### THE ORIGINAL 28th JUNE 1961 VOL. 132 NUMBER 3420 'DO-IT-YOURSELF' MAGAZINE HUKKLY FOR ALL

HOME CRAFTSMEN

★FREE Design inside

An ideal gift project for a child



# **TOY HORSE AND CART**



Also in this issue:

MAKING YOUR OWN JEWELLERY COLLECTORS' CLUB AND STAMP HINTS FORMULAS FOR HOME CHEMISTRY SHIP MODELLING AND FRETWORK JULY WORK IN THE GARDEN PHOTOGRAPHY

ETC. ETC.

Up-to-the-minute ideas **Practical designs** Pleasing and profitable things to make

**5**<sup>.</sup>



AJ ARZBERGER, a public prosecutor in St. Poelsten, Austria, is building what he claims will be the first picture postcard museum in the world, in which to lodge his collection of 275,000 specimens. If

### POSTCARDIALLY SPEAKING

stacked on top of each other, Mr Arzberger's cards would tower to a height of 243 ft. He has been collecting cards for many years, and it is his particular pride that he can find any given card within five minutes.

'Gruss aus' is a German phrase meaning 'greetings from'. It is found on many old foreign cards of the early 1900 era. The cards are usually very beautiful. They sometimes show a small local view, or may have a symbolic design of some kind.

'Air brush cards' — are so named from the method by which they are coloured. The method was used on both views and greetings, but it was most widely used on greetings.

In making these cards, the design was first embossed or 'pressed' into the paper and then colouring was applied with an air brush. The air brush worked on the principle of the spray gun now used in painting. The centre of an air brush coloured design is generally darkest, and it fades out toward the edge of the design. Very often a faint colouring is noticed beyond the edge of the flowers, leaves or other designs.

Air brush cards come in two general varieties — single paper and double paper. The double paper variety are usually very heavily embossed, so that it is hard to write on the back, and so a flat sheet was pasted to the back after the embossing. Some were further embellished with tinsel, jewels, appliquéd flowers, etc.

Probably the largest publishers of these cards were the Illustrated Postcard Co. of New York. Some bear their name; others have only the 'eagle and shield' trademark which they used on most of their cards. Some also have the



A colourful scene of the Pyramids of Giza depicted on one of the latest Egyptian issues

eagle on the back, and the embossed imprint of P. Sander on the front of the card.

Most of these cards were used during the period from 1905 to 1910. They apparently reached the height of their popularity about 1907, as more are found postmarked that year than any other.

Here's a list of collectors who need pen friends ---

- Mrs Iris Tavernier, 4037 17th Avenue, So., Minneapolis 7, U.S.A.
- Ruth E. L. Berggren, 2575 Warnock Street, Philadelphia 7, U.S.A.
- Louis O. Fisher, 6969 N. Figueroa Street, Los Angeles 42, California, U.S.A.

William S. Crane, Jr, 76 Shawmut Avenue, Boston II, Mass., U.S.A.

### BOOK-MATCH COLLECTION

NE day soon, another large box of empty book-match covers will be on its way to a spastic young lady in Lancashire who passes her time collating what must, by now, be one of the best collections of its kind.

They will be sent by Mr E. A. Tuxford, Secretary of the Sheffield Cutlery Manufacturers Association. Wherever he goes — and during the past fifteen years he has travelled some 200,000 miles by air and another 150,000 miles by road, rail, and sea — he keeps a sharp lookout for book matches. He uses the matches himself and saves the covers for his friend.

On his desk in Melbourne Avenue, Sheffield, the other day, were arranged the latest consignment. They were in all colours of the rainbow. Some were collected in America, some in Canada, Germany, Sweden, Austria. Others were from London and, of course, Sheffield, Many of the covers bear the names of world-famous hotels like the Savoy-Hilton in New York, the Cosmopolitan Hotel, Copenhagen, the Cleveland Hotel, Ohio. Some came from coffee bars like the 'Knotty Pine' on Highway No. 8, Ontario, and there were covers from tobacco kiosks and chain stores. One had been delivered with the laundry. and yet another advertised Hemden-Kirawatten pyjamas whose headquarters are in Vienna.

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×	Next week's issue will give	*
*	details for making a loudspeaker	*
*	intercom. Projects for all the	*
*	family will also be included.	*
*	Make sure of your copy.	*
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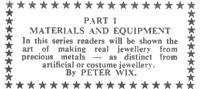


HE craft of jewellery making dates back at least 23,000 years. For that is the staggering age of one primitive necklace unearthed in recent years, and it makes jewellery the oldest craft known to mankind.

This may hold some key to its fascination. Then there is the indestructible quality of the stones and metals used. and the sense of a more than transient achievement when good design together with good craftsmanship result in something beautiful, which can be treasured for its own sake as well as for its monetary value.

Much of the character of an age or civilization is reflected in a broad selection of its jewellery. Looking now at jewels made by men who saw the beginnings of the pyramids, the raids of the Vikings, or the greatest days of Rome. you catch more than a whisper across that gulf of years.

Look at the crowded ornamentation of much Victorian jewellery, often hollow in spite of apparent weight; and then



the modern ideal of expression, with carefully balanced shapes and textures, and the considered spacing of stones whose settings, like the windows of our houses, admit more light than ever before.

Whether we copy, adapt, or create afresh, there is an exciting and perhaps profitable hobby waiting to be explored: one where results reflect thought, care and patience rather than money spent on equipment.

#### BENCH AND PIN

An ideal bench for jewellery making at home is shown in Fig. 1, though any strong table could be converted. The pin. made of hardwood, is used when piercing designs with the saw, and a groove or depression here and there helps you to hold small parts in position for filing

> 195 World Radio History

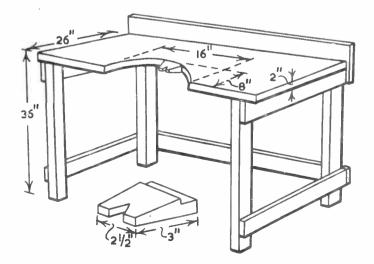


FIG. . - AN IDEAL JEWELLER'S BENCH

or drilling. The semi-circular opening is necessary if you do much work. It makes for ease and comfort. A leather skin or piece of material hung loosely across under the pin makes the retrieval of dropped stones or metal a simple matter.

A fair alternative would be a fretworker's pin clamped over a sheet of hardboard protecting the kitchen table.

You may find it interesting - and certainly economical - to make the following tools. They are described in order of importance, but are included in the list of recommended tools in case you prefer to purchase them.

#### SOLDERING LAMP

With many commercial types the centrally placed wick is only some  $\frac{3}{16}$  in. in diameter, and does not allow you to blow a large or very hot flame. The lamp in Fig. 2, made from a small tin and piece of tube, is an improvement in this respect. It is used with the mouth blowpipe Fig. 3A. The french blowpipe Fig. 3B, using gas, and air from mouth, bellows or compressor, makes easier work of jewellery soldering.

### BENCH STAKE

An old-fashioned flat-iron with the handle sawn off and the face cleaned up with emery paper does very well.

### DRILL STOCK

Basically unchanged in several thousand years, the drill stock Fig. 4 is the only type which can be operated with one hand.

The bob-weight is soldered to the steel rod, and then the threaded sleeve. This sleeve must accept the two components from the pin-chuck. The pin-chuck will have to be purchased, but will thus serve a dual purpose. Spear-point drills are used.

The archimedean type drill stock used by fretworkers may also be used, although it is less convenient, slower, and occupies both hands.

### PIERCING SAW FRAME

Mention must be made of this very important tool. It is best to purchase a proper ieweller's saw to take 3 in. or 4 in. blades, but a small fretsaw can be used with success if the frame is not too deep.

A deep frame means less control and more broken blades.

### MALLETS

These are at least as important as hammers. They can be made from boxwood, or a well seasoned bough off an apple tree. They may be shaped with chisels, Surform file and glasspaper to contours like those in Fig. 5. Two or three round-ended mallets with different diameters will be found very useful. The handles may be made of ash or of bamboo.

### RING CLAMP (WEDGE TYPE)

The clamp shown in Fig. 6A, designed to hold a ring by its shank, has leatherlined jaws which will not mark the work. It will, in addition, hold almost any small article. It can be made from a piece of chair leg, or any hard wood of about  $l\frac{1}{2}$  in. or 2 in. diameter, sawn down the middle. Shoulders at the top have pieces of shoe leather glued on. The clamp has a metal band around its middle, the band being held by two half-tightened wood screws. The hardwood wedge is pushed or driven in from the bottom.

#### RING CLAMP (EXPANDING TYPE)

This tool, Fig. 6B, is also very simple to make. A file handle of 4 in. to 6 in. in length will make a single-ended clamp, a hole being drilled in the end to accommodate a large wood screw to half its length. Four saw cuts are made as indicated. The head is best removed from the screw and a new slot cut. A doubleended clamp can be turned if you have a lathe. The four different diameters will, on expansion, cover many ring sizes.

### TRIANGULAR SCRAPER

This can be simply an old threecornered needle file, the end broken off and ground to a more sharply tapering point than originally, and the teeth ground off for the last inch or so. If you avoid overheating when grinding, no hardening or tempering will be needed.

### DOMING PUNCHES AND BLOCK

These are expensive items purchased commercially. But there is an ingenious method of making punches. Ball bearings are soldered to the ends of tubes of suitable diameter by placing the ball on an asbestos mat, the tube on top, and dropping snippets of tinman's solder down the tube after fluxing and heating the join. Another way is to use tubes of strongly magnetized steel. A small tube cannot be expected to hold a large ball, but this way you need fewer tubes than balls.

The doming block is best purchased, though you can cast some lead scrap into a square wooden mould, and drive in punches to provide the hemispherical depressions. The block can be melted and re-cast when it has suffered from hard use.

Other items you can usefully collect are a cork table mat; a soft, thick asbestos mat; sealing wax; used gramophone needles (large ones); fine steel wool; pieces of scrap lead; a few split-pins of various sizes; any clean steel, brass or aluminium rods from  $\frac{1}{16}$  in. diameter to about 1 in. diameter, anything from 6 in. to 12 in. long; better still any tapered rods. And lastly, because tidiness in this craft is an asset, save any small metal or plastic containers; some toothbrush packings make excellent saw blade cases, for example.

### TOOLS LIST

10020 2101							
Many existing tools may be pressed into service. The following list of recommended							
tools is by no means exhaustive, but it is wise to							
buy any other tools only as they become							
necessary. Prices, where given, are approxi-							
mate.							
Mouth blowpipe 2s. 6d.							
Soldering lamp 3s. 9d. (but far better to							
make one as described) alternatively, French							
blowpipe 20s. 0d. to 25s. 0d.							
Soldering tweezers 1s. 0d.							
Charcoal block 1s. 9d.							
Borax cone 1s. 0d.							
Jeweller's saw, 4 in. adjustable 9s. 6d.							
Bow drill stock 11s, 6d.							
1 doz. spear-point drills 3s, 9d.							
Snips (shears), small, 7s. 6d. to 10s. 0d.							
Iron binding wire, 32 swg and 24 swg.							
Hammer, jeweller's 2 oz. (or cheaper tack							
hammers with faces polished).							
File, 6 in. and 1-round.							
Needle files, 14 cm. long (cut two or four).							
1 round, round, barrette, three-square,							
2 round, round, parrette, three-square,							
each 1s. 9d.							
Pliers, snipe, flat, round nosed.							
Hand vice (from 10s. 0d.) or wedge-type							
ring clamp at 5s. 0d.							

Suppliers of tools: E. Gray & Son, Ltd, Grayson House, Clerkenwell Road, London, E.C.1.

#### and per Ltd. Hatton Gard

Charles Cooper Ltd, Hatton Garden. Suppliers of silver, gold, solders, etc, E. Gray & Son, Ltd (as above).

A. E. Ward & Son, 10 Albemarle Way, Clerkenwell, E.C.1.

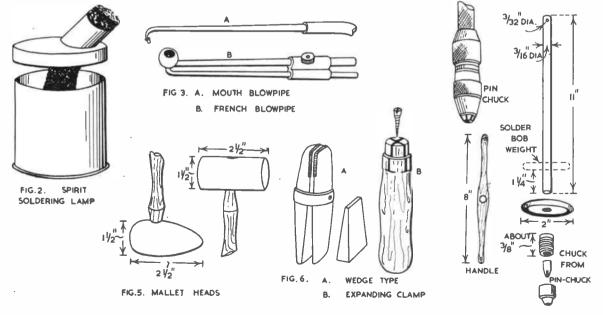


FIG.4. DRILL STOCK

# TOY HORSE AND CART

This strongly constructed toy cart should give many happy play hours to a tiny tot just starting to walk. It is built as one unit to be pushed along the floor on its four wheels, or pulled along with the addition of a piece of string. It has been designed to the suggestion of Mr G. Reid of Scotland, who has built many such examples for the enjoyment of sick children in hospital. The construction is quite robust, and the toy will stand up to a lot of hard wear.

All parts are shown full size on the design sheet. They should be traced and transferred by means of carbon paper to their appropriate thicknesses of wood, and neatly cut out with the fretsaw. For those working from a Hobbies kit, Fig. 1 shows how various parts are laid out on the  $\frac{1}{2}$  in. wood for economical cutting.

Glue the various parts of the cart together as shown in Fig. 2. Note that the ends (pieces 5 and 6), and the floor (piece 4) are inset, and go between the sides (7). The shafts (9) and axle (8) are glued under the floor with the axle positioned centrally. Note that the addition of screws can supplement the glue if thought necessary.

Leave the cart and carry on with making the front wheels. These each consist of two pieces (2) glued on either side of piece 3, as shown in Fig. 3.



These wheels are fixed to the  $\frac{3}{8}$  in. diameter axle, which should be a loose fit in the horse, and lubricated with linseed oil. Do not finally fix the wheels until the model has been painted.

The wheels for the cart are made from piece 10, to which are glued the decorations (pieces 11). These are glued in position as indicated by dotted lines on the design sheet.

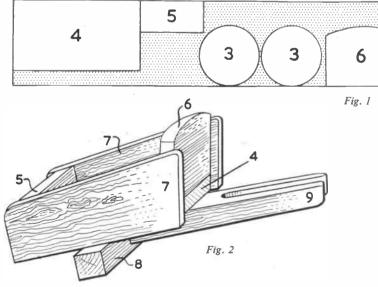
Clean up thoroughly, and paint the horse and cart in gay colours. Add details of the bridle and features on both sides of the horse's head.

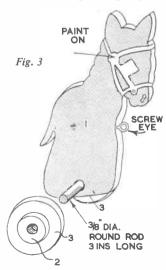
The horse is positioned in the shafts as shown on the design sheet, being glued and screwed. The front wheels can now be glued to the round axle, ensuring easy movement, and the rear wheels are secured by screws to the square axle, free rotation being obtained by the use

Hobbies Kit No. 3420 for making the Horse and Cart contains all wood, stripwood, round rod, screws, etc. Kits price 9/11 from branches and from Hobbies Ltd, Dereham, Norfolk (post 1/6 extra).

of washers. Note that screwholes should be bored and counter-bored to prevent the wood from splitting.

A screweye is fixed in front of the horse for attaching a string for pulling.





# Photographic Processing—5 **DOPING AND TRIMMING**

THE overall brilliance of a matt print and the depth of shadows is noticeably less when the print is dry. If the depth of tone of the wet print was ideal, this can be a disappointment. It can, however, be overcome. Doping is the answer.

A suitable dope can be made up from linseed oil,  $\frac{1}{2}$  oz.; mastic varnish,  $\frac{1}{2}$  oz., and turpentine, 1 oz. Alternatively, a proprietary preparation can be bought from any photographic dealers.

### By K. Baxter

It is best applied with a soft, fluffless cloth and should be rubbed well into the entire surface of the print, giving particular attention to the shadows. Polish off with a clean, soft cloth, making sure no streaks or marks remain. Afterwards, set aside to dry in a dust-free atmosphere. Drying will normally take several hours. If the print requires any retouching this should be carried out before doping is done.

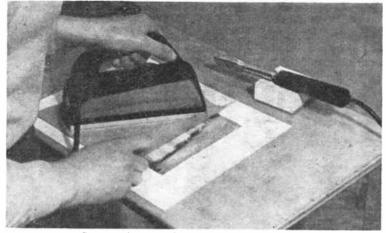
Then, with your print as perfect as you can make it, the final stages of presentation are reached. And even at this point much can be done to make or mar your picture. Trimming is useful for eliminating distracting or unwanted objects lying at the outer edges of the print. It is also useful for improving the general proportion of the picture.

Except with small prints, which can be

trimmed with a single cut, scissors are not very satisfactory for this purpose. The commercial types of trimmers are ideal — either the desk or guillotine pattern. But if you do not wish to invest in one of these, a sharp, thin-bladed penknife or a safety razor blade, carefully used, will do the job equally well.

improved if they are given a deckle edge instead of the more formal straight one. Special trimmers are available for this purpose, but it is possible to achieve a similar effect without going to this additional expense.

The print is placed face upwards between two pieces of stiff cardboard so

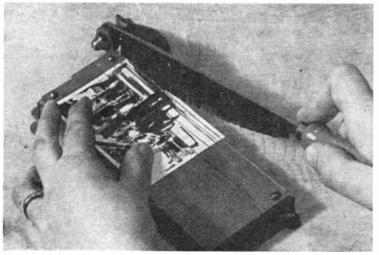


Pressing the covered print on to a mounting card

For trimming, the print is placed on a sheet of glass. A steel or steel-edged ruler makes the most satisfactory guide for the cutting instrument.

### **Deckled** edges

The appearance of some prints will be



Cutting a deckle edge with a guillotine trimmer

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that about half the white margin along one edge is visible. This edge is gripped firmly between thumb and finger and torn downwards at regular intervals. The remaining edges are then dealt with similarly.

Mounting completes the presentation of your print. There are several ways of doing this; of these, dry mounting is perhaps the best. It is a comparatively simple process and there is little risk of damaging the finished print.

A sheet of mounting tissue slightly larger than the required size is first attached to the print. An ordinary domestic iron is suitable for this operation. The melting point of the tissue is between 140 and 170°F. It is important that the iron is heated accordingly. Insufficient heat will fail to melt the adhesive; too much may cause scorching.

With the print face down on a sheet of strong white paper, the mounting tissue is attached to the back of it at some five or six points, starting at the centre. Avoid the extreme edges. Keep the iron moving, applying gentle but firm pressure at each point of attachment. The tissue and picture are then trimmed as required.

Next, place the print accurately in position on the mounting card. Hold it firm with the heel of your hand. Then,

lift up one corner of the print and apply the tip of the hot iron briefly to the exposed tissue. Repeat the procedure for each of the other corners.

Permanent mounting is achieved by overall pressing. A sheet of drawing paper is laid over the face of the print, which is then smoothed over with the iron until it is completely attached to the mounting card. Press one section at a time, applying the heat for about 10 sec.

Extra adhesion can be effected by rapid cooling of each section immediately after ironing. A sheet of glass laid over the covered print will do the job simply and efficiently.

As an alternative to dry mounting, rubber solution can be used. If you decide on this method it is advisable to buy a specially prepared solution from your photographic dealers. Ordinary adhesives are likely to contain chemicals

which may, eventually, damage the print.

#### Rules for positioning

First, mark out by means of pencil dots or a lightly drawn rectangle the position the print will occupy on the mount. Then apply an adequate amount of the solution to this area and a similar quantity to the back of the print. Allow both surfaces to become thoroughly tacky. This normally takes about 15 minutes.

At the end of this time the print is exactly positioned on the mount and firmly pressed home with a soft cloth. Work outwards from the centre, thus ensuring that all air is excluded. After a further 10 minutes any solution which may have seeped out from the edges of the print can be rubbed away with your finger tip.

Positioning the print on the mounting card is largely a matter of individual taste. But unless a startling, or particularly unusual effect is desired, there are one or two basic rules which can be observed.

The mount should be somewhat larger than the print  $-1\frac{1}{2}$  times is a good standard. Central positioning should, generally, be avoided.

Upright prints normally look best if the side margins are greater than the top one. Horizontal prints are helped by allowing the bottom space to be wider than the top.

Various additional effects can be achieved by surrounding the mounted print with a pencil or black ink border. The depth of a landscape picture can sometimes be increased by a pencil border  $\frac{1}{2}$  in. wide at the top and on each side of the print, and 2 in. wide at the bottom. A black ink outline, with the bottom line heavier than the others, will intensify a snow scene.

### JULY

THESE NOTES REFER CHIEFLY

MIDLAND GARDENS, DUE ALLOWANCE SHOULD BE MADE FOR CHANGE OF LATITUDE.



OW at last you can see a reward for hours of labour in the spring. Beddingplantssocarefullyplanted and tended are now showing colour in borders. Nemesia, marigolds, petunias, pansies, and lobelia are in full bloom, and bedding dahlias are already making up into large plants.

Time will be well spent staking and tying if the garden is to be kept tidy

#### ESSENTIAL WORK SUGGESTIONS FOR

time.

shade.

Sow last of perennial seeds.

Lupins, forget-me-nots, pansies, etc, may be sown in the open. Transplant them in the autumn.

Layer border carnations.

Take pipings of pinks.

Feed and bud roses.

Summer prune fruit trees where necessary.

Clean up strawberries and remove runners.

Thin out apples to give better size.

Continue sowing carrots, lettuce, and radish for succession.

Carrots sown now and thinned to 2 in. as soon as possible will give a supply of young roots for the winter and spring.

Sow spring cabbage.

Spray potatoes against blight. (Listen for local radio warnings).

Spray outdoor tomatoes at the same

during summer and autumn. Most plants will stand up to a certain amount of wind or rain, but when they are sodden and heavy with rain, it only requires a moderate wind to lay them flat.

Take advantage of warm weather to hoe as frequently as possible. This will not only keep the weeds down, but will provide a dust mulch to conserve moisture.

LAY OUT IN human

то

TRENCH IN AUGUST

Treatment for Pelargoniums

Feed tomatoes as required.

Feed cucumbers and fuchsias.

Repot seedlings as available.

In the warm greenhouse

Feed cucumbers, and pinch out laterals regularly.

Ventilate, fumigate, and provide

Stop tomatoes when good crop is established.

Order bulbs for forcing.

Water cacti liberally (about once a week).

In the cold house

Attention should be paid to pelargoniums. Lay them out in the shade without water for three weeks. Plant in a trench (in pots), and cut back.

Feed tomatoes and cucumbers. (M.h.)

### **ROSE-STEM TONGS**

When cutting rose blossoms for the house, use a wooden spring type clothes peg to grip the stem whilst cutting through lower down. The gentle pressure exerted will not injure the plant, and painful scratches from the thorns will be avoided.



N the accession of James I to the throne there was a great change in the appearance of ships of war. The change was mainly in the appearance and not in the basic design of the hull. It involved the replacing of the contrasting and somewhat brilliant painting of the Elizabethan ships by elaborate carving and gilded work. Otherwise the basic shape of the hull was very similar to that of the later Elizabethan vessels.

prominent feature of the later vessels. Later the forward and after ends of these galleries were made to conform more to the shape of the hull and stern.

The beak remained a prominent feature, and although there was a tendency to shorten the 'galleon' type beak, a real alteration in bow was not apparent until the time of the building of the *Prince* (1670).



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### WOODEN SHIP BUILDING—14 By 'Whipstaff'

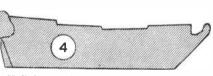
The vessel that most clearly marks the transition from the galleon to the ship of the line was the *Royal Prince*, sometimes called the *Prince Royal*, of 1610. In designing this vessel the architect departed from some of the previous features of design, such as the long beak, etc. A great difference is noticeable in the shape of the quarter galleries and forecastle.

The designer was Phineas Pitt, a member of a famous ship-building family, who a few years later designed the famous Sovereign of the Seas, later renamed the Royal Sovereign.

The beginning of the seventeenth century saw the gradual change in English ships from the square tuck or transom stern that had been a feature of ship design from the early part of the sixteenth century, to the round tuck. In the continental vessels the square tuck continued for some time.

In the round stern the planking was curved round the quarters and into the rabbot of the stern post. This round stern had almost certainly replaced the square design in our ships by the end of Commonwealth rule, although the square tuck remained in many of the smaller ships.

During the reign of Queen Elizabeth I projecting galleries were introduced, extending along each quarter, and a few years after the rebuilding of the *Royal Prince* of 1610 these galleries became completely covered in, and were a



Hull shapes : (1) Royal Charles, 1610 also known as the Royal Prince, (2) Sovereign of the Seas, (3) The Prince, 1670, (4) British second-rate, 1665

The Restoration brings us to period when for the first time really authentic information about various Naval ships becomes available. Appointed as official marine painters were the Van de Veldes, producing for the first time first-class paintings of English ships of war. About the same time the custom arose of having scale models made of proposed ships before the actual building, together with the keeping of the draughts of Naval vessels. Unfortunately this did not apply in the case of merchant ships, and much remains to be done in the way of research on early merchantmen.

In some of these draughts and manuscripts we find that some of the methods of shipbuilding did not differ greatly from those of the previous century. We find, for example, that ships of the naval architect Anthony Deane when compared with those of the earlier Matthew Baker, had less sheer. Upper works at bow and stern were reduced in height. But while the tumble home was practically the same, it was less marked as the greatest beam was now on the waterline. This also produced a more bluff shape at the bow.

A great impetus was given during this period to shipbuilding, and the design of larger vessels by the East India Company.

They had a monopoly of the Indian trade and were not satisfied with the prices and work of the shipbuilder of the day, and established their own shipyards. Although their early attempts were not very successful, in time their ships were some of the finest afloat.

Their early vessels were 400 to 500 tons, but later they concentrated on the building of larger ships, generally frigate type, carrying somewhere in the region of twenty-eight guns, six of which were on the quarter deck.

The first spikes and bolts to replace the tree nails of wood, and iron knees (brackets) to hold the beams to the side timbers were used successfully in the East India Company's ships. A typical East Indiaman of the period would be about 100 ft. long, with a beam of 35 ft. Usually a two-decker, it was built with the appearance of a warship to discourage attacks by pirates.

### **DOWELLING TIPS**

THE next time you have difficulty in replacing a wood screw - as is often the case with hinges on doors, because progressively longer and larger screws have destroyed too much of the wood - use a length of dowel to effect a repair. Drill out the screw hole to a generous oversize, smear the inside surface with glue and tap in a short length of dowel. Cut a shallow groove on one side of the dowel to allow air and excess glue to escape as the dowel is driven in. When the glue is thoroughly dry, cut off the dowel flush with the surface, drill a pilot hole and use the original-size wood screw.

Indented dowels give you a stronger joint by providing extra gluing surface. Cut the dowels to the required length, then roll each under a file with sufficient pressure to knurl the surface. Extra pressure at the ends will produce a slight taper for easier fitting in holes.

Screws rarely hold well in end grain, due to shearing by the threads. If you drill and insert a dowel across the grain, the thread of the screw will have an anchor. (E.)



AVE you a metal rule the graduations of which have become faint? These can be made to stand out clearly again by filling them with a special preparation. Melt 2 parts by weight of white wax (bleached beeswax) and stir in 1 part of French chalk. Continue stirring until the mixture is cool enough to shape into a stick between the fingers. Rub the rule with this stick and wipe off any surplus with a rag, warming the metal if necessary.

### **TISSUE PAPER PASTE** -

Tissue paper requires an adhesive of a more delicate and less obtrusive nature than the conventional adhesives. First dissolve 8 grams of powdered gum arabic and 1 gram of sugar in 12 c.c. of hot water. Next beat up 6 grams of starch with 12 c.c. of water; stir the batter into 128 c.c. of boiling water and continue boiling and stirring until it thickens no more. Allow the solutions to cool, mix them together and the paste is ready for use.

### LABEL MUCILAGE

This mucilage will prove especially useful to those with garden shed laboratories, where ordinary gummed labels tend to drop off glass bottles owing to damp in winter and excessive dryness in summer. Put 113 c.c. of water into a bottle. Add 2.84 grams of gum tragacanth, 11.4 grams of gum arabic, 11 c.c. of glycerine and 0.5 gram of phenol (caution: blisters the skin, and hence should not be touched). Close the bottle and shake occasionally until an even mucilage results. As the phenol is now diluted, the mucilage is harmless to the skin.

### **COBALT BLUE PIGMENT**

This brilliant pigment, which is familiar to all who use water colours. may be made from cobalt phosphate and aluminium hydroxide. To prepare the necessary quantity of cobalt phosphate, dissolve 2.69 grams of sodium phosphate in 50 c.c. of hot water and add it to a solution of 2.54 grams of cobalt chloride in 20 c.c. of water. A violet precipitate of cobalt phosphate appears which gradually becomes pink. Wash it well by decantation in a large bottle fitted with a siphon until a few c.c. of one wash water give no white precipitate with silver nitrate solution. Keep the cobalt phosphate temporarily in the last wash water.

The aluminium hydroxide is prepared by dissolving  $54 \cdot 22$  grams of alum in 175 c.c. of hot water and stirring it into 500 c.c. of cold water containing 35 c.c. of strong ammonia (of specific gravity 0.88). Wash the white precipitate of aluminium hydroxide by decantation as you did the cobalt phosphate, but this time test the wash waters with strontium nitrate solution. When one wash water

### FORMULAS TO NOTE

no longer gives a white precipitate with this reagent, mix the liquid with that containing the cobalt phosphate, swirling well until uniformly coloured.

Now filter off the whole, dry it in the oven, grind the cold mixture, put it into a crucible closed with a lid and heat it up to a cherry-red heat. Maintain the heat for half an hour. Let the crucible cool and then grind finely the resulting Cobalt Blue.

### MAP VARNISH

Maps, drawings and charts may be protected by a suitable varnish. To make up a supply set a bottle of natural Canada balsam in a warm place, so as to thin it. Then pour it into the same volume of genuine oil of turpentine in a bottle, close the latter and shake until uniform. The varnish will be ready for use in about a week.

### HAIR SETTING LOTION

A cheap and simple hair setting lotion may be based on a gum tragacanth mucilage. Put 0.5 gram of guin tragacanth into a bottle together with 100 c.c. of water, close the bottle and shake occasionally until an even mucilage results. Add 10 c.c. of glycerine and 1 c.c. of eau-de-Cologne (or similar perfume) and shake until dispersed. The lotion may be coloured to a pastel shade with any cake icing colour, if desired.

### SCOURING POWDER

Powder for cleaning pans, etc, is easily made. Weigh out  $6\frac{1}{2}$  oz. of pipeclay,  $4\frac{1}{2}$ oz. of powdered washing soda, 4 oz. of pumice powder and 2 oz. of powdered soap. Mix thoroughly and then rub through a sieve. Spread the whole out on a paper to dry. Crush any lumps which may have formed and sift well, when the product is ready for use.

If difficulty is experienced in obtaining pipeclay, another recipe may be used. Mix 11 $\frac{1}{3}$  oz. of pumice powder,  $5\frac{1}{3}$  oz. of powdered washing soda and 5 oz. of powdered soap, rub through a sieve, spread out to dry as before and sift again.

### **CLOUDY AMMONIA**

This is far cheaper to make than to buy. There are a number of recipes. The easiest of these consists of 480 c.c. of water, 25 c.c. of strong ammonia (specific gravity 0.88) and 6 grams of soap. Heat up the water and dissolve the soap therein. Allow the solution to cool and then stir in the ammonia.

### FLOOR POLISH

An extremely cheap floor polish may be made from 1 oz. of candle wax and 4 fluid oz. of white spirit (turpentine substitute). Boil up a water bath, turn out the flame and put into the hot water a tin containing the white spirit and wax. When the wax has dissolved, remove the tin from the bath and pour out the solution into a flat tin to cool and set. Keep it well closed, so as to avoid evaporation of the white spirit on storage. It is an added advantage to keep a circle of waxed paper on the surface of the polish.

### PAINTING ZINC

Galvanised roofs and other zinc surfaced articles often refuse to cover well with paint. Various copper solutions are recommended to provide a surface which will accept paint. A useful solution for pre-treatment may be made by dissolving 2 oz. each of sal ammoniac, copper nitrate and copper chloride in  $6\frac{1}{2}$  pints of water. If the zinc is dirty; scrub with sand and water first, rinse off and then brush with the copper solution. After 24 hours flush off with water, allow to dry and the zinc is ready for painting.

#### **BRASS LACQUER**

It will have been noted that many brass souvenirs do not tarnish. They have been given a coating of a special lacquer. This sensible labour-saving ruse may be extended to other articles about the house which hitherto have needed regular polishing. Put 1 oz. of bleached shellac into a bottle of brown or blue glass fitted with a screw cap and carrying a disc of sheet rubber within the cap. Add 21 fluid oz. of methylated spirit, close the bottle and shake occasionally until the shellac has dissolved. Since grease films may be present on the brassware, swab well with benzine and allow to dry again before lacquering.



AMPING, caravanning and angling are all enrolling more enthusiasts week by week and all have the same basic thing in common a love of the open air.

Now a great number of these people have never done any boat fishing and it all looks so simple but there is really a lot to take note of. In this article we shall only be concerned with using a boat on a lake and in the manner likely to

### SOME TIPS ON BOAT FISHING By 'Kingfisher'

provide the most opportunities for enjoying good sport. Many people possess their own boats and are very adept in their use but this skill is not all that is required if fishing from the boat is undertaken.

I've met quite a few of these people who can handle a rowing boat far better than I can, but to use it for fishing in the same manner ruins all their chances of sport. Here then are some hints and tips for the person who is taking up fishing by boat.

Vibration is one of the things to guard against. Noise as such does not interfere with fishing, but to stamp your feet on the bottom of a boat is the best way I know to scare every fish for miles around.

On arriving at the boat, then, the first job is to assemble your rods and lay them where they are out of the way but where they can be easily reached without having to move about the boat. The rest of your tackle should also be dispersed in a like manner. Your rowlocks should be of the kind where a hole has been drilled through the stem and on the side of the boat there should be a piece of cord to which a hook is secured. This hook is passed through the hole in the aforementioned rowlock shank. This is a security measure and should be used as intended.

It is also a wise plan to have some cord fastened to the oars, which in turn should be secured, say, to the rowlocks. On a large lake where a squall may get up it isn't pleasant to find that one oar is floating away. It isn't every man who can scull a boat along with one oar over the transom.

Never take chances when a wind gets up, as very often the waves on a lake can be short and steep and to say the least uncomfortable to be on. If you don't want to come in then row where you can get in the lee of some form of shelter but only do this after you have considered the state of the weather and don't stay out if conditions worsen.

Never trust the water, which although it can afford you loads of pleasure is always ready to take advantage of your ignorance in boating matters. It's like a bicycle — always ready to tip you off if you don't use care.

Always fish if possible near to weed beds, as it is in here that the fish find food in the form of insects, seek shelter from the sun and sanctuary from many of their enemies.

Having made all ship-shape and Bristol fashion make sure that you have some form of anchor, which for lake fishing may well be a concrete block with an eyelet let into it and a long rope fastened to the boat. You should have two of these unless there are fishing stakes in the lake. Never unfasten these ropes from the boat except in an extremity or danger in some form or other.

Your groundbait will be ready mixed and it is a very good plan to put this in one of the plastic shopping bags which has a lot of very narrow slots all round it and at the bottom. Row out towards your weed bed and remember that you will want the fish out of the weeds. So as you get nearer to the spot row hard to get up a bit of speed, then ship the oars. As you pass close to the weeds drop your bag of groundbait - secured by a cord of course - over the side. You will glide along and the water will wash the groundbait out through the slots of the bag to form a trail on the bed of the lake. Don't go too far past the weeds and be ready to lower an anchor, quickly followed by the second one as the boat loses 'way'. You have made no sound whilst the boat has been gliding along so you won't have scared the fish away.

When you are hove-to, as it were, get some samples of both groundbait and hook bait on to the weed bed, where it will encourage the fish to feed. It is a good plan to use maggots for this purpose as in their wrigglings they'll fall off the weeds and sink to the bottom. Throw some also in the clear water at the edge of the weeds so that the fish will be encouraged to come out and see your trail of groundbait. Your hook should lay along this trail.

Incidentally, never lay the trail right up to your fishing position and never fish under the point of your rod when in a boat. I have found that a nice distance is to have the float about 25 ft. or so from the craft.

Fishing from a boat is very easy and good sport can be had. It is only the approach which has to be carefully made. Once you've tried this way of fishing you'll soon want to be afloat again. To be out on a calm lake on a quiet summer's evening is 'out of this world' and I find it easy to almost forget my own name and address when fishing under such conditions.

### NASTURTIUM WATER-LILIES

ASTURTIUMS are pretty flowers, but many gardeners find them tiresome because they grow and spread so rapidly. Have you ever noticed that the flat, rounded leaves of nasturtiums resemble the larger floating leaves of water-lilies? Why not make some water-lilies out of nasturtium flowers? This is easy to do and the results of your efforts can be used to make a charming table decoration that will last for several days.

Select perfect flowers that are quite free of pests and pluck them off the plant right at the top of their stems. Three or four flowers will be enough, but do not let them all be of the same size. Now choose a large untorn leaf for each flower and also pick a few smaller leaves of different sizes. Make small holes, off centre, in the large leaves and press the horn-like nectary of each flower into one of the leaves.

Your completed 'lilies' will float like little boats in a bowl of water. Make adjustments to your lilies until you are satisfied with their appearance. Twothirds fill a glass salad bowl with water and arrange your flowers upon the surface. Float the smaller leaves around them attractively. The flowers will not die until they have given you several days of pleasure. Float a small plastic duck upon your lily pond. (A.E.W).



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### Home Chemistry Laboratory

COULD you please send me a list of chemicals and apparatus which you think suitable for a home laboratory? (J.H. - Bridport).

**TO** provide a nucleus of apparatus and chemicals you should base your purchases on the list of A. N. Beck & Sons, 60 Stoke Newington High Street, London, N.16. They will send the list on receipt of a 4d. stamp. Some items under Chemical Apparatus can be modified, e.g. a retort stand with rings will supplant a filter stand, and there is no need for a spirit lamp if gas is laid on, when a Bunsen burner should be used. Regarding the section Chemicals and Reagents. some of these items will probably already be at hand, e.g. sodium carbonate (washing soda), sodium biborate (borax), calcium hydroxide (hydrated lime), calcium sulphate (plaster of Paris), magnesium sulphate (Epsom salts), sodium bicarbonate (baking soda), sodium silicate (water glass), sodium thiosulphate ('hypo'), bleaching powder ('chloride of lime'). Pharmacists can also supply a number of the others. With a range of Beck's apparatus nearly all Hobbies Weekly experiments can be done. For the occasional odd item or for a chemical not listed by Beck, you should visit a laboratory furnisher in your area or enquire of Oakes, Eddon & Co. Ltd, 95-99 Prescot Street, Liverpool 7. A pharmacist who deals with British Drug Houses Ltd, can also be immensely helpful in acquiring chemicals.

\* \* \*

### **Trouble with 'Home' Programme**

**THAVE** just made a 2-transistor radio, but it will not cut out the Home programme. I tried a wave-trap but it cuts out altogether. Could you please tell me how I could add another transistor? I think if there was more power it would cut the Home out. (B.F. — Belfast).

I is not easy to obtain sharp tuning with a simple circuit of this kind. Your aerial may be too long. If so, it way be shortened; or a small fixed, variable or pre-set condenser may be added in the aerial lead at the receiver. Or an aerial coupling winding can be added to the coil. These methods sharpen tuning. The wave-trap should help considerably, but this circuit should also be arranged to tune as sharply as possible, by employing one of the methods above. If the trap tunes flatly it will eliminate wanted stations as well. An extra stage would increase the volume of present signals, not increase selectivity. If the methods above give enough selectivity but insufficient volume, the extra stage would be useful. The present output stage could be repeated, or one of the other circuits in other issues could be used.

### \* \* \*

### Guitar Amplification

I have made a solid electric guitar, I building it up as I went along. I now find that the pick-up I have is not strong enough, and to buy a new one is beyond my reach. Is it possible to make one at a reasonable cost? I have a fair knowledge of electricity. (R.D. — Waltham Cross). Bequipment it is difficult to advise you. If you already have a crystal, magnetic or similar pick-up, lack of volume may arise from insufficient amplification. If so, this can only be overcome by using a preamplifier between guitar and amplifier. Such a pre-

### CONTRIBUTIONS TO THE EDITOR

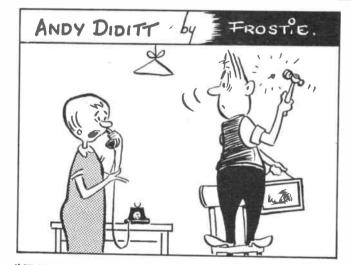
The Editor is always pleased to consider suitable articles, particularly of a practical nature, for publication in 'Hobbies Weekly' If accepted, they will be paid for at the usual rates on publication. For preference, articles should be typed or neatly written on one side of the paper only, and to help in understanding the make-up of the project, important stages should be illustrated with drawings.

While the Editor does not hold himself responsible for manuscripts, every effort will be made to return them if a stamped addressed envelope is enclosed.

Ideas for subjects (including designs) which readers would like to see in these pages, would also be welcomed. If you have a project in mind, let us know, and it will receive every consideration, depending on suitability.

All Editorial communications should be addressed to the Editor, 'Hobbies Weekly', Dereham, Norfolk.

amplifier could usually be a single valve, could draw current from the main amplifier, and would cost less than a different pick-up. If your amplifier does not give much amplification (e.g. is for record playing only) a new guitar pickup will still probably be unsuitable. If the amplifier is for records only, this is probably the cause of poor volume. But if the amplifier can be used with a microphone (of other than carbon type) the guitar pick-up itself is giving insufficient output. If so, a crystal insert as sold by Henry's Radio, 5 Harrow Road, Edgware Road, Paddington, W.2, at 3s. 6d. upwards, could be tried. Note that you need more amplification than for record playing.



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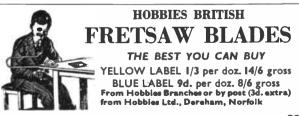
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HAT is a philatelist? I have just looked this up in one dictionary, and it says 'One who collects postage stamps'. That definition is not really good enough. although it stresses one particular word which is most important, and that is the word 'postage'. The definition would be improved if it included the word 'adhesive' before postage. Now a postage stamp is really a piece of paper which is stuck on a letter or a parcel to denote that a certain amount of money has been paid to the government to defray the cost of taking that letter from one place and delivering it to another.

At Christmas quite a number of different organizations sell sheets of labels which look very much like stamps. and which are stuck on the backs of letters, and in this way they collect quite an appreciable amount of money for their cause - but these have no place in a stamp album. That, no doubt, was known to all of you, but how about the following: A receipt in Britain now requires a twopenny stamp if it is for a sum larger than £2, and this is defaced by writing over the stamp; although the stamp was purchased at the post office, there is no question of postage about it. so it should not go in an album.

Years ago the stamp cost one penny, so you may see a stamp of that value with writing on it (No. 1), and the same remark applies.

Sometimes when the post is very heavy it happens that a certain letter or packet may be missed when cancelling. Then it is the duty of the postman to deface the stamp with a pen or pencil. Generally it will have a cross on it. Such a specimen has paid postage, and as such it is a postage stamp, but it is called 'pen cancelled', and is almost invariably of less value than a normally cancelled stamp. So, although it may go in the album, it would be better to replace it as soon as possible. The specimen shown (No. 2) is from Horta, now using stamps of Portugal.

### TO ENTER—OR TO OMIT

Another type of stamp that should not appear in the album is the one containing perforated initials of a firm (No. 3). These were placed there to prevent theft, or at least to detect theft. A high value stamp with initials should be kept. but every effort made to replace it by a perfect specimen. There are, however, a few cases of perforated initials which are collected. For example, illustration No. 4 is from Australia, and has the letters 'O.S.' perforated. These stand for 'On Service'; that is, for use in a government department in the same way as the familiar British 'Army Official' or 'I.R. Official' overprinted on stamps up to the reign of King Edward VII.

Probably you have noticed that there are fewer stamps with initials perforated in them now than was the case years ago. The reason is, of course, that so many firms are now using the machines giving the printed device 'Post paid' and a number, known as meter marks. There are some people who collect these, and also slogans, but it is rather outside the province of the average stamp collector.

How about the six-sided stamp (No. 5). It looks rather a nice specimen to have, doesn't it? Well, unfortunately, it is one of those that one does not collect. It is a telegraph stamp from Belgium. Some countries issue special stamps for defraying the cost of telegrams, but Britain does not. The ordinary stamps are put on the forms which are kept for a certain time, and then destroyed. But towards the end of the last century a collector came across a copy of the 1s. 0d. green, and noticed something queer about it. It had come from a telegraph form, and he compared it with others also from telegraph forms, and found they were all the same. They had come from the Stock Exchange. Someone had forged a number of these 1s. 0d. stamps, and used them on the forms, and in that way had collected quite a lot of money. Today one of these forgeries would be a very nice stamp to possess, yet it is not really a postage stamp at all.

In one way it is a pity that stamps are such handy pieces of paper. It means that they are so easily sold over the counter, and consequently we have far more than postage stamps coming from the post office — Health Insurance. Unemployment Insurance, National Savings stamps, Postage Due stamps, and so on. Some other countries have even more. From Canada we get Customs stamps, the Cape of Good Hope issued stamps for paying cigarette duty. and if you go to France you will often see small advertisements in shop windows. These have a stamp on them. They may look like a postage stamp, but they should not find their way into a postage stamp collection.

It requires courage to remove a specimen, and in so doing make your total number smaller, but remember a few good stamps will make a far better collection than a mass of rubbish, so be ruthless, and clear out all those torn and unwanted – it will repay you every time. (L.P.V.V.)



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# **YACHT PLAQUE**

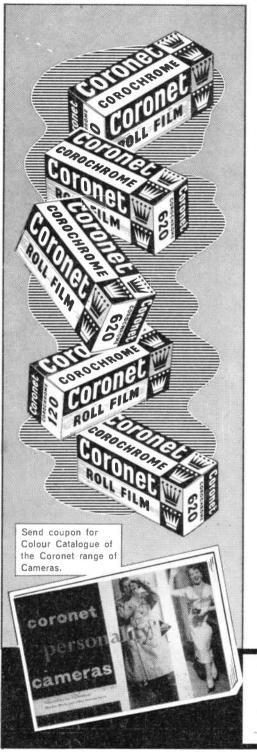
### DECORATIVE GIFT CUT WITH A FRETSAW

UT piece A from  $\frac{3}{6}$  in. wood, and piece B from  $\frac{1}{2}$  in. Glue piece B to piece A, and place under weights until dry. The overlay B can then be carved with a modelling knife and the background 'matted'. After wax polishing, the plaque may be fixed to the wall by means of a hanger at the back. (M.p.)



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