

# HOBBIES

## *weekly*

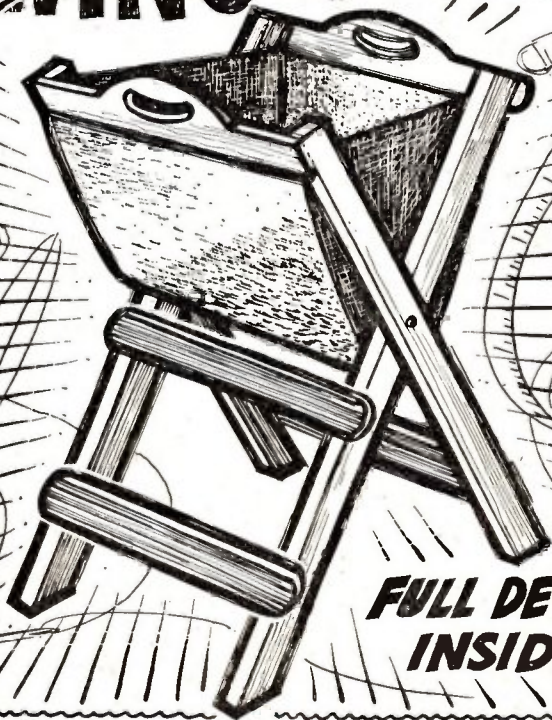
9th DECEMBER 1964

VOL. 139

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## SEWING STAND

**HANDY**



**FULL DETAILS  
INSIDE**



**FOR CRAFTSMEN OF ALL AGES**

**6<sup>p</sup>**

**H**OUSEWIVES, are you still using a sewing basket or workbox, having to lean down to the floor to get the required materials? Or do you put the box on another item of furniture? Why not dispense with all this inconvenience and get this sewing stand made up for you? You will soon find it indispensable. It is at convenient height, when opened up, to stand against a chair and can be moved from room to room with the minimum amount of fuss.

Very little wood is required for the construction, and it can be stained and polished if good quality timber such as oak, beech or ramin is used.

### Start with the legs

The four legs required are of 1 in. square wood 2 ft. long, and each pair of legs is made into a framework by means of two rails and a handle piece, all of which are  $\frac{3}{4}$  in. thick. In the case of one frame the rails and handle piece protrude 1 in. at each side as seen in Fig. 1 but in the other frame they are flush at the outside. This second frame will be full 16 in. wide overall, the legs being full 14 in. apart, allowing space for washers between the legs.

The rails are  $1\frac{1}{2}$  in. wide and are screwed into place on the face of the legs, with their lower edges spaced at 4 in.

# MAKE A SEWING STAND

and  $10\frac{1}{2}$  in. intervals from the bottom of the leg.

Each handle is cut from a strip of wood 3 in. wide to the preferred shape as shown on the squared drawings in Fig. 2, in which  $\frac{1}{2}$  in. squares have been used.

In Fig. 2 at the points marked by small crosses 1 in. apart, holes  $\frac{1}{2}$  in. diameter are bored through each handle piece, ready to receive the lacing which supports the fabric bag or trough. The handles are then screwed into position on their respective legs, but in each case are screwed on the opposite edges to those on which the rails have been previously fixed. Two screws should be used at each end of each handle piece.

The two frames are placed together

and with centre points at 1 ft. 1 in. from the bottom of the legs;  $\frac{1}{4}$  in. diameter holes are bored to receive hexagon-headed bolts which will hold the frame together. These bolts need to be about  $2\frac{1}{2}$  in. long, and a washer should be put between the legs. Fig. 3 shows the completed woodwork before trimming the legs.

Apart from sawing the bottoms of the legs at the appropriate angle so that it stands securely when opened, the actual woodwork of the sewing stand is complete. The legs should not be sawn until the fabric 'trough' has been made and fitted.

### Use a strong material

Almost any decorative, strong material such as light-weight canvas, cretonne, linen, etc. may be used for the trough and should be 1 ft. in width. It should be made up into the shape shown in Fig. 4. The trough measures 1 ft. long by 10 in. wide and at its deepest point is 7 in.—8 in. Around all four top edges a stout hem is made, a length of stout cord being sewn into the hem at the same time.

By means of the holes made in the handle pieces, the trough is laced into place with some fancy coloured silk cord, the latter coming through the bottom of the hem, over it, and then through one of the holes in the wood

## CONSTRUCTION OF LEGS AND ALTERNATIVE SHAPES FOR HANDLES

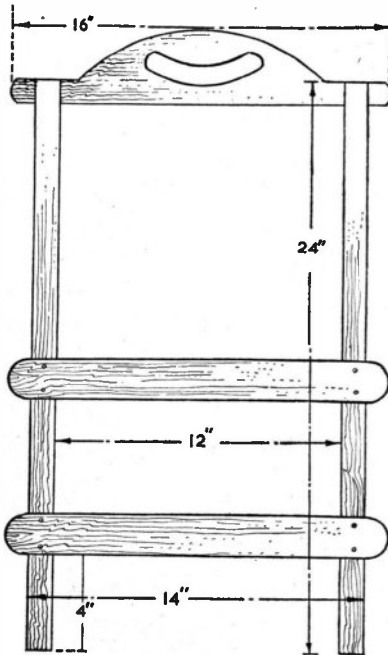


Fig. 1

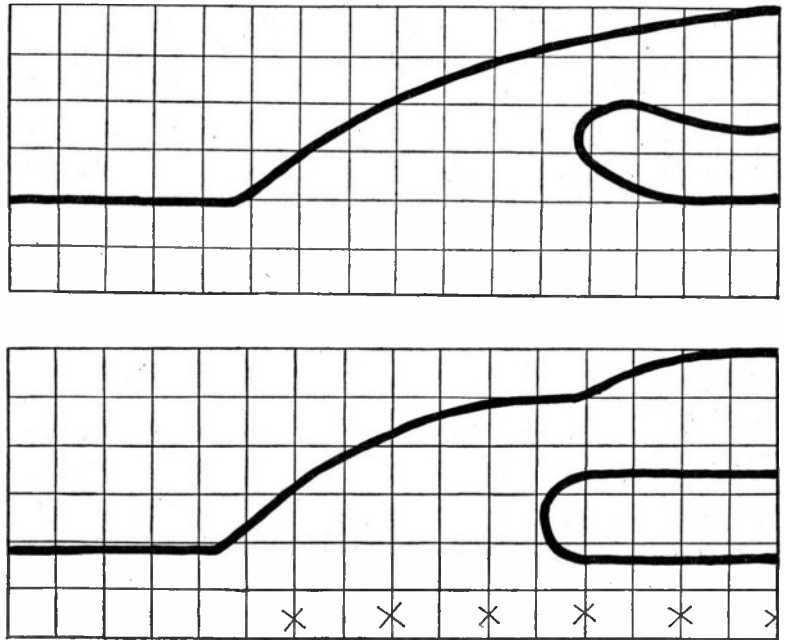


Fig. 2

before passing down for the next turn. In this way the strain, when the sewing stand is in the opened position, is taken more by the cord in the hem than by the fabric itself. A large bodkin will be found of considerable use in making the holes in the fabric for this threading. A piece of fabric may be sewn to the side of the trough to hold buttons and similar oddments; also a piece of felt or flannel is ideal for holding pins and needles.

With the trough in position the sewing stand may be opened to its full extent, the necessary angles marked at the bottom of the legs and the waste taken off with a tenon saw.

The design as explained above could be modified by omitting the holes in the handle pieces and the cord in the hem of the trough and by then nailing the trough direct to the woodwork of the handle pieces. This is not altogether desirable, as there is considerable strain on the trough top when the stand is opened, and the fabric may tear round the nails. If this alternative method of construction is adopted, large-headed

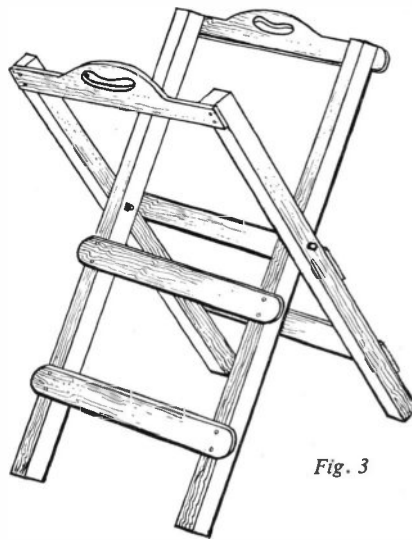


Fig. 3

Ready to trim legs

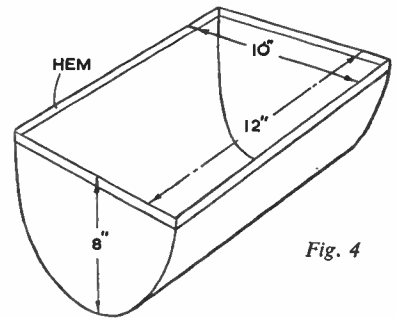


Fig. 4

Shape of trough

upholstery nails should be used for the fixing.

The staining and polishing treatment can be given before the trough is finally fixed into place and before the two frames are bolted together. (M.h.)

## A Quick-change Picture Frame

**H**ANDY, quick-change picture postcard frames can be made quite easily from a few pieces of card and a piece of clear sheet acetate, obtainable from Hobbies Ltd. This particular type of frame will also hold a few other cards, like a wallet, and if you want to change the picture it only takes a moment.

You will require some thin card, about

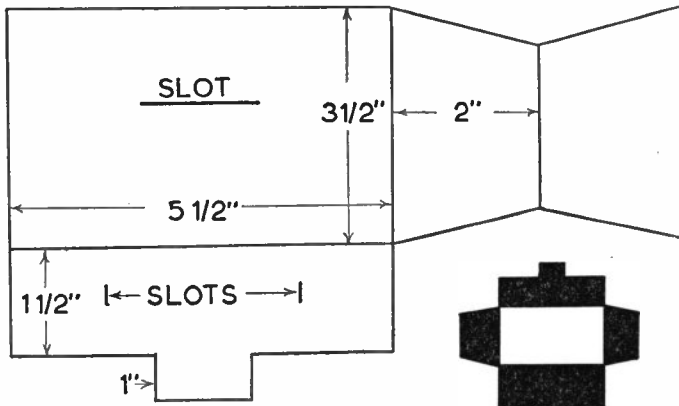
the thickness of a postcard, and a piece of sheet acetate the exact size of the picture. The dimensions given in the diagram are for the average sized picture postcard measuring  $3\frac{1}{2}$  in. by  $5\frac{1}{2}$  in. but with a little modification you can use the same idea for the giant sized cards now on sale.

Cut your card into four separate pieces as shown, that is, two side pieces

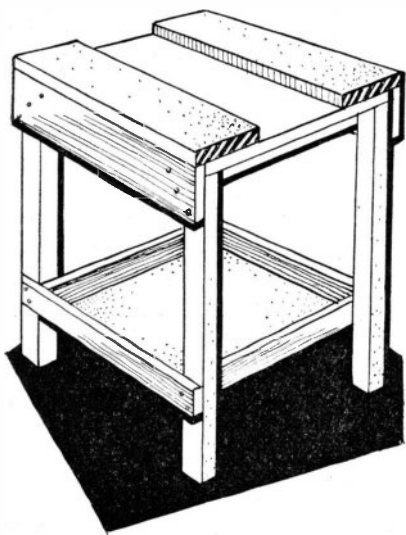
and two pieces for the back. The assembly is shown in the smaller diagram but before sticking them together cut a slot in the larger piece to accept the fastener in the form of a tab and two short slots in the latter piece for inserting a ribbon hanger. Push a piece of narrow ribbon through the two small slots, leaving a little slack and securing the ends on the inside with pieces of Sellotape.

Fasten the five pieces together by means of Sellotape, which as you are no doubt aware can become entangled so here is the easiest way. Start by laying a suitable strip of Sellotape on the table. Take hold of an end piece by finger and thumb of each hand holding in an almost vertical position. You can then lower the card so that the edge of same is in contact with the centre of the tape. Lower the card gently into the flat position and press. This should cause the tape to fold upwards and you will then have little difficulty in joining on to the sheet acetate. Press with the fingers, rubbing a little harder to ensure adhesion. Treat the other end similarly and then the sides.

Place the picture in position, fold the sidepieces inwards, then the backing piece, pushing the tab into the slot to fasten. Other cards may be placed at the back for changing when desired. (H.M.)



# A Carpentry Bench for young handymen



their ends cut at an angle, and they are screwed to the outside faces of the legs as shown, to complete the bracing and form the tray. A sheet of  $\frac{1}{4}$  in. thick plywood (H) is glued and screwed to the underside

of the tray sides.

The completed bench can now be varnished, treated with wood sealer, or coated with a semi-matt polyurethane finish. (A.L.)

**A** SCALED-DOWN version of a carpenter's bench, on which a youngster can saw, hammer and work quite happily without fear of doing any damage, is a worth-while fitting which is simple to make.

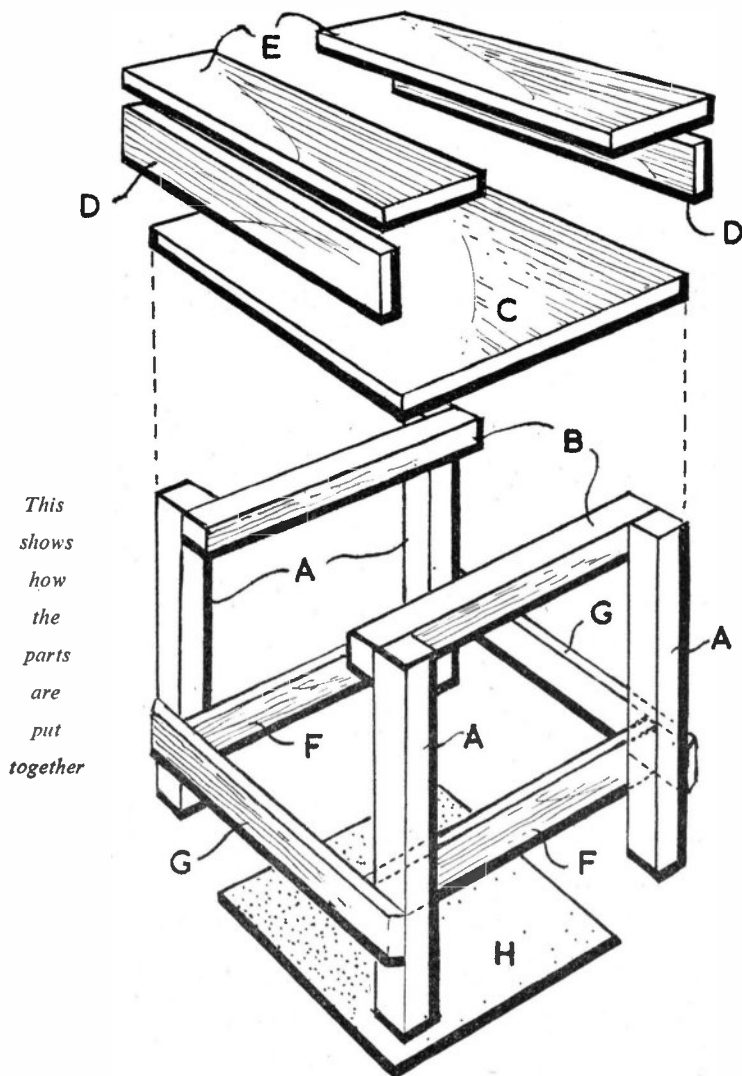
The dimensions given here are for a bench which is approximately 24 in. square and 23 in. high; these measurements are easily altered if necessary. One mistake which is all too easily made, however, is the lengthening of the legs until the bench-top is too high for comfort. It is wise to check the proposed height against the measurements of the person who will be using the bench.

The four legs (A) are 21 in. lengths of 2 in. square wood. Two horizontal bars of the same wood (B), 24 in. long, are screwed to the tops of the legs, the top of each bar being flush with the top of the legs, as shown. The flat table-top section (C) is now screwed to the legs. This top is a 24 in. square sheet of  $\frac{3}{4}$  in. thick chip-board.

Two 24 in. lengths of 3 in. by  $\frac{3}{4}$  in. wood (D) are screwed along opposite sides of the bench, the top edge of the wood being flush with the top of the chip-board. Two 24 in. length of 6 in. by 1 in. wood (E) are screwed to the flat top, with their outer edges flush with the sides of the vertical pieces below them.

## The tray section

The lower tray section, which also braces the legs, is formed from four 24 in. lengths of 2 in. by  $\frac{3}{4}$  in. thick wood and a plywood base. Two of these 24 in. lengths are screwed to the inside faces of the legs (F), 4 in. up from their lower ends. The second two pieces (G) have



*This shows how the parts are put together*



## NEW STAMPS FROM ALL QUARTERS

### GREECE

A set of stamps commemorating the wedding of H.M. King Constantine II and H.R.H. Princess Anne-Marie of Denmark appeared on September 18th. All three stamps illustrate the Royal couple.



The National Institution of Social Welfare (P.I.K.P.A.) the official organization of the Greek State for the Protection of Children and Mothers, is celebrating its 50th anniversary this year and the Greek Post Office marked the event with the issue of a special stamp in September.

The Europa set appeared on September 14th.

### SOUTH AFRICA

Special 2½ and 12½ cent stamps appeared on October 12th, marking the 50th anniversary of the South African Nursing Association.



### CANADA

A 5 cent stamp marking the historic conference at Quebec at which many basic agreements were reached which subsequently led to Confederation in 1867 was released in September. It features the maple leaf and a quill pen in the hand of a signatory.

### WEST GERMANY

In a continuation of the 'Capitals of the Federal Republic' series, West Germany has issued stamps featuring the Berlin Reichstag and Gutenberg Museum.

This country's Olympic stamp appeared on October 10th, and depicted judo.

## OLYMPIC EVENTS MAKE A GOOD THEME

**T**HE Czechoslovakian Olympic Games set appeared on September 2nd.

Designs included: 60 h — Cycling. 80 h — Track and Field Athletics. 1 Kcs — Football. 1.20 Kcs — Rowing. 1.60 Kcs — Swimming, and 2.80 Kcs — Weight Lifting.

Since ancient times the tradition of friendly competition among amateur sportsmen at the Olympic Games has been bound up with the term 'peace', the pure and clear flame of the Olympic fire and the laurel wreaths for the winners.

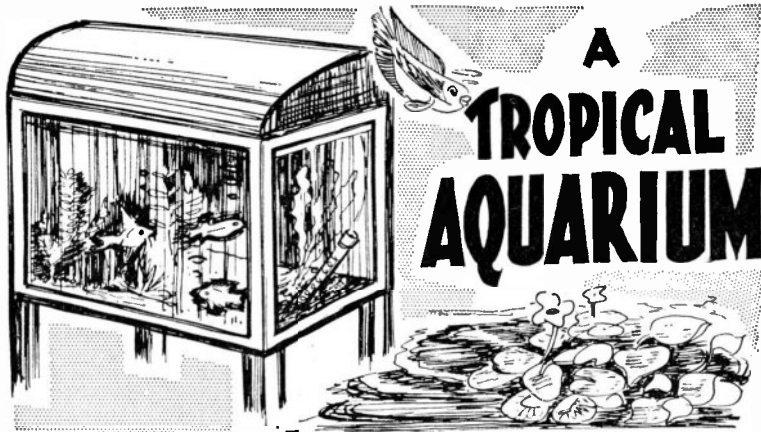
The five Olympic circles stand for the unity of five continents. The important thing at this top competition of joy, strength, beauty and health, is not so much to win as to take part in it. The Olympic village at Tokyo is the meeting ground of thousands of sportsmen and women from dozens of countries, gathered to demonstrate their skill in 20 different sports. The number of nations participating was the greatest ever.

Collectors should remember that it is almost impossible to collect every stamp issued these days and general collectors are on the way out. The question so often asked "What stamps shall I collect?" is a difficult one to answer. But those who like to see their stamps rise in value over the years will do well with these beautiful stamps issued to commemorate the Olympic Games and put on sale by most countries.

I know several people who collect these issues and also Olympic programmes, press photographs and all data connected with this event. So if you seek an additional hobby why not choose the Olympic Games as your theme, starting with stamps and then labels or other pictorial publicity issued to promote the Games. If you have pen friends in Japan, you could start a collection of autographs of sportsmen and sportswomen taking part.

(R.C.)





# A TROPICAL AQUARIUM

provide an adequate meal for about fifty fry. One objection to breeding infusoria is that after a time the jar develops a penetrating, foul smell. If sufficient jars are started at intervals of (say) three days it is possible to have an ample supply of food, yet dispose of the jars as necessary to keep the smell in reasonable bounds.

With egg-layers the first culture jar can be started as soon as the male and female are put together. It is more difficult to estimate when the culture should be started for live-bearers but in view of the cheapness and simplicity of infusoria breeding it is just as well to be on the safe side and start the first culture jar immediately prior to mating.

From infusoria the fry can graduate to micro-worms after a few days, and then

## Advice on Feeding Young Fish

**T**HE fry of live-bearers will take food as soon as they are born, but the young of egg-laying breeds cannot take food until they are free-swimming fish.

Food of the kind given to adult fish cannot be fed to fry. The youngsters should, at the start, be fed on 'infusoria.' This term covers a wide range of minute aquatic creatures. Individually they are too small to be seen with the naked eye, but in great numbers they appear as a rather cloudy mass that obviously has

some form of life in it.

Infusoria are bred by the aquarist in large glass jam-jars. Lettuce leaves are the easiest medium for raising infusoria. A jar of aquarium water (preferably from a tank that has been established for some time) is taken and some lettuce leaves are bruised and put into this. The jar is stood in a dark place at a temperature of from 55° to 65°F, and after about four days the jar should be swarming with infusoria.

Two tablespoons of infusoria liquid

to the smaller sizes of dried food as fed to adults. There are also various proprietary foods in tubes (sold separately for live-bearers and egg-layers) that are suitable for fry. These are in liquid or semi-liquid form, have the advantages of being clean and easy to feed and, not being exposed to the air, they will keep better than will most home-made diets.

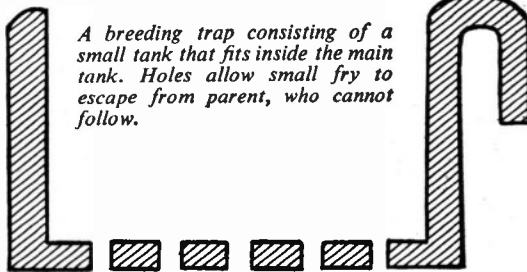
It is easy enough to recognise when the fry are ready to take something more substantial than 'baby foods' but the same general rules concerning feeding must apply to the fry as to adults, i.e. fairly frequent changes of diet and an avoidance of over-feeding.

Although the main classification of live-bearers and egg-layers remains true, certain species of fish have breeding habits of particular interest.

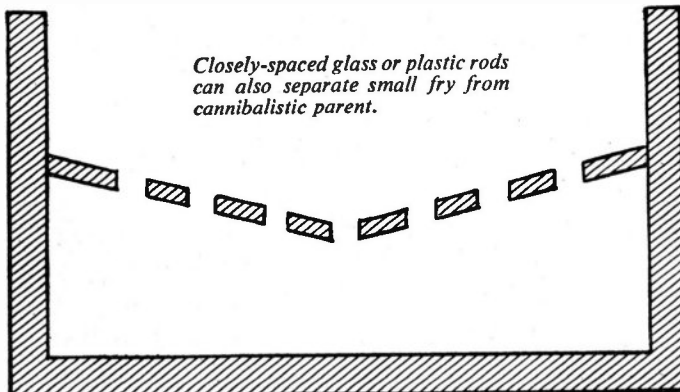
Fish do not lure intruders away from their young in the way that some species of birds will do, but certain breeds have a fascinating way of caring for their young. When danger threatens the young are taken into the mouths of the parents, who then chase the intruders. The young are rarely damaged by this treatment and even less rarely is one accidentally killed. Fish that show this type of family care are known as 'mouth-breeders'.

Again, there are the 'bubble nest' breeds such as the Siamese fighter and the gouramis.

With these the males make a nest by blowing bubbles on to the top of the tank. The nest is quite fragile and has constantly to be repaired. The eggs are laid direct into this and if any should fall out they are carefully replaced by the male. Young fish, too, as they get out of the nest are replaced, but obviously the time must come when the fry are too



*A breeding trap consisting of a small tank that fits inside the main tank. Holes allow small fry to escape from parent, who cannot follow.*



*Closely-spaced glass or plastic rods can also separate small fry from cannibalistic parent.*

active to be restrained. The male must be removed at this stage as he will go frantic trying to keep the young fish under control, and will go on a killing spree.

Notes now follow on the breeding characteristics of some of the popular tropical species.

**Bloodfins.** These breed only in soft water and the tank must be well planted as they prefer to mate in fairly dense foliage. It is vital that the breeding tank is covered as the male, in particular, is an expert jumper and can well leap out of the tank. Both parents must be removed as soon as spawning is finished as the breed are avid egg-eaters.

**Dwarf gourami.** These are bubble nest breeders but slightly unusual in that the female also helps to build the nest.

A rockwork cave should be put in the

breeding tank for the male's courtship is very rough and if not ready for spawning the female may be severely mauled, so a hiding place is useful. After spawning the female will not again approach the male until it is time to start nest building.

**Guppy.** This is a very prolific breeder and as the result of one act of fertilisation young will be born over a period of many months. Mating may occur at a very early age but should be prevented, if possible, until the fish are at least six months old. Cannibalism is rife with the breed.

**Mollies.** One of the features of the courtship preliminaries is the display of its fins by the male. This is a live-bearing breed demanding a tank that is fairly densely planted. The male should be removed before the first of the young is born so as to leave the female undis-

turbed in a tank with which she is familiar.

**Neon tetra.** This is a rather difficult species from which to breed. It is essential that the tank be scrupulously clean and that soft water be used for it.

No bright light is permissible. The tank must be well shaded when the parents are put in (which should be overnight) and the adults should be removed as soon as they have spawned. The tank and its eggs must then be kept in total darkness for a week, after which shaded light can be gradually introduced. If the breeding attempt has not been successful further efforts should be made at intervals of approximately fourteen days. If still unsuccessful after the third attempt at breeding the partners should be changed.

(N.W.)

## Smallest Public Railway in World

**T**HE 15 in. gauge Romney, Hythe and Dymchurch Light Railway in Kent can lay claim to being the smallest operated public railway in the world.

It first came into operation on 5th August 1926, when the 8.3 miles portion from Hythe to New Romney was opened. In 1928-29 further progress was made when the line was extended through to Dungeness, another 5½ miles.

Around the period 1920 it was noticeable that transport facilities along the East Kent coast near the Romney Marshes was somewhat inadequate for local requirements and more so for the popular and increasing holiday traffic. At this time two distinguished racing motorists, Captain J. E. P. Howey and Count Zborowski were seeking a site in order to construct a small public railway for passenger carrying. Unfortunately however Count Zborowski met with a fatal accident in his motor racing

activities, but Captain Howey agreed to a suggestion put forward by the former Southern Railway that this location in East Kent would be successful and would meet all his requirements.

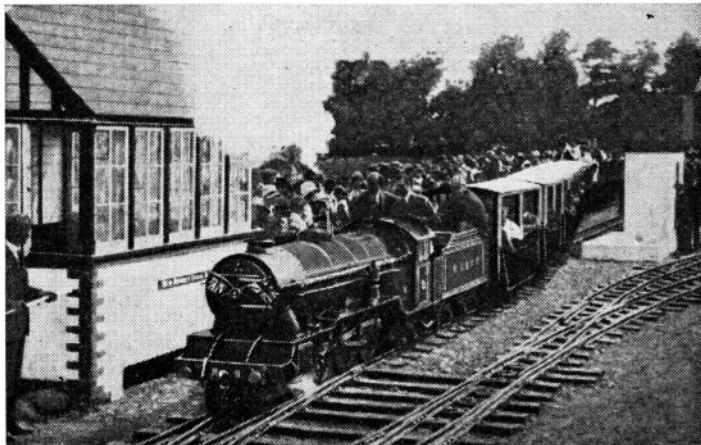
Accordingly after a public inquiry, Light Railway Orders were obtained and the construction of the line began. It was originally laid with double track throughout but just after the 1939-45 war the section between New Romney and Dungeness was altered to single track with Dungeness situated on a loop.

This interesting little railway follows closely many features of full size practice a particularly fascinating one being found in its locomotives. These include the miniature L. & N.E.R. 'A3' Pacifics named *Green Goddess*, *Southern*

*Maid*, *Northern Chief*, *Hurricane* and *Typhoon* which were all designed by the late Henry Greenly and made by Messrs Davey, Paxman & Co., the 4-8-2 type engines *Samson* and *Hercules* which were also made by Paxman and the Canadian Pacific types *Winston Churchill* and *Dr Syn* which were supplied by the Yorkshire Engine Co. of Sheffield.

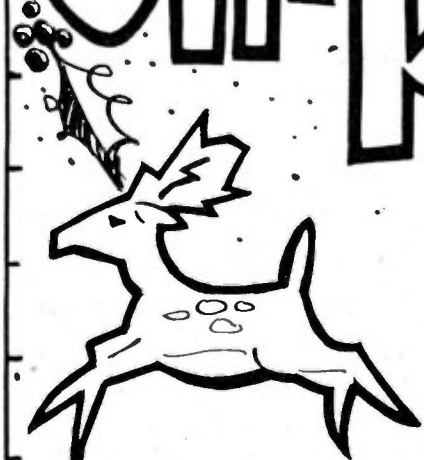
The line also operates two petrol driven locomotives primarily for ballast work and other special duties. The station at Hythe is at the western end of the Cinque Port. On the journey to Dymchurch (5 miles), this being the first stop, the trains run parallel with the Royal Military Canal before emerging into the open fields onwards.

(A.J.R.)



*The late King George VI, when Duke of York, driving the Pacific engine 'Green Goddess' at New Romney on August 5th 1926*

# CHRISTMAS CUT OUTS

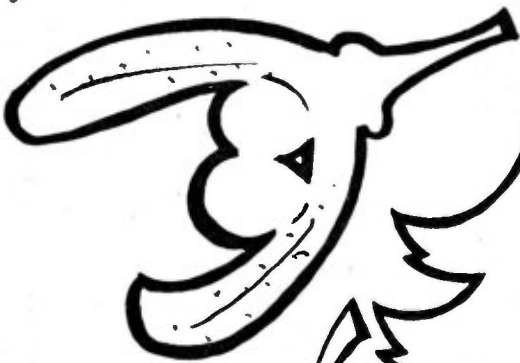
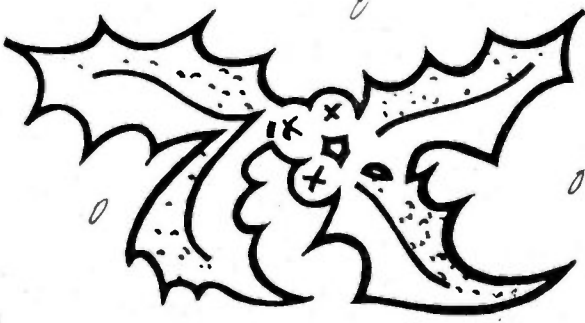


**CUT FROM  
WOOD,  
METAL  
OR  
PLASTIC**



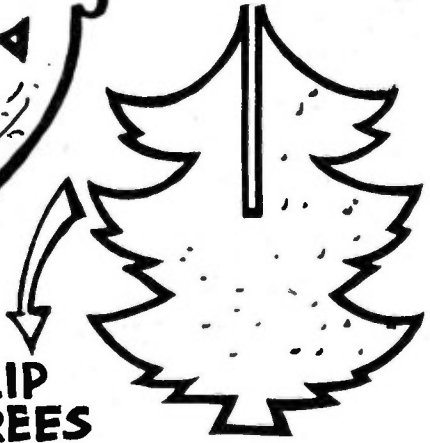
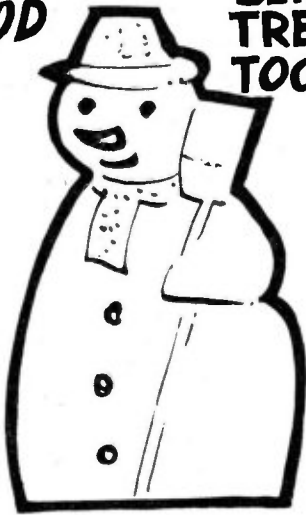
**PAINT  
APPROPRIATE  
COLOURS**





**ENLARGE BY  
SQUARED METHOD**

**SLIP  
TREES  
TOGETHER**



# CHEMISTRY AT HOME

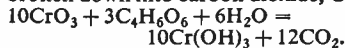
## TARTARIC ACID EXPERIMENTS—2

IN the first article on tartaric acid,  $C_4H_6O_6$ , some of its everyday uses were mentioned. One use not so generally known is in dyeing. Some dyes need to have a mordant in the fibre before they will dye it. A mordant is usually a metallic compound deposited in the fibre and which is capable of combining with the dye. A commonly used mordant is chromium hydroxide,  $Cr(OH)_3$ , and one way of depositing it in the fibre is by the use of potassium dichromate,  $K_2Cr_2O_7$ , and tartaric acid. Such a mordant is much used for dyeing navy-blues and blue-blacks on wool using logwood as the dye. As logwood chips are a feature of most home laboratories this interesting dyeing experiment can easily be carried out.

Weigh out a 10 gram piece of woven wool fabric and wet it thoroughly in just enough boiling water as will comfortably cover it in a beaker. Lift out the wool. Dissolve 0.3 gram of potassium dichromate in a little hot water and pour the solution into the beaker. Put back the wool, boil for a few minutes, lift out the wool again and pour in a solution of 0.6 gram of tartaric acid in a few ml. of water. Replace the wool and boil for 1 hour, stirring up the wool at least once a minute. The wool, at first yellow, turns greyish-green. Run a slow stream of cold water into the beaker until the whole is cold and then wash the wool thoroughly in cold water. It is now mordanted and contains chromium hydroxide.

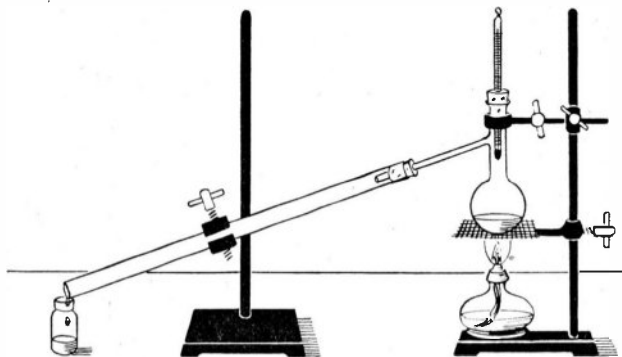
At first the potassium dichromate splits up into potassium chromate,  $K_2CrO_4$ , and chromium trioxide,  $CrO_3$ :  $K_2Cr_2O_7 = K_2CrO_4 + CrO_3$ , the chromium trioxide combining with the wool, giving the yellow colour to it. In con-

tact with tartaric acid and water,  $H_2O$ , this is gradually reduced to chromium hydroxide, the tartaric acid being finally broken down into carbon dioxide,  $CO_2$ :



To prepare the dyebath use about the same volume of water as was used in the mordanting bath. Add some logwood

Fig. 2—  
Purifying  
pyruvic acid



chips and boil the whole until the water is deeply coloured by the extracted dye, adding more chips if the first are insufficient. Filter the solution from the exhausted chips and let the filtrate cool. Put in the wrung out wool, bring the dyebath to the boil and boil for 50 minutes, stirring frequently as before. Remove the wool, wash it well in cold water and let it dry. It will now be dyed a fast blue or blue-black according to the quality of the logwood chips.

it up and put it into a 250 ml. distillation flask connected to a long wide glass tube to serve as an air condenser Fig. 1.

Now heat the flask, reducing the heat if the froth which forms creeps too near the flask neck or it will pass over into the condenser and contaminate the distillate. Acrid-smelling white vapours escape from the end of the condenser and the crude pyruvic acid collects in the 100 ml. distillation flask which serves as a receiver. When the mass in the 250 ml. distillation flask gives off no more fumes and only a black residue remains the distillation may be stopped.

The brownish-yellow pyruvic acid may now be purified by fractional distillation in the apparatus in Fig. 2, the 100 ml. distillation flask which has just served as a receiver being used. The liquid which distils up to 155 degrees Centigrade may be collected in a beaker and rejected. Collect that which distils between 155 and 170 degrees in a small bottle. This slightly yellow liquid is fairly pure pyruvic acid. Note its strange sour smell, which is rather like a mixture of acetic acid,  $CH_3COOH$  and meat extract.

Lead tartrate,  $PbC_4H_4O_6$ , is an interesting salt in that it will form a pyro-

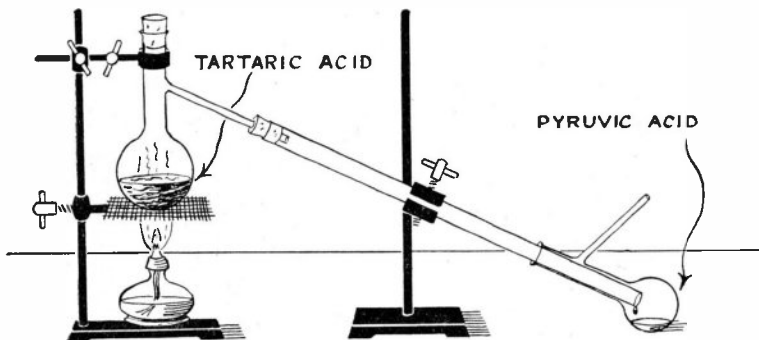


Fig. 1—Preparing pyruvic acid

phorus—a substance which takes fire on contact with air. To prepare lead tartrate dissolve a few grams of tartaric acid in about 50 ml. of water. Add a few drops of a solution of lead acetate,  $(\text{CH}_3\text{COO})_2\text{Pb}\cdot 3\text{H}_2\text{O}$ . A white precipitate of lead tartrate appears. Continue adding lead acetate solution until no more lead tartrate separates out, stirring well at each addition. Acetic acid remains in solution:

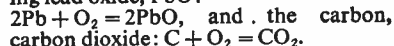


Filter off the lead tartrate and wash it

on the filter until it is free from acetic acid — indicated by one wash water not reddening blue litmus paper. Let the lead tartrate dry.

To make a pyrophorus from it heat some in a closed crucible until the bottom of the crucible is red hot and then let it cool. The lead tartrate breaks up in a rather complex way giving a variety of volatile products and leaving a black residue of finely divided lead, Pb, and carbon, C. In this state the lead tends to oxidize rapidly in contact with air, the reaction causing the powder to glow and

igniting the carbon also, the lead forming lead oxide,  $\text{PbO}$ :



According to the fineness of the powder this will take place on sprinkling a little from a height over a tin tray, when a shower of sparks results, or by warming one corner of a mass of it spread on a tin lid. In the latter case a glow appears at the heated point and spreads in a sudden spectacular manner through the whole mass, leaving a yellow powder of lead oxide. (L.A.F.)

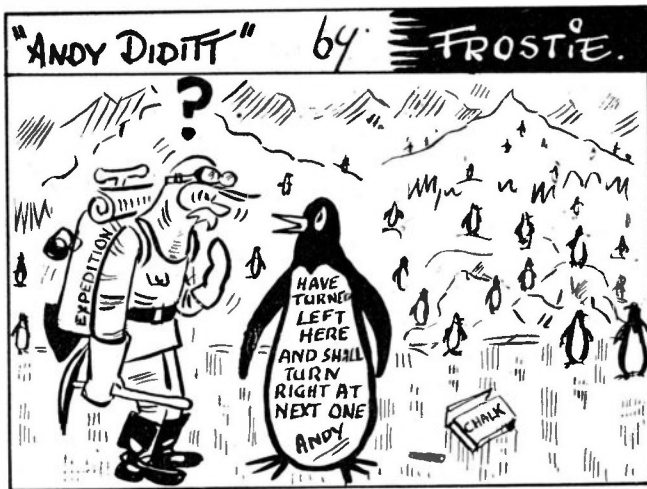
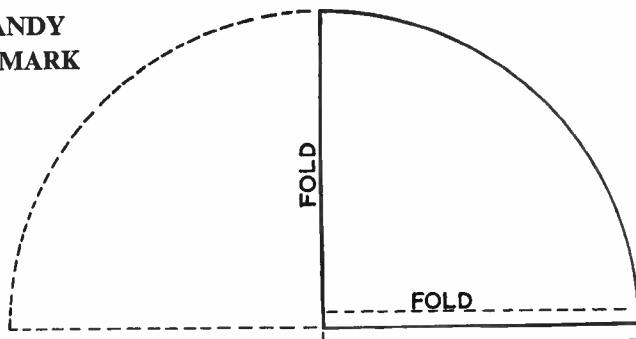
**A** BOOKMARK which will fit on to the corner of a page is often more useful than the ordinary straight kind which can easily fall out of the book.

Draw a semi-circle with a radius of  $2\frac{1}{2}$  in. on a piece of stiff paper or parchment. Leave a small flap below one half of the base line (see diagram). Fold the semi-circle in half and fasten by folding the flap over and sticking it down.

Decorate the front of the bookmark with a small painting, or a monogram of your initials in Indian ink. If you don't fancy yourself as an artist, use a transfer or paste on a flower picture from a magazine or bulb catalogue.

(D.H.N.)

### A HANDY BOOKMARK



## Miscellaneous Advertisements

INDIA'S largest hobby club provides congenial penfriends in all countries. Send self details to, — FRIENDS' WORLD, postbox 708, Calcutta, India.

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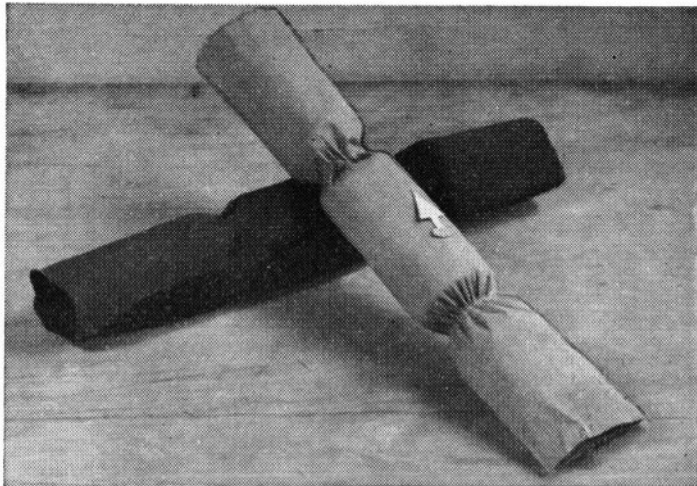
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Improved designs with Denco coils. All kits complete with all components, accessories and full instructions including prepared and drilled chassis. Before ordering, call and inspect a demonstration receiver, or send stamped addressed envelope for descriptive catalogue.  
'H.A.C.' Short-Wave Products (Dept. 22), 44 Old Bond Street, London, W.1.

**T**HE Christmas cracker is now an established seasonal novelty, an invention of a confectioner named Tom Smith. He would be as surprised as anyone if he knew that the annual sale now exceeds 400 million. And it is just over a century since the first crackers were introduced and when they were called 'bangs of expectation'.

Our old friend Tom Smith specialized in making sweets and ornaments for cakes. On occasion he would visit the Continent in search of new ideas.

While in France in 1847 he saw some sweets wrapped in plain tissue paper and which were described as bon-bons. This idea interested him and on his return he sought to improve on it. The plain tissue paper was replaced with gaily coloured wrapping. Later he thought it would attract more sales if he inserted lucky charms, inexpensive trinkets and mottoes.

These innovations proved successful but he still sought an idea to make his



*Some home-made Christmas crackers*

## How Tom Smith put the 'bang' into your Christmas Crackers

bon-bons even more popular. One day in 1858 he happened to be sitting in his chair before the fire dozing when he was suddenly aroused by the crackling of the logs. This gave him the idea for a bon-bon which included some form of explosive cracker. As he pondered on this he came to the conclusion that he could develop the cracker and exclude the bon-bon.

### 'Bangs of Expectation'

Thus was the Christmas cracker invented although it actually engaged Tom Smith's attention for another two years. He made many experiments to produce the right effect and it was not until the Christmas of 1860 that the first 'bangs of expectation' appeared in the shops.

He had, however, overlooked the date of the launching of his invention and the public regarded the crackers as a Christmas novelty. Nevertheless, the sales grew and grew so that the demands for the season were so great that production became an all the year round activity.

The production methods have hardly changed since Tom Smith's days with the exception that the coloured crepe papers are machine cut. They are still rolled by hand, trinkets and mottoes inserted as in the past. A large quantity is made by women workers in the home on a spare time basis.

Sheets of crepe paper are cut to size, crimped and assembled in the correct order round metal or wooden tubes. One end of the cracker is tightly crimped to make a shoulder with the cracker snap in place on the inside, a paper cap and trinket inserted in the open end, a shoulder is made at the other end and the sealing completed. More often than not a coloured scrap is stuck on the outside of the cracker for decorative purposes.

The hand workers making these crackers are very quick and they conform to the pattern set by the manufacturer. Colour schemes have to be considered and there is a great deal of thought given to the attractiveness of the boxes. The trinkets and mottoes are kept reasonably topical and vary according to the price charged. This topicality is to be expected and in some modern crackers we may find tiny models of space rockets.

History reveals that when Darwin was expounding his theories of evolution the manufacturers decided to insert little monkeys in the crackers. Again, at the time of the Nansen's expedition to the Arctic there were souvenirs of his voyage in the crackers of the day.

Experiments have been made in an endeavour to give the cracker a new look but these have never met with success. There was an attempt to produce

crackers in the form of a bunch of bananas which cracked when pulled from the stem. These never became popular. Then some cracker cakes were made which exploded when a slice was cut.

### Sticking to tradition

Both the public and the manufacturers are reluctant to accept any break with the traditional form. In recent years there has been no attempt to make any alterations and consequently production is almost standardized. A skilled operator can make about 600 crackers a day although it should be mentioned that it takes considerable practice to attain such a standard.

We are told that the largest cracker made was produced in the North of England. This was ordered by a baronet for a children's party and was erected under the dome of the ballroom at his country mansion. It cost £500, was floodlit with electric lights and filled with expensive toys. There was even a spiral staircase fitted inside so that the gifts could be reached for distribution. When all the gifts had been presented a cord triggered off a detonator and the whole cracker disintegrated.

That was a cracker that really went with a bang!

(S.H.L.)

# 'What a Super Present!'

Just what I wanted — a Diana air gun just like Dad had when he was a boy. And this set has everything in it — targets, target holders, slugs and darts — even plastic pellets for indoor use. A complete home shooting gallery. Wait till my pals see this



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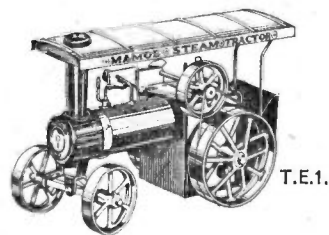
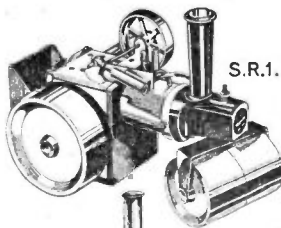
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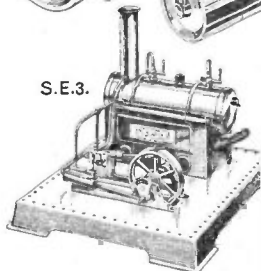
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and 467 Caledonian Road, London, N.7

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**Mamod**

Manufactured by

Malins (Engineers) Ltd., Thorns Road, Quarry Bank, Brierley Hill, Staffs.

**W**E play this game with the aid of a dice and four coloured markers for four players. The markers are our rockets and may be shaped like a pyramid cut from  $\frac{1}{4}$  in. square section 2 in. long, each differently coloured, or you may use buttons.

Rules are:

1. A six must be thrown for the launching of each rocket to the first base at No. 1. Your next moves are then in accordance

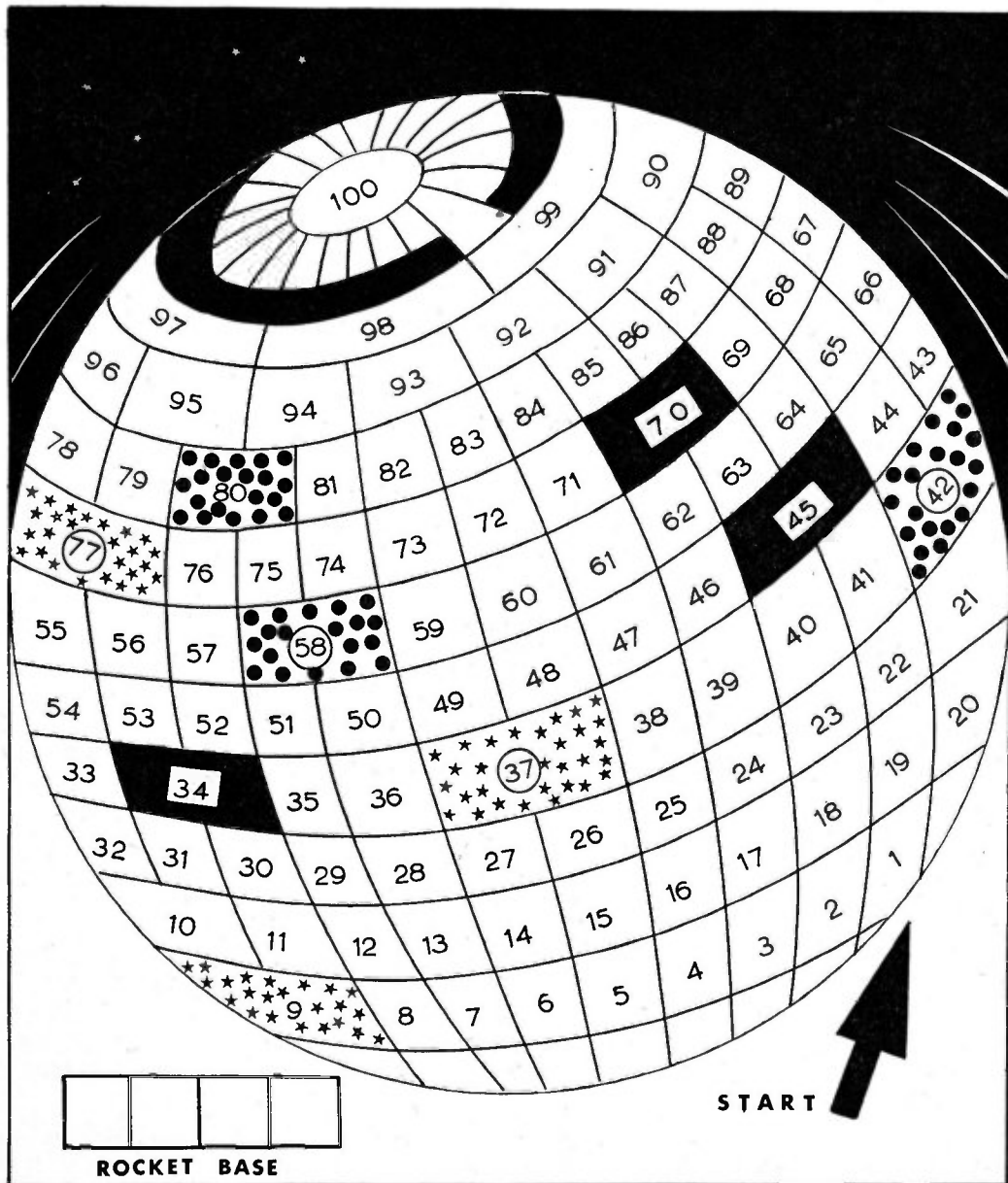
# MOON ROCKET GAME

with the values thrown by the dice until you reach the winning point of 100, the

first player to arrive being the winner.  
2. The starred areas represent hazards you meet by way of meteorites and a player landing on such an area is delayed by missing a throw of the dice.

3. Black areas represent navigational errors and players landing on these must move back six places.

4. The spotted areas are free from lunar gravity and if you land on these you may move forward four places. (S. H. L.)

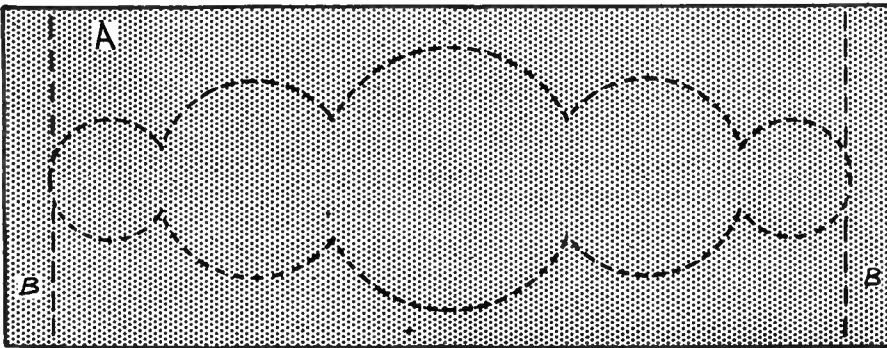
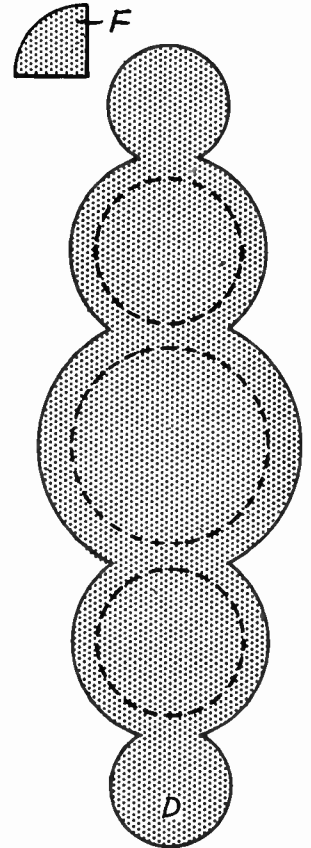
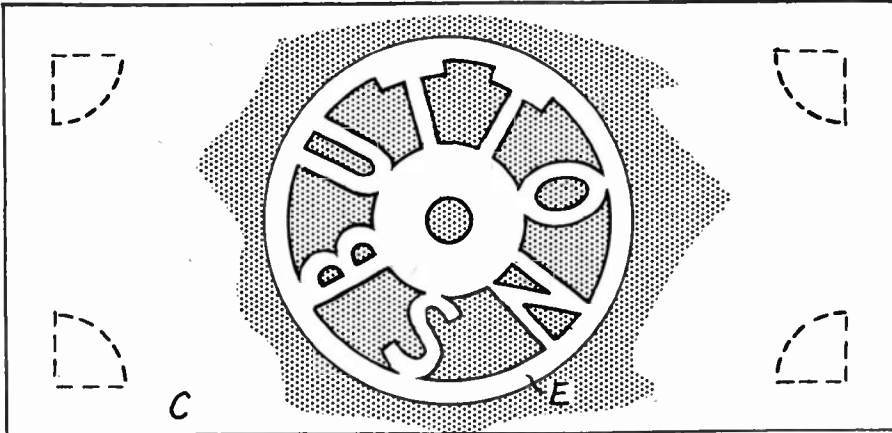
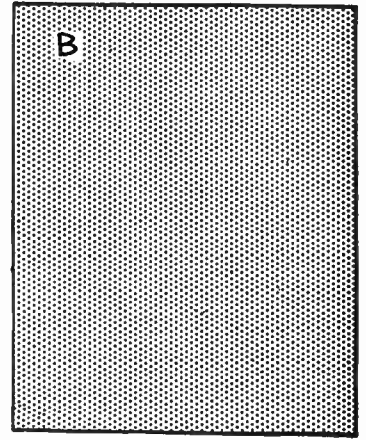
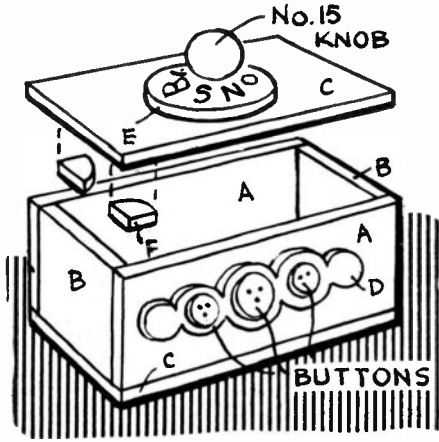


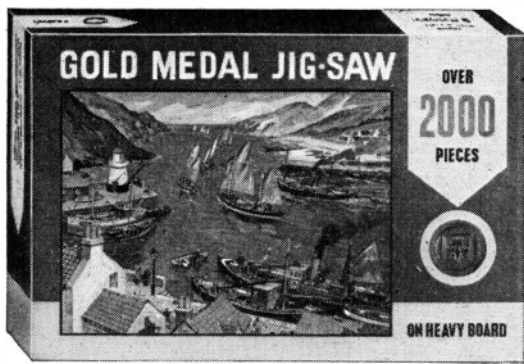
# A neat box for buttons

*Project for the Fretsaw*

**T**HE small box illustrated, with its decoration of buttons on the sides, will make a useful gift at Christmas.

Use a fretsaw to cut the various parts from wood, cutting two each of A, B and C from  $\frac{1}{4}$  in., two of D and one of E from  $\frac{1}{8}$  in. Pieces F (four required) can be cut from  $\frac{1}{8}$  in. or  $\frac{1}{4}$  in. and act as locating pieces for the lid. Assemble as indicated in the small sketch and finish off by adding a Hobbies No. 15 knob as shown. (M.p.)

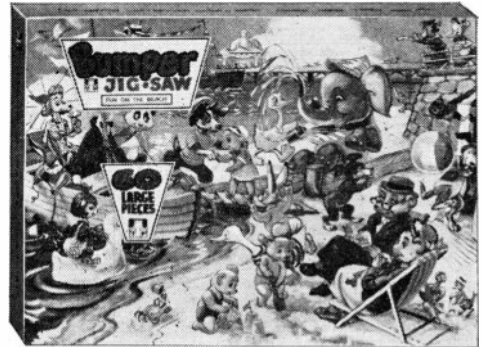




No. 4830/4. 2,000 piece **GOLD MEDAL**. A jig-saw puzzle for the enthusiast. Available in two different pictures: 'The Fishing Fleet Sets Sail' (as shown above) and 'An English Garden'. The puzzle size is 29½" x 40". Price 15/11 each (post 2/6).

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for all members  
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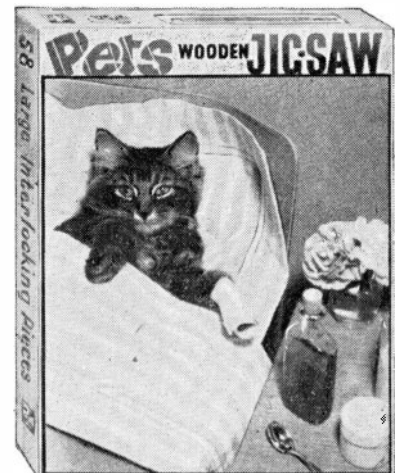
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160

World Radio History



No. 4831/15. **BLUE RIBBON** 1,200 piece jig-saw puzzle. Hours of fun for the whole family. Two pictures are available: 'Village Cricket' (above) and 'Autumn Tints'. The puzzle size is 21½" x 34½". Price 10/6 each (post 2/3).



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