HOBBIES weekly

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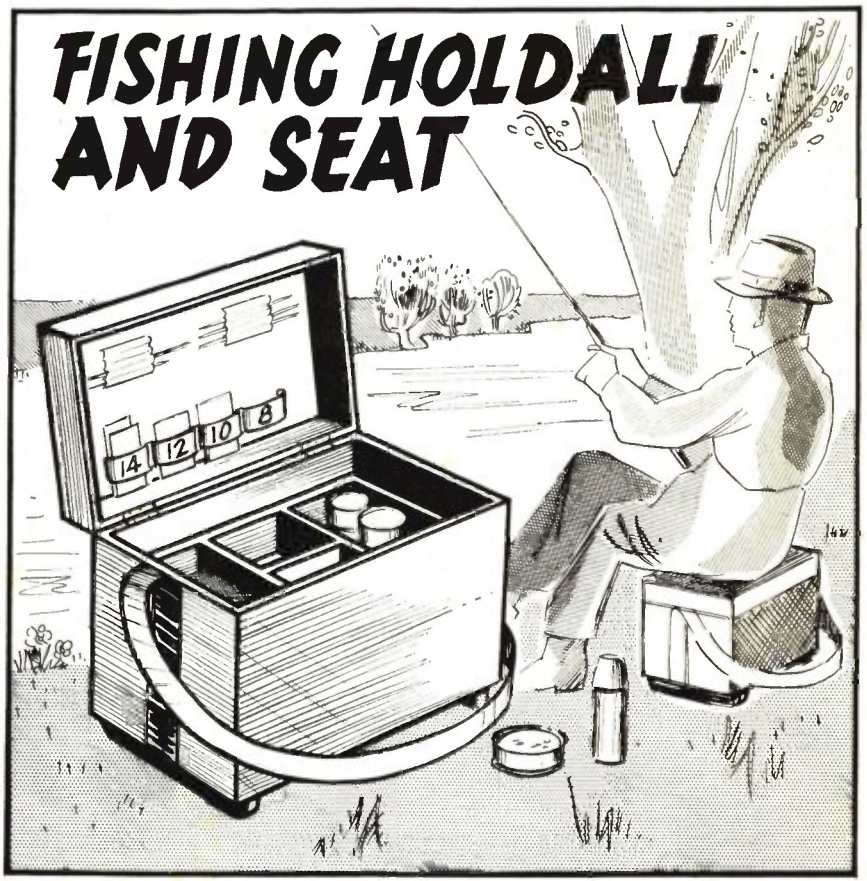
FISHING HOLDALL AND SEAT



Hobbies

FOR CRAFTSMEN OF ALL AGES

6D

PAPER LAMPSHADES

PAPER lampshades are easy to make, and being cheap, they can be replaced with a new one whenever desired. Moreover, the material can be decorated when it has been cut out, and before assembly and there are no fraying edges to deal with as when fabric is used.

You may use plain white cartridge paper of good quality, applying your own decorations, or buy some of the many attractive papers now on sale. I would mention that I prepared a design on a cartridge paper shade, coloured with water colours, fastening these by a coat of ordinary varnish. You may think the paper absorbs the latter, but this is not so, and all that happens is the back appears a little mottled.

If you care to experiment a little further you can use artificial parchment, again adding your own decorations in paint, transfers, or coloured paper.

Probably the most difficult part of making paper lampshades is knowing how to cut out your basic shape to fit an old wire frame. The latter decides the size of the shade, and we can hardly avoid a hole at the top. A complete shade would scorch or burn from the heat of the electric lamp. It is wise to prepare a trial shade in stiff brown paper before cutting out the actual shade. Brown paper can be easily folded, shaped, and any adjustments made, but let us explain the diagrams.

Fig. 1 shows how we prepare the circular frame with just less than half a circle of paper. Should a wider flare be desired, i.e., wider at the base, we allow just a little more than half a circle. The two ends are overlapped and firmly stuck together with adhesive. Another way of fastening together is by punching a series of holes in both edges which overlap, and inserting a fancy cord with a bow at the end.

In Fig. 2 we show how to make a square shade, again based on a circle. Note that we are using exactly half a circle for the shade, but must allow ½ in. extra at one side to provide the overlap for joining. We cannot alter the flare of this shape in the same way as the circular shade, and the only method is to increase the width of the base at each side. This is done by preparing the pattern on a circle of larger diameter. In the illustration we have shown how motifs may be added for decoration and for a border.

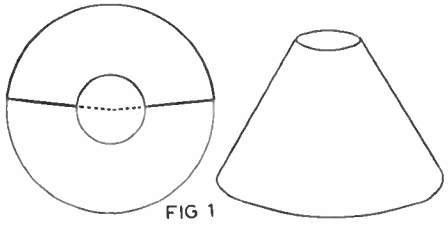


FIG 1

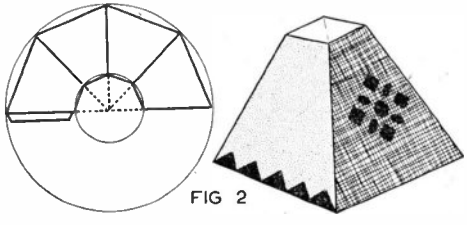


FIG 2

Fig. 3 is an extension of the last mentioned shade, being hexagonal in shape, and again using the circle as basis. Allow an overlap as before. To obtain the six equal sides fold the semi-circle first into half, then each of these into three equal sections.

It is quite possible that you may not have a pair of compasses large enough for scribing wide circles, and so we have to improvise. I often use a long strip of cardboard, about 1 in.

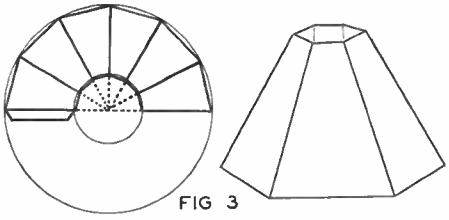


FIG 3

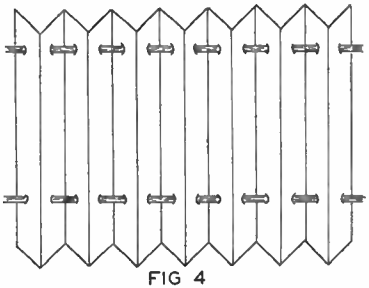


FIG 4

wide, with a hole near one end for inserting a drawing pin. This is the centre. I then measure the radius from this centre, making another small hole just large enough for the pencil point. If the improvised compass is now fastened down on the paper you may be sure of scribing a perfect circle to the size required. A further hole nearer the centre is also necessary for the hole in the top of the shade.

We can experiment with all kinds of papers and decorations. While the aforegoing gives you full details concerning the preparation of the basic shapes we would mention that the edges, or corners, may always be reinforced by additional strips of paper, folded down the centre, and then glued to both sides in the case of the edges, or around corners. This should be done before the shade is joined. These reinforcements may be decorated to make borders or edgings as the case may be, or you may use a patterned paper along with plain cartridge.

While we have suggested water colours for painting the shades, we can also use transfers, stencils or motifs cut from coloured paper, and which are added where required.

Pleated shades are easily prepared, and can be fitted over old wire frames. A shade with a circumference of 39 in. at the base and 7¾ in. deep can be made from a strip of paper 60 in. long and 8 in. wide. We suggest a strip of tracing paper for such a shade.

Fold over both sides ⅛ in. deep, and thoroughly crease with the blade of a knife to reinforce. Now mark off ⅜ in. spaces along both edges with pencil and ruler. Any decorative work should be completed before pleating.

From a practical point of view you will find it best to lay a ruler from point to point on the edges, and score a line with a blunt tool, e.g. the end of a penholder. Follow this procedure throughout the length of the strip, and if any joints are necessary, in view of the length, see that these are made where a fold will conceal. Adhesive will join additional strips.

Having scored the paper we start creasing to make the pleats as shown in Fig. 4. Starting at one end crease along the edge of each of the *alternate* lines to make the outer edges of the pleats. This is followed by creasing the remaining lines in the opposite directions to prepare the inner pleats.

When the creasing is complete we measure 2 in. from the bottom, mark the point in the centre of the top pleat, and mark a similar point ¾ in. from the top. If you have a good leather punch you will be able to make the holes with one attempt. Thin cords are threaded through both sets of holes, and the shade placed on the wire frame.

Draw up the top cords first and tie in a bow. Draw the base cord in a similar manner, trimming the surplus, and tie, adjusting the pleats where necessary, so that they all appear even. Note that when measuring for this type of shade we always allow 1½ in. below the edges of the wire frame.

Incidentally, paper lampshades can give a really gay appearance during the summer months if bright papers are used, and since they are so cheap, they can be discarded and replaced when soiled. (S.H.L.)

FISHING HOLDALL AND SEAT

A COMBINED seat and fishing tackle holdall is extremely useful for the keen angler. Everything is always at hand and there are no disappointments because of items left at home. There is plenty of room for bait and other extras the angler usually carries, and space can be provided for a sandwich tin if required.

All diagrams are shown on the two centre pages.

Make up the seat from obechi and ¼ in. exterior grade plywood to keep down the weight as much as possible. Use Cascamite One Shot glue for all joints, using it liberally to ensure everything is watertight.

The size shown should be sufficient for most requirements but it may need to be increased for sea-fishing enthusiasts where heavier tackle is used. Whilst the depth is sufficient for most vacuum flasks it may be necessary to increase a little for some, and of course the tray would need to be shorter to allow for a flask to stand upright if this is to be carried.

From the constructional diagrams it will be seen that the seat consists of a main box and a lid, the measurements being as seen at A. Make up the box first as seen at B, butting two pieces together if necessary to get the full width of 10 in. for the sides. The ends are screwed and glued to the sides, using countersunk brass screws, and the bottom is then cut to fit and screwed and glued in position.

The feet are two pieces of 2 in. by ¾ in. obechi glued and screwed to the bottom, the screws being inserted from inside.

The lid is shown at C, and consists of a simple framework of ½ in. obechi, butt jointed and covered with ¼ in. ply. It should, of course, fit the box exactly.

The interior of the lid is intended to hold floats and hooks or any other flat and light-weight articles as suggested at D. The envelopes of hooks can be placed in pockets of lightweight canvas or similar material. The pockets can be open at the bottom, but should be close enough to the side of the lid to prevent them falling out. Pockets can be numbered according to hook size. Floats, too, can be kept in similar open-ended pockets and are slipped in from the centre. These are, of course, only suggestions and the enthusiast will no doubt arrange his tackle to suit his own individual requirements. There is plenty of scope for ingenuity in this respect. Pockets should not be fixed until the interior has been painted.

ALL DIAGRAMS FOR MAKING THIS WORTHWHILE PROJECT ARE SHOWN ON THE TWO CENTRE PAGES

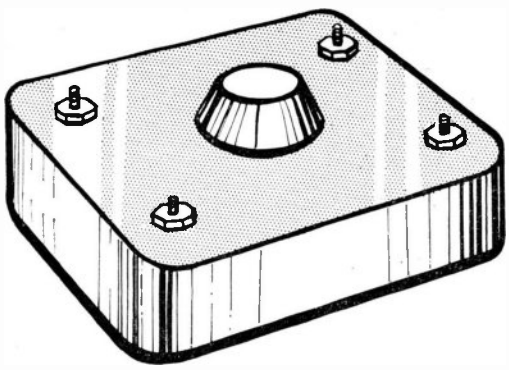
The box too can be partitioned off as at E and here too allowance must be made for the particular types and sizes of reels and other items used. The partitions should only come part way up the box, the top being filled with a lift out tray. Tray partitions can be quite small as in diagram F and should allow for plugs, spinners, jardine snaps, bungs, pilot floats, weights, etc. to be easily selected. Alternatively reels can be kept in the tray as indicated in the finished sketch.

Hinge the lid to the box by means of 2 in. heavy brass butt hinges, recessing both lid and box to allow them to come flush.

Clean up all parts and give a coat of clear Cuprinol and then an undercoat which should be allowed to dry thoroughly. Rub down with silicon carbide paper, used wet, and fill any holes with putty or Isopon. Give a further undercoat and then two top coats of outdoor quality paint.

Finally rub down lightly with the finest grade silicon carbide, using plenty of water, to take off the gloss. If a medium green paint is used and treated as described the holdall will be quite inconspicuous on the river bank.

The last job is to provide a carrying strap and fastener of some sort. A visit to the ironmonger or multiple stores will enable you to choose a suitable fastener, and a suitable webbing strap could be obtained from stores which sell ex-army equipment. What is needed is belt or strap of green canvas which can be adapted for this particular use. Failing this, use a strong leather belt or terylene webbing such as small-boat sailors use as toe straps. Any of these can be adapted for the purpose, and can be fixed by means of ⅜ in. roundhead screws with washers. (M.h.)



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A CRYSTAL DIODE TUNER

EARLIER articles have shown how to build audio amplifiers, to run from the mains, or from batteries. These amplifiers can be used to play records, and for similar purposes. It is also possible to employ them for radio programmes, if a radio tuner is added.

A tuner, or feeder, supplies a low volume audio output, which can be brought up to speaker strength by the amplifier. The tuner may be of very simple type indeed, or may have a number of valves, for long distance reception. It is often of advantage to be able to listen to local programmes with the aid of an amplifier, and the tuner described here is for this purpose. It requires no battery or mains supplies.

A tuner of this kind gives excellent quality of reproduction. It is similar to the usual kind of crystal set, and can be used to work headphones.

The tuner circuit is shown in Fig. 26, and has a coil for medium waves (about 200–550 metres). A commercially manufactured or dual-wave coil can be used instead, as described later, if this is preferred.

The diode should be of good quality (*not* cheap surplus) and many similar types are sold for detector purposes. They have wire ends for connecting them into the circuit.

For tuning, a 500pF (or similar) solid dielectric variable capacitor is used, with a small knob. If an air-spaced capacitor is to hand, this will be satisfactory, but may need a larger case.

Assembly

The tuner is easily and quickly built in one of the plastic boxes which are available. All the components are assembled on the lid, as in Fig. 27.

Drill four holes for 6BA or 4BA bolts or terminals, and a larger central hole for the variable capacitor. Some boxes are made with material which cracks easily, so a little care is needed. The capacitor is fixed with its nut, and the knob fitted on. Terminals can be bought, but ¼ in. 6BA bolts, each with two nuts, will do well.

Any other small box or case to hand could be used, but it must not be metal. If the coil is near a piece of metal, this will reduce efficiency. Some of the terminals would also have to be insulated from the metal case. So a plastic, wood, or card box or case is recommended.

Connect Earth and Phone terminals together, and to M (moving plates) on the capacitor. The diode is connected from F (Fixed plates) to the other phone terminal.

Coil

An efficient coil can be wound on a piece of ferrite rod about 2 in. long and ⅜ in. in diameter, using 28 s.w.g. enamelled wire. Cover the rod with a layer of brown paper, glued on. Fix one end of the enamelled wire with adhesive, or thread, leaving the wire long enough to reach M. Twenty turns are then wound on, side by side, and the wire is twisted into a loop which can be taken to the aerial terminal. Then continue winding in the same direction, for another 40 turns, fasten the wire, and leave the end long enough to reach F.

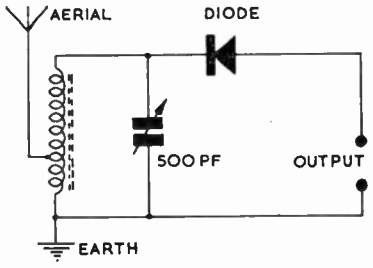


Fig. 26—Diode circuit for phones or amplifier

Scrape the enamel from the wire at both ends, and the loop, so that a proper connection can be made. Adhesive holds the coil to the lid.

Other coils

Fig. 28 shows other aerial connections which can be used. If a very short aerial is to be employed, volume will be improved by taking this directly to the top of the coil, as at A. But with a long aerial, this would cause very flat, unselective tuning.

Ready-made coils often have a primary, or aerial coupling winding, as at B. If so, this is connected from aerial to earth.

For a dual-wave coil, covering both medium and long waves, a switch has to be added. Dual-wave coils are often wired as at C. Here, the medium wave section MW is in use when the switch is closed. Opening the switch brings the long wave section LW into circuit as well.

Any ready-made coil, intended for a crystal set or similar purposes, is likely to be satisfactory.

Use as a receiver

To use the tuner as a crystal receiver, connect Aerial, Earth, and Phones as in Fig. 27. Reasonably good quality medium or high resistance phones are best, and should give good volume.

If the aerial is not very good, a test can be made by taking it to point F, Fig. 27, to see if this is better. The range obtained depends largely on the efficiency of the aerial and earth.

Tuner feeder

To reproduce radio programmes through an amplifier, the output of the tuner is taken to the input sockets of the amplifier. The coupling circuit in Fig. 29 is required for most amplifiers, and will need a 100k resistor, and 0·01μF capacitor.

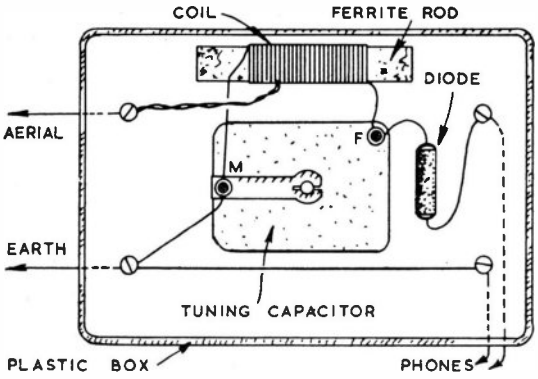


Fig. 27—Wiring plan of receiver tuner

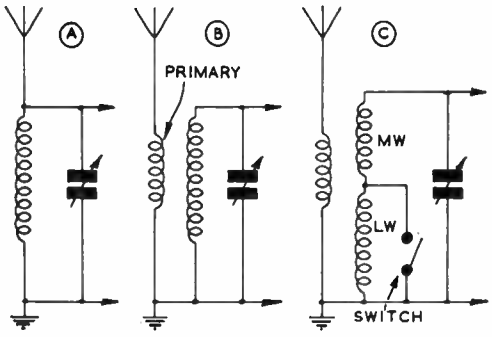


Fig. 28—Aerial couplings

The diode output terminal is taken to X, Fig. 29. Y is the other 'phone' terminal, or earth line. At the amplifier, Y is also taken to earth, or chassis. The remaining connection Z goes to the second input socket, which will go to valve grid or amplifier volume control.

It is best to connect leads Z and Y to a jack plug, co-axial plug, or pair of sockets to fit the amplifier. It is then easy to change from record playing to radio reception. If the tuner is always used with an amplifier, the resistor and capacitor in Fig. 29 can be fitted inside the case, and a screened lead can pass to the amplifier. The outer brading is used for the earth circuit Y. With some amplifiers reproduction is improved if a small capacitor (100pF to 500pF) is connected from X to Y, Fig. 29.

Do not use the tuner with any mains amplifier which has the chassis circuit alive to the mains. It may be used with any of the amplifiers described earlier in this series.

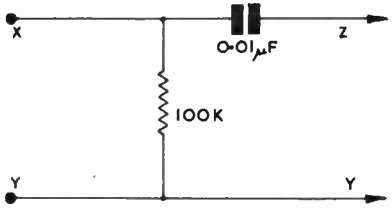


Fig. 29—Capacity coupling

Aerial and Earth

The earth lead should go to a metal spike, or other earth connection. In some localities, enough volume may be obtained with no earth. But the earth is generally necessary, and increases volume.

The aerial may be indoors, or placed outside when space is available. If it is fairly high, insulated at each suspension point, and some 30 ft. to 60 ft. long, this will improve volume considerably. The aerial and lead-in can all be one piece of uncut wire, to avoid joints.

For outdoor aerials, 7/26 or similar stranded wire is often used, suspended with egg insulators. For indoors, bell wire or any other inconspicuous wire may be used, along two walls of the room, near the ceiling.

A tuner of this type is intended only for the reception of local programmes. For greater range, a valve tuner may be used, and one will be described in the next article in this series.

Tricks to do with a Needle on the water

PEOPLE laughed when engineers said they would build steel ships. Of course a steel battleship DOES float because it is really just a thin-walled metal bowl of air with an average density far less than the density of water.

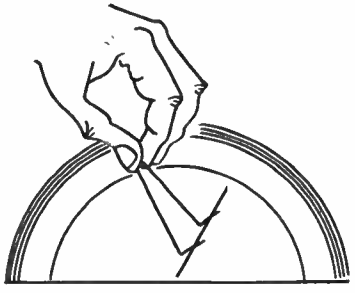
The 'bowl' sinks in the ocean until it pushes aside its own weight of water. Then the water tries to push back with just enough force to keep the vessel floating.

Solid steel is more than seven times as dense or 'heavy' as water — so we can safely assume that a solid steel sewing needle would sink in water.

However, it is possible to make a needle rest upon the surface. . . . Bend up the ends of a hairpin evenly, to form a little 'stirrup'. Then use this as a tool to lower a needle gently into a saucer of water. As you push the hairpin underwater, the needle is left resting upon the surface. The needle even dents the water!

If it is magnetized, the needle acts like a compass and points northwards. Two magnified needles resting upon water can be pushed about with a matchstick and used to demonstrate the magnetic laws of attraction and repulsion.

Water molecules cling together extra tightly at the surface, to form an elastic 'skin' that is strong enough to bear the weights of some small water-dwelling insects. Your needles rest upon the water because of this force of 'surface tension'.



Try resting a needle upon methylated spirit, where surface tension is less. A pinch of powdered detergent sprinkled near a needle at the surface reduces surface tension, so that the needle sinks.

(A.E.W.)

Famous Forgeries

STAMPS are forged for two purposes; first to cheat philatelists, and secondly, to cheat the postal authorities. The former kind of trade is fairly lucrative, but in England, at any rate, the production of fictitious stamps for postal uses seldom enjoys more than a short-lived success.

The forger hardly ever takes up his abode in the Home Country, for the pains and penalties awaiting him, when apprehended, are severe. He far prefers a Continental existence, where he can work his printing press in obscurity. His unsavoury wares, however, are made to circulate in England just as much as abroad, and the novice must be ever on his guard in consequence.

Some forgers possess elaborate and costly plant, and have the means of turning out stamps printed almost as well as the originals. But most people in this dishonest trade are handicapped for capital, and have to rely on the cheaper processes — usually lithography — in the production of their forgeries. It is here that a knowledge of the various means of printing stamps proves so valuable to the collector. A specimen, say, of a line-engraved stamp produced by lithography immediately excites suspicion, and a close examination shows it to be an undoubted counterfeit.

The watermark is another stumbling-block for the stamp faker of small means. He has no opportunity of procuring paper impressed with all the various watermarks, and so he often prints on ordinary paper, and trusts to the philatelist's ignorance or lack of examining powers. Of course, the beginner is often caught by such practices, but it is really wonderful how soon a serious collector grows to know at sight the real and unreal.

How they work

An ingenious trick of the forger in a small way of business consists of transforming a common stamp into a valuable one. His work is not very arduous, and his apparatus costs but a few pence. All he needs is an aptitude for drawing, a few paints, brushes, and some chemicals.

He selects, first of all, an issue where the stamps all bear an identical design and are printed in the same colour, the value, and perhaps an additional word or two, only being printed in a distinctive colour. His choice of stamp is by no means limited, for in Queen Victoria's time it was a favourite arrangement with many Colonies for the head and ornamentation to be printed in a shade of purple and the name of the colony and the price to vary on each value.

A typical forgery of the 'Suez Canal Set'

The forger takes a nice copy of the halfpenny, and cleans out the price and any features which make the stamp distinctive, by means of chemicals; then he fills in the blank areas with the particular lettering — using, of course, then correct colour — of a high-priced stamp. His work takes but a few minutes, and in this time he can transform a stamp worth, say, a penny into one listed at, perhaps, £10. This form of faking is particularly dangerous, because such distinguishing marks as perforations, watermark, and quality of paper, are correct in every detail.

The length at which some forgers will go is positively amazing. A few years back a case came to light where one of these rogues regularly used real stamp-paper on which to print his worthless imitations. His plan was to buy a whole sheet of low-priced unused stamps, to remove all the printing by chemical means, and then to print on the blank paper so obtained a complete sheet of high-priced stamps. Of course, he had to select his paper and his stamps with care, but this was a matter simple enough. It is interesting to point out that the authorities seeing the possibility of such practices, have made it a rule to use one watermark for adhesives of low value and another for those of high value.

What is the best way to tell whether a specimen is a forgery? This is a question often asked. The first test is the watermark, but too much faith must not be placed on this detail as a very respectable imitation may be produced by painting the back of the stamp with oil. The next point to note is the perforation. These marks must be shaped in a business-like way, and be of the correct number as indicated by the catalogues. The third point is the printing, and the fourth the colour of the ink used. Lastly, the design should be compared with an identical stamp known to be genuine. Beyond such simple tests as these the collector needs to exercise ordinary commonsense in arriving at a conclusion. If, say, a specimen is nice and fresh, and the catalogue tells is that it is at least fifty years old, a certain amount of suspicion might not be out of place.

A big coup

It is not always a simple matter to know whether a stamp is a forgery or not. Cases are on record where the postal authorities themselves have been unable to distinguish between the real and the unreal. Some years ago the shilling value of Great Britain was counterfeited and used for postal purposes not once or twice, but some thousands of times, and never an atom of suspicion was excited. The case is recorded by Mr F. J. Melville in his work, *Chats on Postage Stamps*, in the following words:

'A romantic forgery, and one of almost colossal magnitude, was discovered in 1898. About that time a large quantity of British one shilling stamps — those of the 1865 type in green, with large uncoloured letters in the corners — came on the market, though, as they had been used on telegram forms, they ought to have been destroyed; probably the guilty parties relied on this official practice, not always honoured in observance, as offering a security against not merely the tracing of the offence, but the discovering of the fraud itself.

'Anyhow, after a lapse of twenty-six years, it was found that amongst these one shilling stamps there was a large proportion of forgeries (purporting to be

from plate V), all used on July 23rd, 1872, at the Stock Exchange Telegraph Office, London, E.C. More recent discoveries show that the fraud was continued over twelve months, and, as an indication of the precautions taken by the forgers, plate VI (which came into use in March 1872) was duly imitated, although the change of the small figures was a detail probably never noticed by members of the general public.

'According to calculations based on the average numbers used on several days, the Post Office must have lost about £50 a day during the period mentioned above. Who were the originators and perpetrators of the fraud will probably never be known; possibly a stockbroker's clerk (or a small "syndicate" of these gentlemen), or, more probably, a clerk in the Post Office itself. It was an ingenious fraud, well planned, and cleverly carried out at a minimum of risk and but for the market for old stamps it would never have been discovered.'

Watch out for these

For purposes of reference, we give below a list of the stamps which have been most frequently copied, together with hints on how to detect the forgeries. (G — genuine; F — forgery.)

Alsace and Lorraine. G, the points of the network in the background turned up; F has them turned down. The 'P' of word 'Postes' farther from margin in G, than F. Used copies more likely to be G, than unused.

Belgium. One centime, Leopold, 1881. F, yellowish paper instead of white. The word 'Postes' has no outline round each letter in F. Obliterated specimens often F.

Brazil. The early issues, with numerals in centre of filigree work often imitated. Paper too thick in F.

Germany. Nearly all the early stamps have been copied; specimens should be accepted with caution.

Cape of Good Hope. Triangular issues, 1853–1864. G has knee of 'Hope' rounded; F angular. If top line of knee produced to border, it cuts through the centre of the letter 'S' in 'Postage' in G but through letter 'O' in F.

Cyprus. The line-engraved Great Britain issue with overprint. In this case forged overprints have been added to genuine stamps. Forgeries have the 'C' in 'Cyprus' thicker than the other letters, also the 'Y' set higher than other letters. The extreme length from 'C' to 'S' is seldom accurate, as given in catalogues, in F.

France. The five francs, 1869. F perforated 13. G perforated 13½. Also F has dots in corner of frame, not rounded as in G.

Mauritius. Many of the early issues F.

Nevis. The shilling green, 1861. In G ink seems to stand up from paper, but flat in F. The lines on woman's arm are straight in G; but in dots in F.

New South Wales. The stamps known as 'Sydney Views' have been largely copied. The large fivepenny, sixpenny, eightpenny, and shilling often had unusually wide margins when perforated. The faker has trimmed off the tooth edges, and called the stamps the rare imperforated specimens.

Nova Scotia. Some of the fine early issues have been lithographed in F, while the G were engraved.

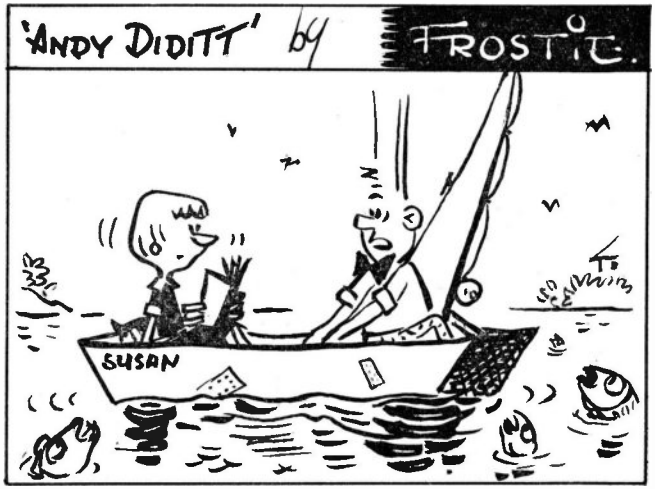
Portugal. Many of the surcharged issues have been forged, the overprinted words being imitations.

Sedan. No genuine stamps ever existed; all were spurious.

Sierra Leone. 1872–1881. A type of stamp that is representative of many others. F lithographed, with the delicate lines on the face as heavy as those constituting the background.

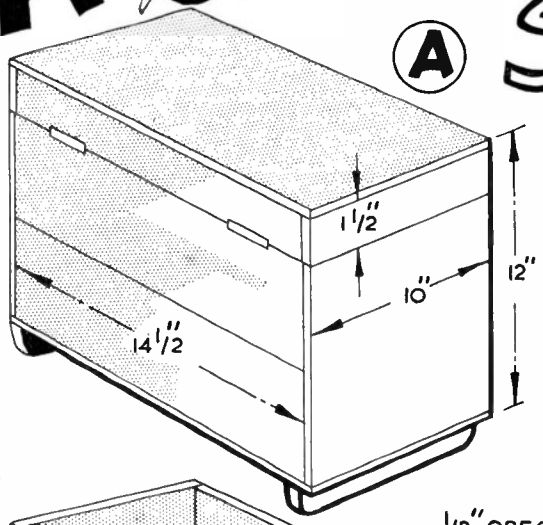
United States. Early issues often had a grille — i.e., an embossed series of lines to prevent removal of obliteration without being noticed. F seldom have grille.

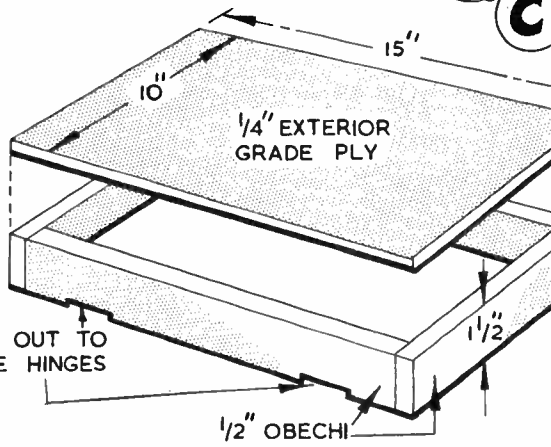
Some people collect forged stamps. But most of us prefer the genuine. But this article should help collectors to detect some of the better known forgeries. (R.C.L.)

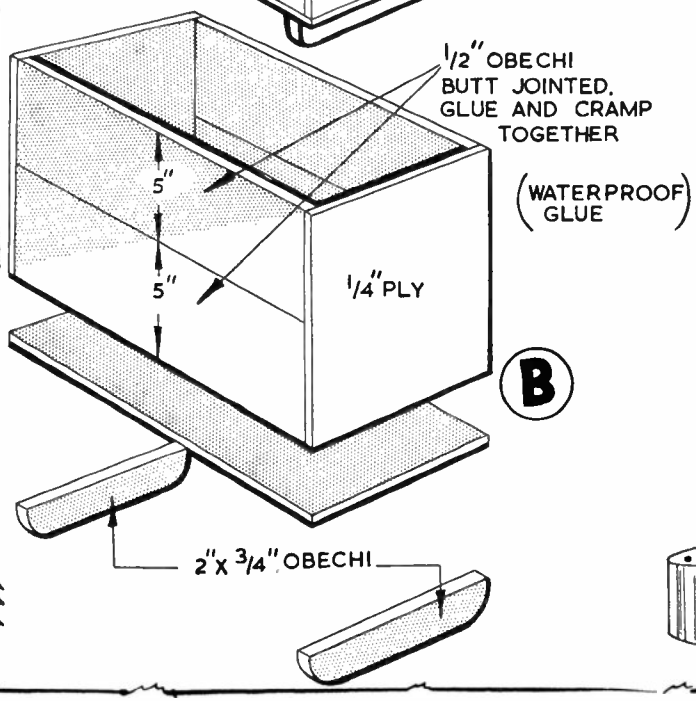


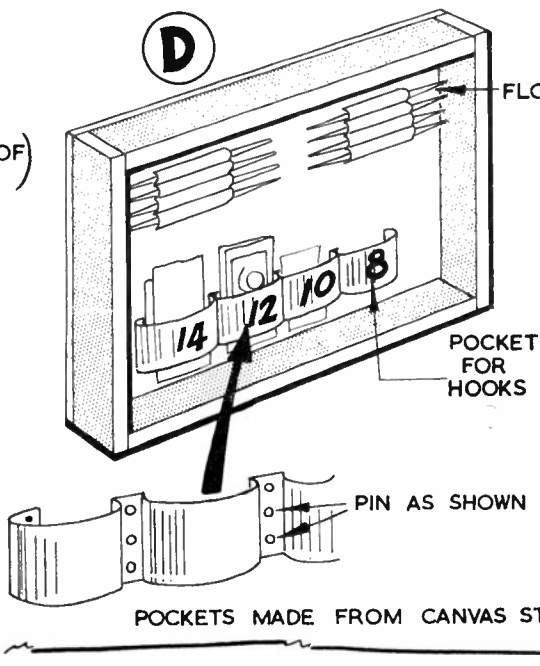
"THE FISH AROUND HERE ARE SO HUNGRY I HAVE TO HIDE THE HOOK WHILE I PUT THE BAIT ON."

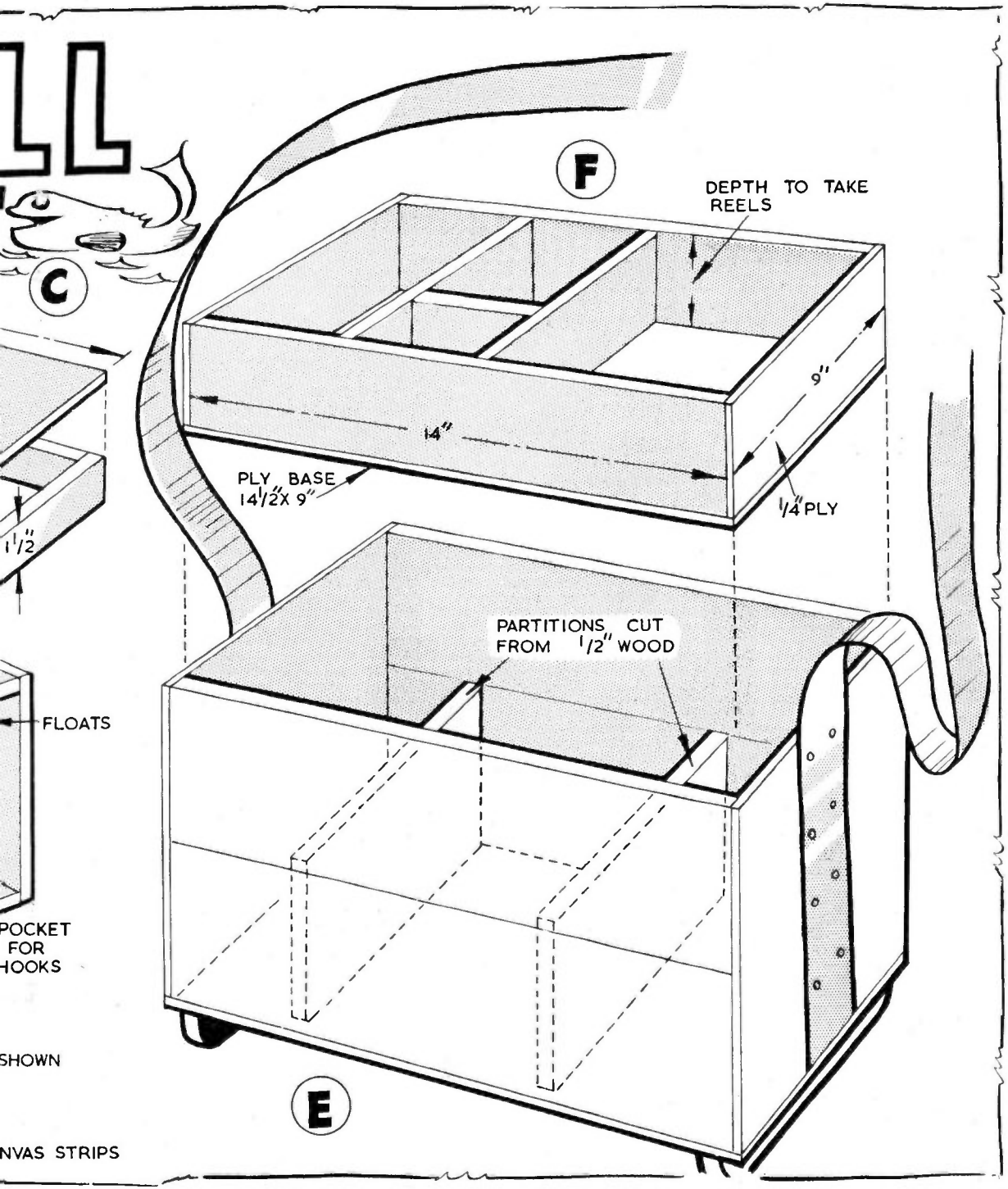
Anglers HOLDALL & SEAT











PRESERVE NATURE'S HARVEST

ENTHUSIASM for home-made wines and preserves is widespread today, the fruits of nature being available to the town and country dweller in great variety. Gathering them is fun, and children greatly enjoy this, too. Little is needed in the way of equipment beyond that already possessed by the average family, and in an hour or two a fine store is easily and quickly made.

Home-made preserves last well, and have a delicious flavour not found in shop goods. These recipes are unusual, old and well-tried, the author having used them for many, many years. Wash all fruit before commencing, and make sure jars and bottles are quite clean. Nature's harvest is maturing, so help yourself. Preserves and jams sell readily to small grocers and butchers, particularly prior to Christmas.

Rose Hip Honey

Cover 1 lb. of ripe rosehips with water, and boil until tender; strain through a jelly bag for one night. Pulp ¾ lb. of cooking apples in a little water, add to the juice, and measure. Add 1 lb. of sugar to each pint of juice, and cook until setting point is reached. Pour into hot jars, and cover.

Green Tomato Jam

Use 2 lb. of tomatoes to 1½ lb. of preserving sugar. Break up the tomatoes, and bring to boil in a preserving pan; add the sugar, and a grated rind of lemon. Boil fast for twenty minutes; when setting point is reached, bottle into hot jars. This is a good way of using unripened fruit at the end of the season.

Bottled Tomato Juice

Slice ripe tomatoes, and lay them in a pan on a warm stove. When the juice begins to flow, press the fruit with a wooden spoon, and bring to the boil. Strain through a fine soup strainer, pressing the pulp and juice through. Place the juice back in the pan, sprinkle with salt, sugar, and pepper, and boil for 15 minutes. Pour into hot jars, and seal. The juice may be watered down, and will keep for about a year.

Blackberry Jelly

Use twice the weight of blackberries to the weight of apples, and ¾ lb. of preserving sugar to each pint of juice. Slice the apples, but do not peel or core them; cover with water, boil until tender, strain, and leave to drip overnight. Boil the blackberries until they are soft, strain, and mix the two juices. Boil until setting point is reached, pour into hot jars, and tie down.

Apple and Tomato Chutney

This uses 2 lb. cooking apples, 1½ lb. ripe tomatoes, 1 lb. onions, ½ lb. sultanas, 1½ lb. Demerara sugar, 1 level tablespoon salt, ½ a small teaspoon of cayenne, 1 level dessert spoonful ground ginger, 6 chillies, ¼ tea spoonful ground mace, 1 lemon, 1 quart vinegar. Peel, core, and slice the apples, chop the onions finely, and slice the tomatoes; place in an earthenware bowl, and add the sugar, sultanas, salt, and spices, and pour on the vinegar. Leave for 24 hours. Boil for 1½ hours gently, add the juice of the lemon, and continue to boil another 1½ hours. Bottle when cold, using corks.

Mixed Pickles

You will need 1 cauliflower, 4 small green tomatoes, ½ lb. shallots, 1 small cucumber, 1 pint white vinegar, 1 dessert spoon peppercorns, salt, chillies. Cut the cauliflower small, peel and slice the tomatoes and cucumber. Place in a dish, add the shallots, cover with salt, and leave overnight. Pour over boiling water to remove the salt, strain, and pack tightly into jars. Boil the peppercorns in the vinegar; place a few chillies into each jar, and fill up with the vinegar. Cover tightly at once.

Elder Syrup

Squash the fruit and strain it; heat slowly in a preserving pan, and add the white of an egg beaten to a froth. When it boils, skim off any froth as long as it forms, then add 1 lb. of cane sugar for each pint of syrup. Boil until setting point is reached, slowly. When cool, pour into bottles, pricking covering paper to allow air to enter. The syrup may be watered down to make elderberry wine, or taken with hot water added.

Rowanberry Wine

To each quart of ripe berries add 1 quart of boiling water, and a piece of bruised whole ginger. Steep for ten days, stirring each day. Strain, and to each quart of liquid add 1 lb. of loaf sugar. Bottle up when dissolved, but do not cork down until fermentation has ceased.

Blackberry Wine

Put alternate layers of ripe berries and sugar into large jars, and allow to stand three weeks. Strain and bottle, adding a few raisins to each bottle. Allow a few weeks before corking tightly. This wine keeps for about a year.

Plum Port

Pour 1 gallon of boiling water over 4 lb. of damsons. Leave overnight, then stir and squeeze daily for five days; strain through a jellybag. Stir in 4 lb. of sugar, add a large cup of boiling water, and leave for eight days. Skim, and bottle.

Elderberry Wine

1 gallon elderberries, 1 gallon water, 3½ lb. loaf sugar, 1 egg white, ¼ oz. ground ginger, ½ oz. cloves, 2 tablespoons yeast, 1 slice toast. Boil the water, and pour over the berries; leave overnight. Strain, add the sugar, and boil; when boiling, add the beaten egg white. Remove scum, strain through a jellybag, add the cloves and ginger; when cool, add the toast and yeast. Leave for a few days, strain, and bottle. Do not cork tightly until fermentation has ceased. Ready in six months.

Home-made Cider

Cut up fallen apples, place in an earthenware jar, cover with cold water, and leave to stand for ten days, stirring occasionally. Strain when fermentation ceases, and add 1½ lb. sugar to each gallon. Bottle, but leave uncorked for two weeks; then cork securely. Ready in three months. Do not use screw tops.

(A.G.)

AMATEUR WINE-MAKING

By H. E. Bravery

STARTING with the chemical basis of wine-making, the author discusses the different kinds of sugar and yeast that may be used. The subject is brought right up to date with explanations of the systematic control of wine-making by the use of scientific apparatus.

Specific recipes for wines include those for wines made from dried fruits, fresh fruit, and roots.

Also included are an index and an appendix of addresses of firms supplying all the ingredients and apparatus for wine-making.

Published by Collins Ltd. 144 Cathedral Street, Glasgow, C.4. Price 5s. 0d.

NOVEL HOLIDAY SOUVENIRS

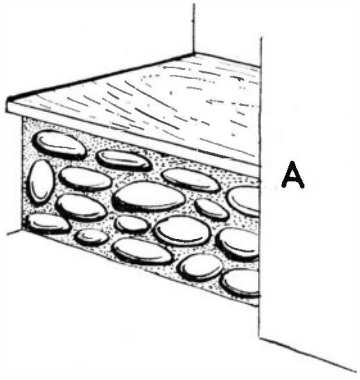
By A. Liston

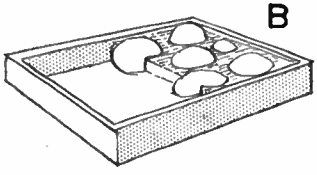
MOST people like to collect souvenirs of the places they have visited; indeed, the souvenir trade is big business nowadays. But the most original and personal souvenirs are not bought from shops. They are the ones fashioned from the native material of the countryside itself.

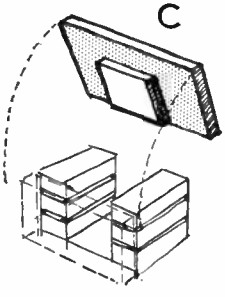
A holiday at the sea-side, for example, usually results in a collection of pebbles which are thrown out after a time. If, however, instead of pebbles, a number of rounded, water-worn stones are gathered, they can be used to make a lasting souvenir, such as a stone-studded bench for inside or outside use, A. The size depends on the situation of the bench, but the method of construction remains the same. A box with sides at least 3 in deep, and a hardboard base, is filled with concrete to the depth of 1 in., the stones are set in place, and more concrete carefully trowelled in to fill the mould B. Vibrating each stone with the fingers will help the concrete to settle round it and hold it firm. After several days, the slab can be removed from the mould.

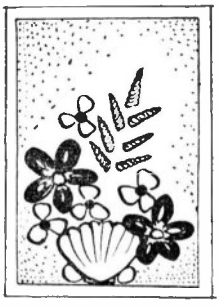
The wooden top of the bench, made from 1 in. thick wood, is supported on two brick piers, C, so that the stone-studded panel is not load-bearing. A block of wood on the underside of the top locates it between the piers. If the bench is not in a recess, the other sides can be made in the same way, and cemented together.

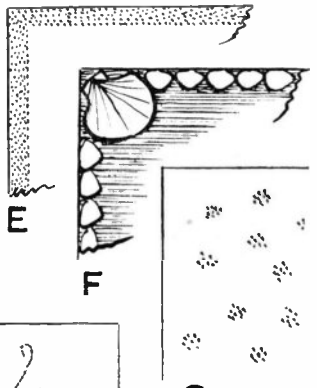
Sea-shells can be given an unusual treatment to make pictures that are different. The one shown, D, has a scallop shell vase, and flowers made from five mussel-shells, three small bi-valves, or seven auger-shells. The background should be unusual — hardboard covered with vynide or adhesive plastic sheeting, or a piece of dark velvet or cord — and various methods should be used to create an effect that is attractive. The border of the picture can be coated with adhesive and sprinkled with sand, E, or lined with small shells and a scallop at each corner, F, or, after the design is in place, dots of adhesive all over the background can be sprinkled with sand or a mixture of sand and silver glitter, G.

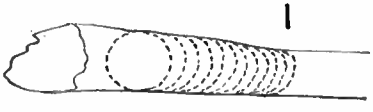


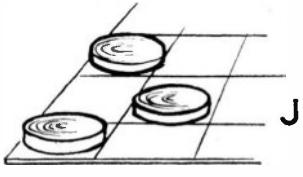












Another variation is to draw a flower-pot and plant, coat the shapes with adhesive, then sprinkle them with sand before adding the shells, H.

Souvenirs need not come exclusively from the beach, of course. A tree-branch, about 1 in. in diameter, can be sawn into rounds, $\frac{1}{4}$ to $\frac{1}{2}$ in. thick, I, to make a set of draughtsmen, J. Half of the discs can be stained in one colour and half in another or two branches from different kinds of trees can be used. The board itself need not be plain black and white squares, but alternate squares can be filled in with sections of coloured picture-post-cards of places visited, then the completed board given a protective coat of varnish or sealer.

Sharpening Planes and Chisels

MOST home handymen will appreciate that in order to produce a good standard of workmanship it is necessary to use good quality tools. It is equally important, too, that the tools are kept in a good serviceable condition at all times, particularly edge tools.

The two most common edge tools found in the home kit are planes and chisels, and every handyman should be familiar with the proper sharpening procedure. The sharpening of a plane iron and chisel is somewhat similar, the only difference being that the cutting edge of a chisel is always sharpened square, whereas a slight curve is usually formed on the cutting edge of plane irons. This is achieved by applying a little more pressure on the extreme corners. The function of the curved edge is to prevent the corners digging into the wood.

A close examination of the cutting edge of a plane iron or chisel will show that there are two distinct bevels: a grinding bevel and a sharpening bevel, as shown in Fig. 1. Generally speaking these bevels are approximately 25 degrees and 35 degrees respectively. Repeated sharpening eventually causes the sharpening bevel to merge with the grinding bevel, and this results in the cutting edge becoming 'stubby'. When this happens the tool must be reground.

Keep it cool

Grinding is best done on a power-driven grindstone, which must revolve away from the operator, The plane iron or chisel should be firmly held at the proper angle, and moved slowly across the revolving stone in a horizontal manner.

When a tool is being ground, a great deal of heat is produced by friction, and it is essential that it is not allowed to become overheated and burn. When this happens, the cutting edge turns brown, and the steel loses its temper. To prevent this, the tool should be frequently dipped into cold water to keep the steel cool.

A little experience is usually all that is necessary to enable the handyman to hold the tool at the proper angle, and to obtain an even bevel. If, however, any difficulty is encountered, a simple jig can be made to keep the tool at a constant angle, as shown in Fig. 2.

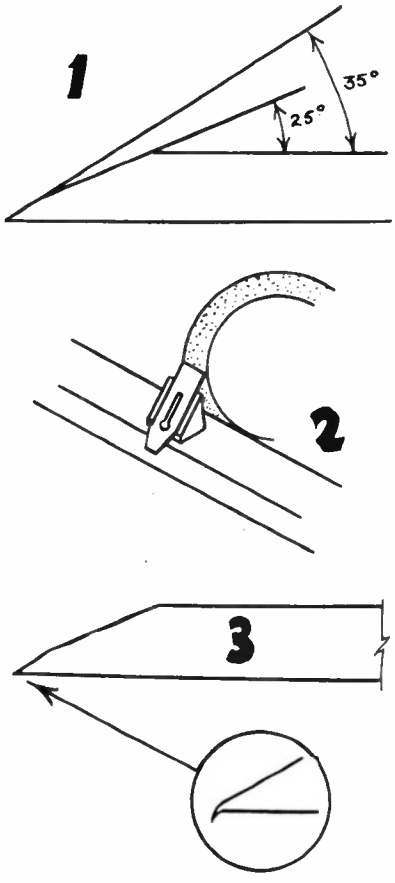
Once a tool has been ground, the next step is to sharpen it on an oil-stone. Before using this the surface should be lubricated with a little light oil, so that tiny particles of steel are kept in suspension, and not rubbed into the pores to glaze the surface.

Getting a keen edge

Place the tool to be sharpened on the stone at an angle of approximately 35 degrees, and move it backwards and forwards several times, maintaining the same angle throughout each stroke. This action will ultimately cause the extreme edge of the tool to bend over and form a burr, as shown exaggerated in Fig. 3. This burr is essential, because without it, the tool cannot become really sharp.

Having now obtained a burr on the edge of the tool, the blade should be turned over and laid flat on the oilstone, the bevelled part facing uppermost. A few rubs across the surface will remove the burr, but remember to keep pressing the tool hard against the oilstone. These two processes should be repeated several times, the amount of pressure being reduced each time. The more gradually this process is carried out the keener the cutting edge will be.

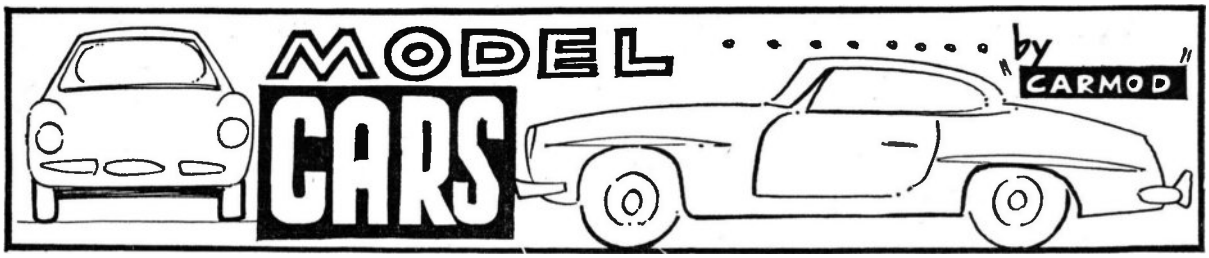
Patented sharpening jigs can be purchased to clamp plane irons and chisels at the proper angle whilst they are being sharpened. These can be obtained from any tool store for a shilling or two.



To ensure a really keen edge on tools, an oil-stone must have perfectly flat surfaces. Sometimes the constant sharpening of narrow tools causes stones to get worn hollow, and if such is used to remove the back burr from a tool which is being sharpened, a bevel will be formed on the wrong side. This will make it impossible to get a keen cutting edge. A stone which has been worn hollow can be made true again by rubbing it on a sheet of emery cloth placed on a flat surface.

Finally, once the tools have been sharpened, remember to wipe away any oil from the stone. This will remove the tiny steel particles which are always present, and will also prevent the oil soaking into the stone and clogging it up.

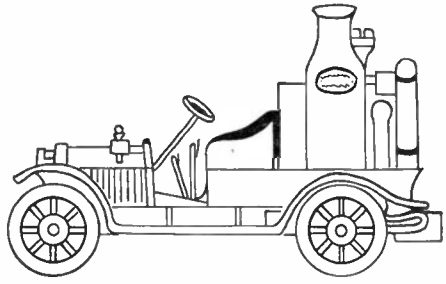
(E)

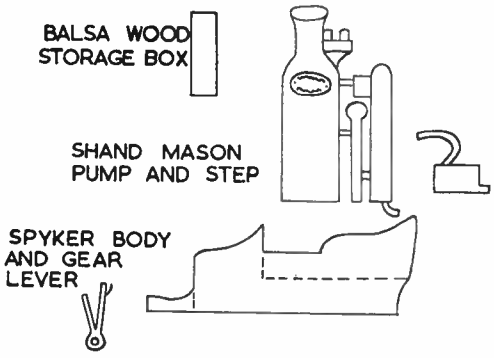


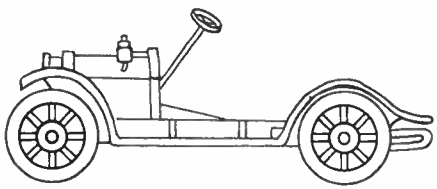
THIS little model was inspired by the beautiful example of a self-propelled fire pump at the Montagu Motor Museum, which is a Merryweather pump mounted on a 1907 Gobron Brillie chassis. The car itself started its life as a limousine, the pump being fitted in 1913. I wanted to model this particular vehicle but unfortunately there are no miniatures of the Gobron Brillie of this date.

Still, determined to have a model of something similar I decided to use Matchbox Models of Yesteryear as basics and selected the parts from three — the Packard, Spyker and the Shand Mason horse drawn pump. Steam pumps were mounted on all makes of chassis at the start of this century so the model is reasonably authentic.

GOBRON BRILLIE 1907 STEAM FIRE PUMP







There will be quite a number of parts left over from this chopping but almost everything can be used for other conversions.

First strip off the needed parts from the three models:

1. SHAND MASON. Drill out the spun-head on the underside and remove the seat box. The brass pump can now be slipped off the locating peg. Snip off an end from the rear axle and, withdraw. The back step can then be cut off with a hacksaw, just under the rear springs and immediately behind the base of the boiler.
2. SPYKER. Drill out the rear locating peg and remove body.
3. PACKARD. Treat in the same way as the Spyker.

Saw off the locating peg flush with the underside of the Spyker body. Remove seats and cut along the dotted lines as shown in the illustration. Saw off the front section of the floor and the rear end. Replace the front seat and cement the Spyker assembly in place on the Packard chassis. At this stage the work so far can be painted bright red with the exception of the brass parts, which should be left as they are. Cut off the bracket in front of the boiler and fix in position so the outlet pipe projects at the rear of the car. It will be necessary to pack the base of the boiler with pieces of balsa wood so that it 'sits' well.

Cement the step over the rear springs.

Cut a storage box from a balsa block and cement in place as shown in the illustration. Paint this in bright red.

Finally soak off the transfers 'KENT FIRE BRIGADE' from the Shand Mason and re-apply to the sides of the body of the new engine.

A MOTOR TORPEDO BOAT

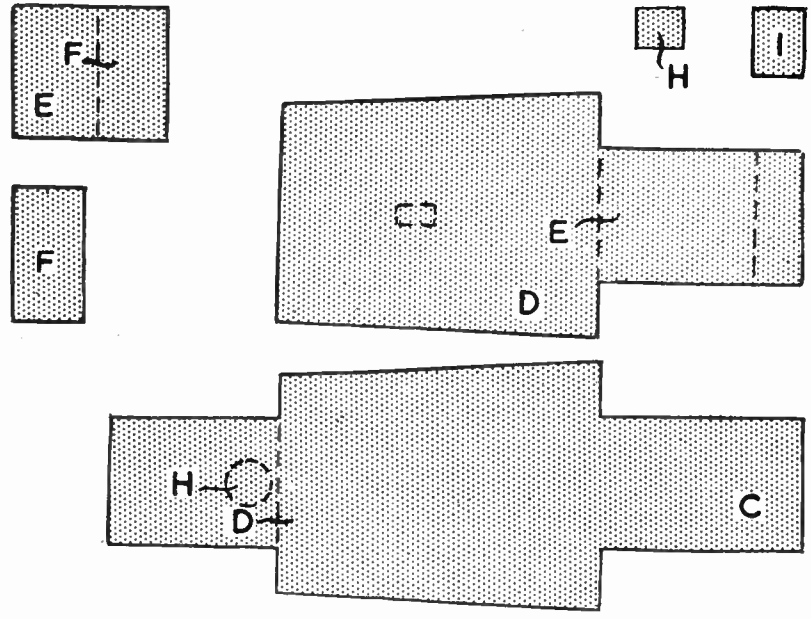
THE side view at the bottom of the page shows how the model looks and gives details of the portholes to be painted on. The letters denote the various parts and show how the pieces are glued one upon another.

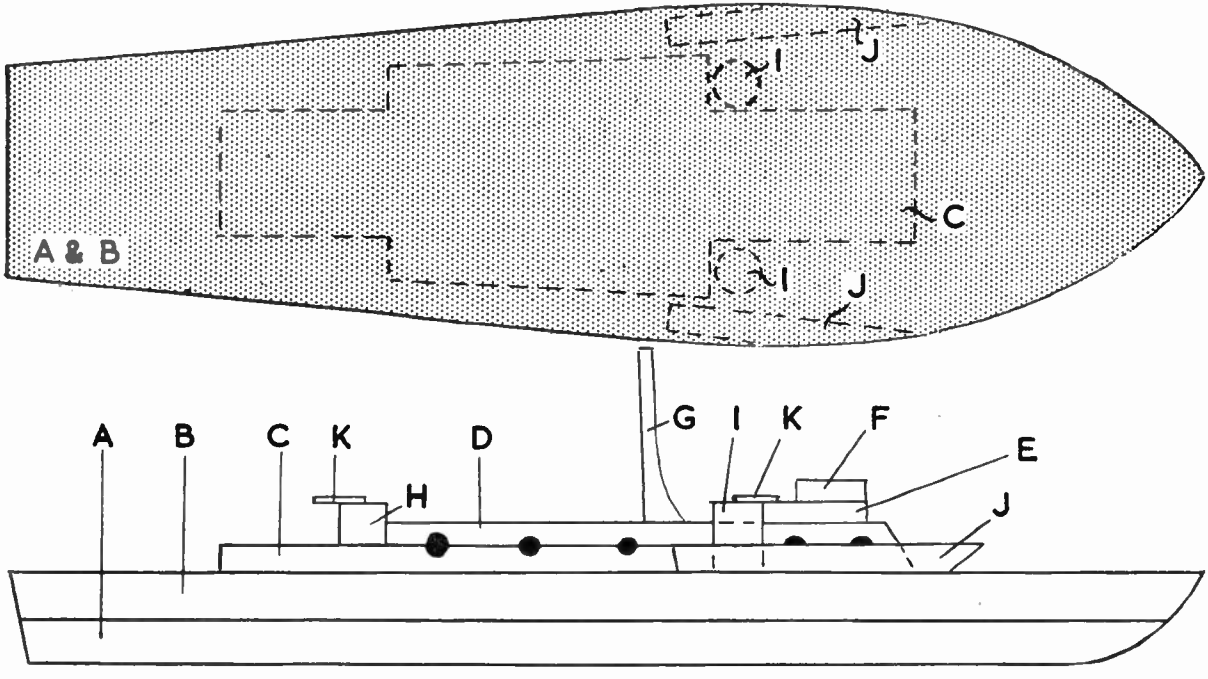
Pieces A, B, H and I are cut from ¼ in. sheet, pieces A and B being glued together and pieces H and I being rounded off to form machine-gun turrets. Note that two of I are required.

Cut C, D, E and F from ⅛ in. sheet, gluing them together as shown. Slope the front edges of C and D.

The torpedo tubes J, are shaped from ¼ in. sheet and rounded off whilst G is cut from ⅛ in. sheet and glued in the centre of D. The machine guns K, on the turrets H and I, are short lengths of wire. (M.p.)

CUT IT OUT FROM BALSA WITH THESE FULL-SIZE PLANS





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