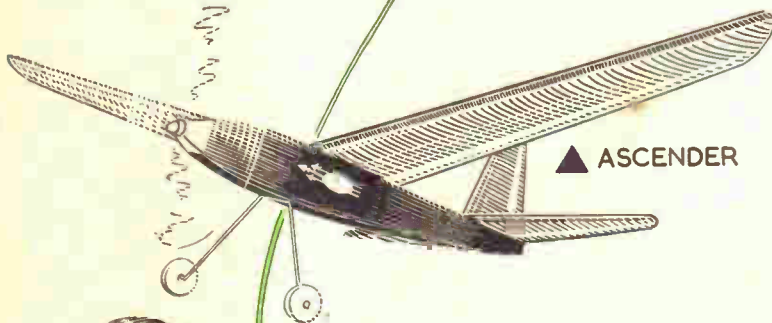
PIECES A
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OUT of the BLUE

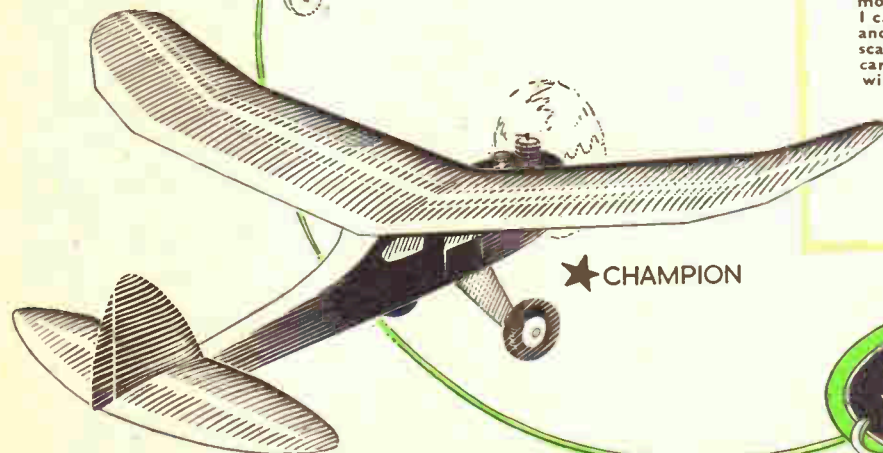
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