

# HOBBIES *weekly*

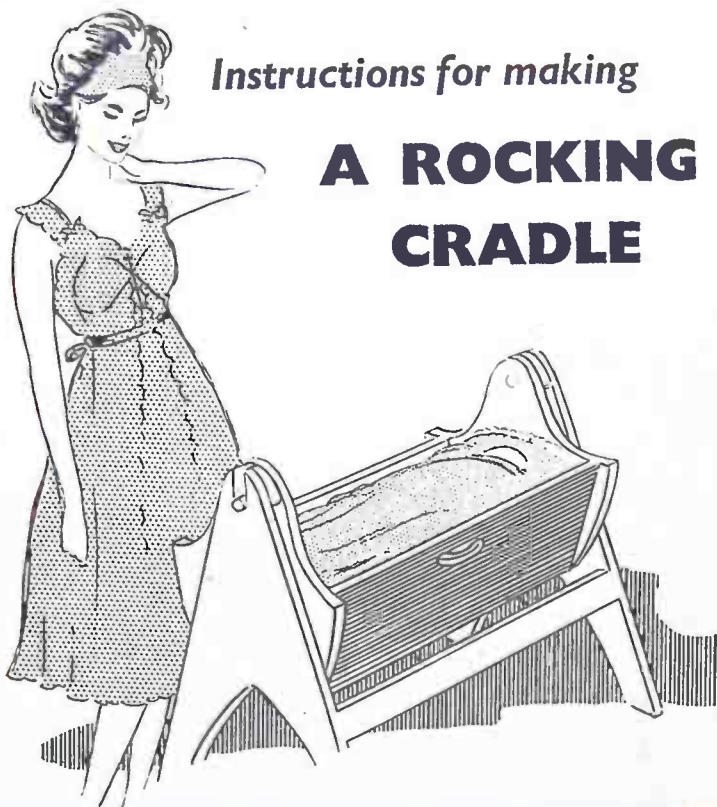
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*Instructions for making*

## **A ROCKING CRADLE**



**FOR CRAFTSMEN OF ALL AGES**

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



**G**ERRY Marsden was born in Liverpool on September 24th, 1942, and has one brother, Freddy — 22 years old and the Pacemakers' drummer. Educated in Liverpool, Gerry left school at the age of 15 and wanted just one thing out of life — to be a joiner.

## GERRY AND THE PACEMAKERS

His first job was with the Kardomah company — making tea chests. So when he and some chums at the Florence Institute in Liverpool decided that they would like to form a skiffle group, the tea chest bass was most certainly the first instrument they were able to lay their hands on! Gerry worked for Kardomah for six months and then left to work on the British Railways delivery vans for some 18 months.

'I played guitar in our first club group but the boys parted company after about three months and I started a group of my own called "The Mars Bars". I was singing as well at that time and we used to play at clubs in and around Liverpool, and then after about six months this group broke up.'

Then came the original Pacemakers. Gerry, then 17, led a group comprising a pianist, bass guitarist and drummer. First break for them came in 1960 when they received an offer to appear in Hamburg. They accepted gratefully, turned professional, and appeared for two months with tremendous success at Hamburg's popular "Top Ten" Club.

On their return to this country the pianist left the group and Gerry and the boys played together as a trio for some time until once again the piano chair was filled.

'We were doing a lot of work in and around Liverpool and the North West — and we returned to Hamburg — and, of course, we played on many bills with The Beatles.'

Says George Martin, 'I watched three numbers, scrubbed around the usual



audition routine and asked manager Brian Epstein to pencil in a date for Gerry's first studio session. Gerry combines exceptional stage presence with an uncommonly exciting vocal personality. I think we captured that excitement on his first Columbia "single".

This debut disc, *How do you do it?* (on Columbia DB4987 and backed with *Away from you*) was written in a London pub by 23-year-old Mitch Murray. Then came *I like it*, which topped the hit parade for several weeks.

Mitch is credited with this story behind *How do you do it?*: 'Most people dream in bed . . . I dream in a tankard of beer. *How do you do it?* happened quite suddenly right there in my pint of bitter. At first I found myself humming a new tune and then the words seemed to fit in naturally as I went along.'

*Away from you* was written by Gerry in collaboration with Pacemakers' pianist Les Maguire — one of more than a score of songs they have written together.

Gerry — Northern girls, we are told, class him as another Joe Brown or a

second Tommy Steele — is 5 ft. 7 in. tall, with hazel eyes, brown hair, and weighs 10 st. 5 lbs. He likes driving, snooker, golf, snow, sleep, stamp collecting, modern jazz, travelling, Grieg's Piano Concerto, 'Liz' Taylor, The Beatles, Ray Charles, Jerry Lee Lewis, and The Pacemakers (but not necessarily in that order!)

Also a self-taught pianist, harmonica and bass player, he dislikes selfishness and rush-hour traffic, and wants (1) to star at the London Palladium, and (2) to buy an English country castle (in that order).

**The other Pacemakers**  
**FREDDY MARSDEN**, born in Liverpool on October 23rd, 1940, has worked with younger brother Gerry for 6 years — in skiffle and rock groups before The Pacemakers were formed in 1959. He plays drums — and sings.

**LES MAGUIRE**, born in Wallasey on December 27th, 1941, plays piano and guitar, and sings, and joined the group in May, 1961.

**LES CHADWICK**, born in Liverpool on May 11th, 1943, plays bass guitar and sings. Joined Gerry and Freddy in 1959.

### Instructions for making

# A ROCKING CRADLE

**T**HIS novel rocking cradle is also portable and can easily be carried from room to room or even taken in the car. The fact that it is made from wood makes it strong and sturdy whilst its attractive appearance will make it the pride of every mother.

Since the cradle will only be used for the new born baby it need not be very large. An interior dimension of about 30 in. will be adequate.

The side view and front view shown in Fig. 1 give the main dimensions and show the general construction. All parts are cut from  $\frac{3}{4}$  in. wood and are glued and screwed together. To get the necessary width for the ends, boards must be dowelled, butted and glued together. Alternatively, plywood or faced chip-board may be used.

Commence by making the cradle portion, shown in Fig. 2. The sides A go between the ends B. Note the finger holes in pieces A. These should be about 4 in. wide and  $1\frac{1}{2}$  in. deep and can be nicely curved with the edges carefully rounded. Cut the finger holes with a fretsaw.

The bottom C is now screwed to the sides and ends, and the ends bored to take two pieces of  $\frac{3}{4}$  in. diameter round rod to act as pivots. These should protrude about  $1\frac{1}{2}$  in. on the outside. They should be liberally glued when inserting them into the ends. Fig. 3 shows the stand with the cradle in position. The

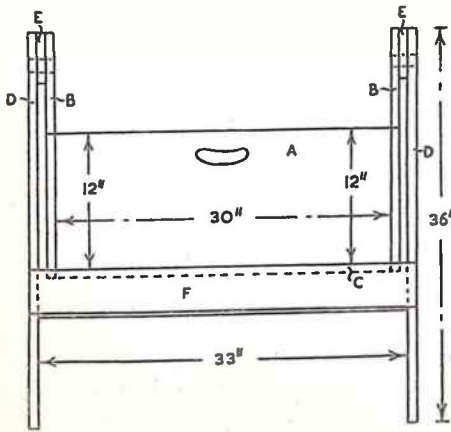
ends D have spacing pieces E glued on the inside and both ends and spacers are slotted to take the cradle pivots.

The ends are held securely together by the bracing pieces F and G. These two pieces are glued and screwed together before slotting into the ends. Screw through F into the ends, then through the ends into G. Countersink all screw holes.

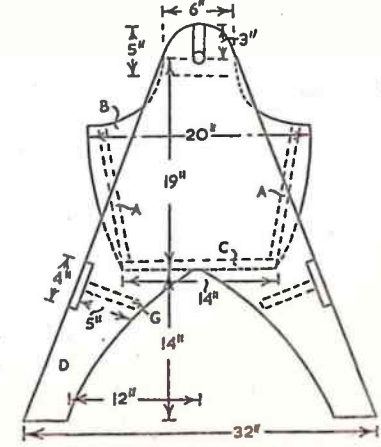
All parts should be carefully smoothed with glasspaper, taking care not to leave any small splinters. Fill the grain, particularly the end grain, with wood filler and then give two undercoats and one top coat of high gloss paint. Make sure that the paint and undercoats are of a non-lead specification.

An alternative finish is to stain and varnish, giving at least three coats, lightly glasspapering between coats.

The interior of the cradle can be lined with thin plastic foam and covered with suitable material. A small mattress can be made from thicker plastic foam and covered with waterproof material. (M.h.)



SIDE VIEW



END VIEW

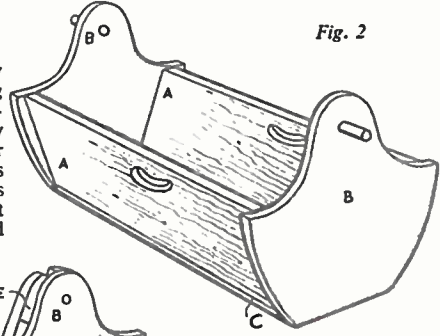


Fig. 2

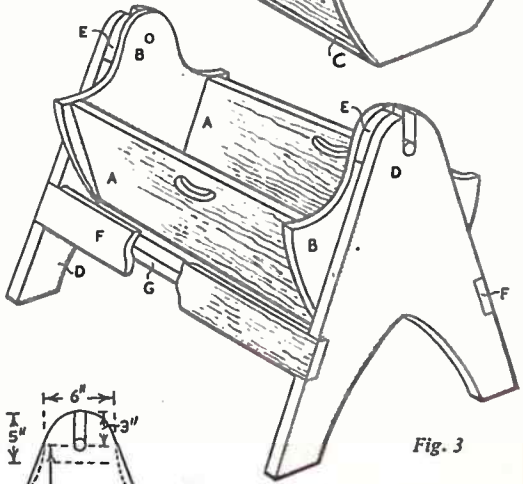
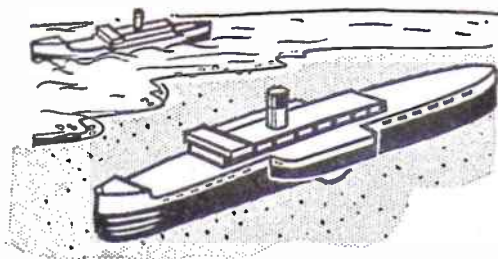


Fig. 3

Fig. 1

Make this pull along toy

# AMPHIBIOUS PADDLE BOAT



By D. McGhee

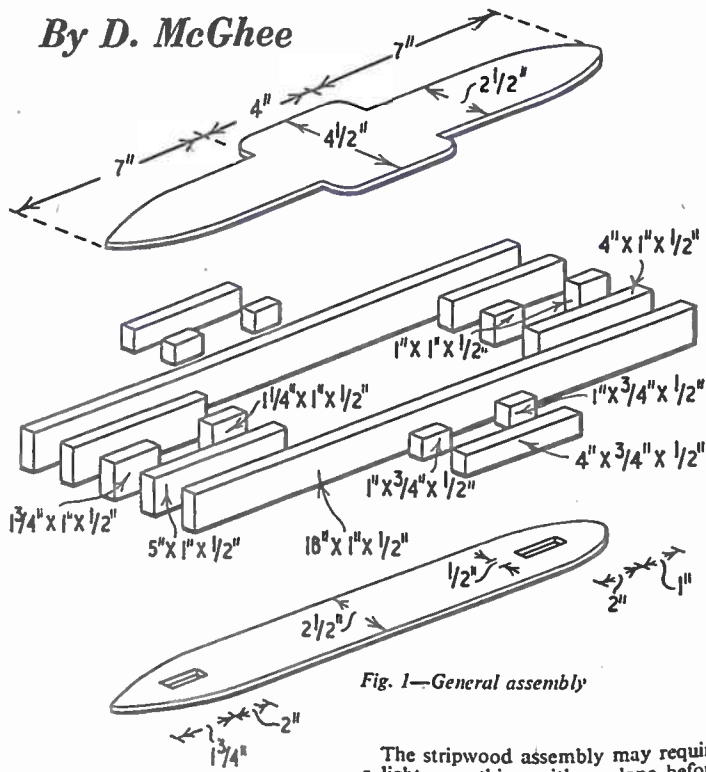


Fig. 1—General assembly

The stripwood assembly may require a light smoothing with a plane before sandwiching it between deck and bottom. Finally shape the stripwood so that it conforms to the outline of the deck and bottom. The 'paddle wheels' are secured with two fine gauge brass screws.

The superstructure (a suggestion is shown in the main illustration) may be made from stripwood left over from the hull, together with a short length of 1/8 in. diameter dowel rod.

A suitable colour scheme would be black below the water line, white above the water line, stone coloured, deck, white superstructure, stone coloured funnel with black top. Use adhesive tape

Continued on page 309

THE paddle steamers which sail the estuaries around our island are always fascinating subjects for the model maker.

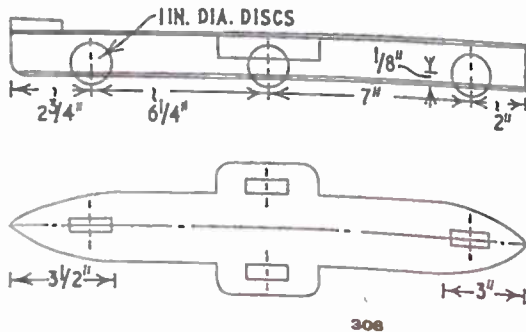
Here is a toy project which should only take a few hours to complete, and it has the advantage of being towed on land, and floated in the water. All the materials are listed in Hobbies Annual, from the 1 in. by 1/2 in. stripwood to the paint, which will give the finished item an authentic appearance.

Fig. 1 illustrates the general assembly. Cut the stripwood to the lengths indicated in the diagram; lay these pieces on the bench top in their order of assembly to avoid confusion. Naturally, a waterproof adhesive must be used. Assembly should be made with the hull inverted, so that the paddle boxes and deck are all quite level (a sheet of greaseproof paper will protect your bench top).

At this stage it is advisable to drill the holes for the front and rear axles — that is, before shaping the bow and stern. The diameter of the holes will, of course, depend upon the axle material. Brass about 1/8 in. diameter will be quite suitable, although the axles do not require to be fitted just yet.

The deck and the bottom can be marked and cut from Hobbies panel K3, 20 in. by 8 in. by 1/8 in. Make a cardboard template to one half of the deck pattern, and use this to draw the complete outline of the deck (see Fig. 2). (The half template ensures symmetry). The same template can be used for the bottom of the boat. (The covers for the paddle boxes are, of course, omitted.)

Fig. 2—Showing wheel spacing and deck outline



# SELLING GOODS BY AUCTION

SELLING your goods by auction is ideal for those who cannot approach buyers and traders direct without embarrassment. There are other advantages in that you are not tied to any particular line. You can find a great variety of goods will sell well as people of all classes, occupations and ages attend the sales and are eager to buy the unusual. Payment is prompt and the names of both buyers and sellers are confidential.

By R. Willey

Arrangements can be easily made by post and the companies who arrange the auctions will help as much as possible. When you write to them they will forward a form on which you list all the articles that you have to sell. Later you will receive the catalogue in which the numbers of your articles will be marked, with instructions of when and how to deliver.

Help the organisers by attaching labels securely to your lots and in a place where they are clearly visible. Take them to the auction halls as early as possible and leave quickly so as to get out of the way of the workmen. It is not necessary to attend the sale for in due course you will receive a state-

ment of the sum realised by your entries and a cheque or postal order in settlement, less the auctioneer's commission.

The bids made fluctuate widely, often without apparent reason and you must safeguard your interest by quoting a reserve price which is the minimum that you are prepared to accept. Should the bids fail to make this price you will still own the property.

To avoid wasting time and effort you must reduce your costs to the lowest figure, so you must buy your materials as cheaply as possible. Set the finished product as high a standard as possible and remember that it must compare favourably with similar manufactured items and preferably be cheaper. You can now calculate your reserve price by including your total cost and adding the auctioneer's profit or commission.

You should miss your profit off the reserve price and rely on the bids to give you a return above your reserve. The reason for this is that if you don't go far above the reserve price it is better to cut your losses on that item; the cash being more useful than an unsold article. In this case you must decide why the article didn't sell. Was it of a poor quality, or not competitive with manufactured articles of the same type?

There is another sideline to your sales that can be incorporated into your venture. By attending the sales yourself it is often possible to purchase cheaply an apparently worn or damaged article which can be restored and entered

into the next sale, or one can obtain at knock-down prices something that becomes raw material for the construction of an entirely different article.

## Seasonal Tips.

Good profits can often be lost by submitting work at the wrong time. In the cold months of winter, warm gloves, scarves, shawls, quilts, and electric fires are snapped up quickly.

Spring is the time for those gardening implements for the enthusiastic gardener; firescreens and wall ornaments etc, will attract the housewife in her frenzy of spring cleaning.

In summer, repaired or discarded garden tools, especially lawnmowers and shears, deckchairs and picnic baskets should be offered. Also wigmans and toy tents, and garden toys for the children.

Autumn is the big selling season and all your energy must be spent on it, for Christmas is approaching and from September onwards there is a ready demand for gift items and toys.

Watch out throughout the year for pedal cars, doll's prams etc. and rebuild them for November. Make dolls houses, forts and garages from old boxes, tea chests, and scrap wood. Pack neatly-made dolls clothing into polythene bags together with soft toys. Remember that while jewellery, rugs, table lamps and shades are good sellers throughout the year, Christmas gifts are especially needed at this time.

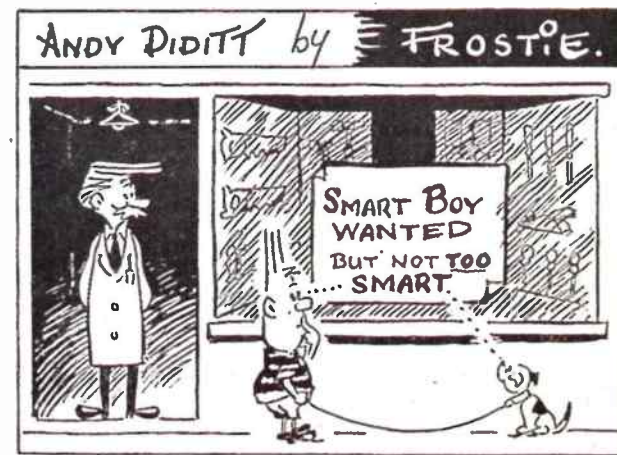
Continued from page 308

# PADDLE BOAT

to mask the waterline to ensure a nice sharp dividing line.

The black windows may be painted, but a sharper appearance may be obtained as follows. Fix a length of transparent adhesive tape to a piece of glass or plastic, and paint it black. When the paint is dry cut it into squares suitable for the windows with a razor blade or modelling knife. Lift each one carefully from the glass, and fix on the model. If this method is used then the windows should be lightly varnished.

Lastly, a screw eye at the bow, and a length of string will provide junior with an amphibious toy, which will give many hours of pleasure.



# NOVEL MOBILE FOR MODELLERS

**A** MOBILE, or hanging decoration, which incorporates tiny model ships from different periods in history makes an attractive and unusual feature, and should be a fascinating project for ship modellers in particular. The mobile shown has five models, and is quite easy and inexpensive to make.

First, the five ships are made. The hull of each of these is shaped from a 2½ in. length of ½ in. square stripwood, using a file and glasspaper. The Egyptian galley A is shaped as shown, being virtually the same at both ends. Vertical slots are cut in the bow and stern, and ½ in. squares of card, cut to a C-shape at the bow, and an L-shape at the stern, are glued in place. The 1½ in.-high mast of stiff wire is fitted with a white card sail. Two holes in the sail enable it to be slipped over the mast; the top of the mast is then bent round into a hook for hanging.

The Viking long-boat B is filed to the shape shown, then fitted with a white cardboard stem-post shaped like a swan's neck. This is glued in a slot cut in

the bows. The row of shields on each side are squins glued in place, and the 1½ in.-high mast carries a white card sail with red stripes. The hull is painted brown, with planking shown by pencil lines. The mast is again bent over to form a hook at the top.

The eighteenth century frigate C has three 1½ in.-long wire masts, and a ½ in. long bowsprit. The fore and main masts are given 1½ in. high cardboard sails, creased as shown to represent three

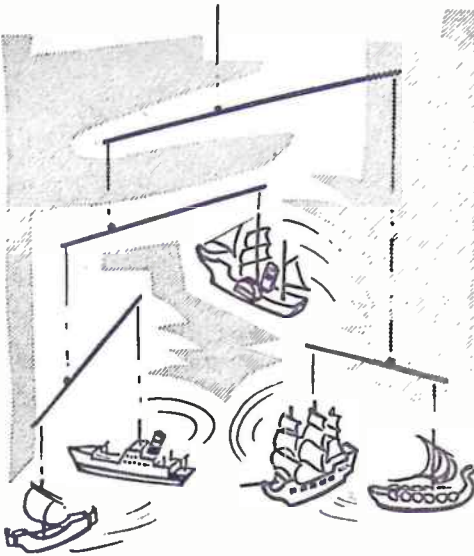
sails on each mast, and glued in place. A fore-and-aft sail is glued to the mizzen mast, with a small square sail above it. The main mast is hooked for hanging. Paint the hull white with black bands and rows of gun ports.

The early steamship D is given semi-circular paddle-boxes made from slices of ½ in. diameter dowel rod, and a ½ in. high funnel of ½ in. diameter; this can be made from paper rolled round a knitting needle and glued. The 1½ in. high mast carries sails similar to that of the frigate, and a triangular jib sail can be glued to a thin thread running from the mast to the bows. The 1 in. high mizzen mast carries a triangular card sail, which is glued in place. The hull is painted black, the funnel red, with a black top, and paddle-box edging in yellow.

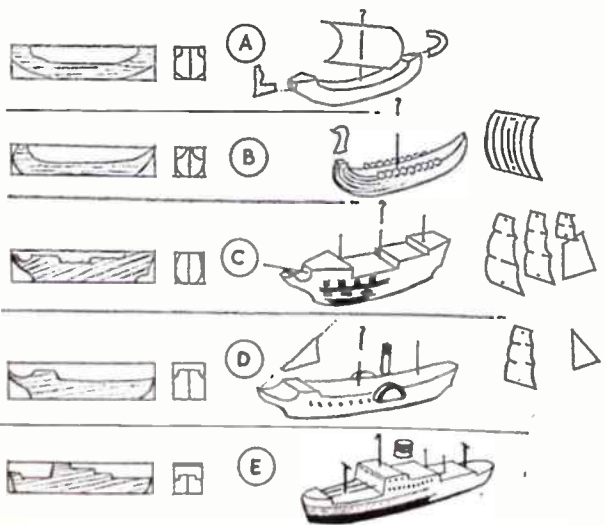
The contemporary cargo liner is based on the motor vessel *Launcestran Prince*. It has a ½ in. high funnel of ½ in. diameter dowel rod, ¾ in. high stubby 'masts' of wire, and derricks and king-posts made from bristles taken from a broom. The ½ in. central mast is fitted into the top of the bridge; it is made from a pin, hooked at its top end. The upperworks are painted white, the hull grey and red, and the funnel red and black.

Each of the models is now tested for balance. The best way to restore out-of-balance ships to an even keel is to drill a small hole in the deck, filling it with tiny scraps of lead or solder. This will not be seen, as the ships will be hung above eye-level in most cases.

The order in which the mobile is



By  
**A. Liston**



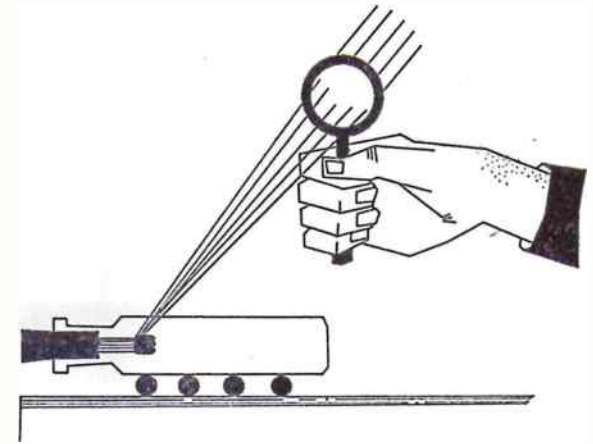
Making the mobiles

Continued on page 311

# Make this novel Solar Cannon

**Y**OU can shoot a model gun with energy from the sun, collected after a journey of 93,000,000 miles across outer space.

The principle of this 'solar cannon' is simple. A magnifying or 'burning' glass can intercept the virtually parallel beams of solar radiation, and bend them towards a single 'focal point' immediately behind the centre of the lens. A big magnifying lens (of the type used for reading) can concentrate a large quantity of the sun's radiant heat on to a match head, and make the match hot enough to catch fire.



By **A. E. Ward**

The barrel of your gun will be a 4 oz. 'flat' medicine bottle, which a chemist will supply complete with snugly-fitting cork for a few pence. Make a fairly large hole in the rear of the cork, into which a bundle of four or five red-topped matches can be inserted 'tails' first. Ram in the matchsticks tightly, and let their heads be pressed together. Put the cork firmly — but not too tightly — into the bottle, as seen in the illustrations.

Take the 'loaded' cannon out into the garden in bright sunlight and rest it upon a series of pencils or ½ in. diameter dowel rod slices, to act as rollers. It will be best to elevate the apparatus; so put everything upon a low wall or upturned box. Let the cork 'missile' point away from you, and allow the bottle some space to roll backwards later on.

As you are shortly going to be staring at a glaring patch of brilliant light, it is advisable to wear dark glasses. Use a magnifying glass to focus the sun's rays through the bottle, and on to the cluster of match heads. If the sun is very bright, you should not have to wait long for one of the matches to start smouldering, and catch fire. Suddenly all the matches will be flaring up together, and you will hear a splendid 'pop' as the cork is shot out like a cannon ball. At the same time, 'recoil' will send the bottle scuttling backwards upon its carriage of rollers.

The increased pressure inside the bottle, resulting from the large quantity of smoke evolved by the burning matches, and the expansion of warmed air, provides the cork projectile with its propulsive force.

Reaction to this sudden dramatic

activity causes the bottle to roll backwards. The 'recoil effect', which you observe, is a neat illustration of Newton's

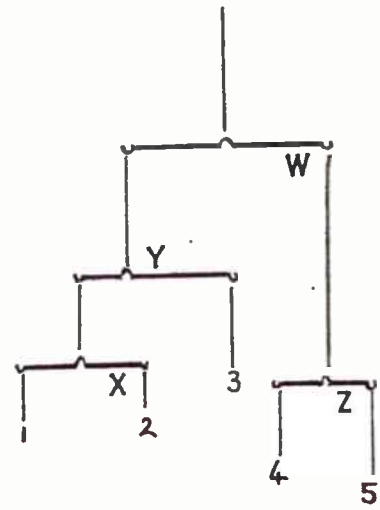
Third Law of Motion, which states that every action will have an equal and opposite reaction.

Continued from page 310

# MOBILE FOR MODELLERS

assembled is illustrated. Models 1 and 2 are hung by lengths of black or white cotton to the ends of a 6 in. piece of stiff wire X. This is hooked at each end to prevent the thread slipping off. The point of balance is found for this wire,

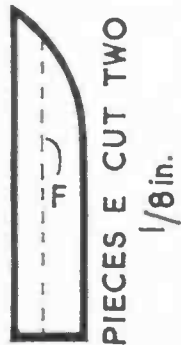
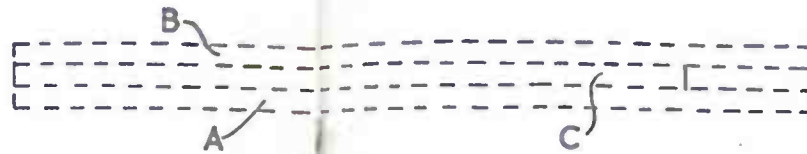
and a small inverted V-shape is made in it for hanging the models. Model 3 is hung from one end of an 8 in. piece of wire Y, and the bar with models 1 and 2 from its other end. The point of balance of this wire is then found, and marked as before. Models 4 and 5 are hung from the ends of a 6 in. piece of wire Z, and this also is balanced. The completed sections are then hung from each end of a 10 in. length of wire W, hooked, like the others, at each end. From the point of balance of this wire, a thread to the ceiling holds the whole mobile in place. The slightest draught will turn the models in various positions, and if the measurements given are adhered to, the ships will not 'foul' each other.



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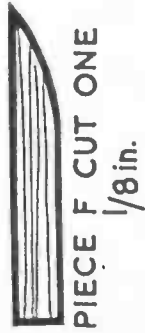
# NURSERY ★ PHOTOGRAPH FRAME AN IDEAL GIFT

PIECE D CUT ONE  $\frac{1}{4}$ in.



PIECES E CUT TWO

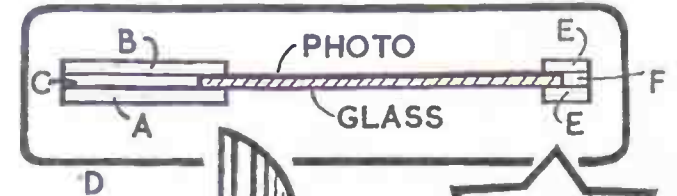
$\frac{1}{8}$ in.



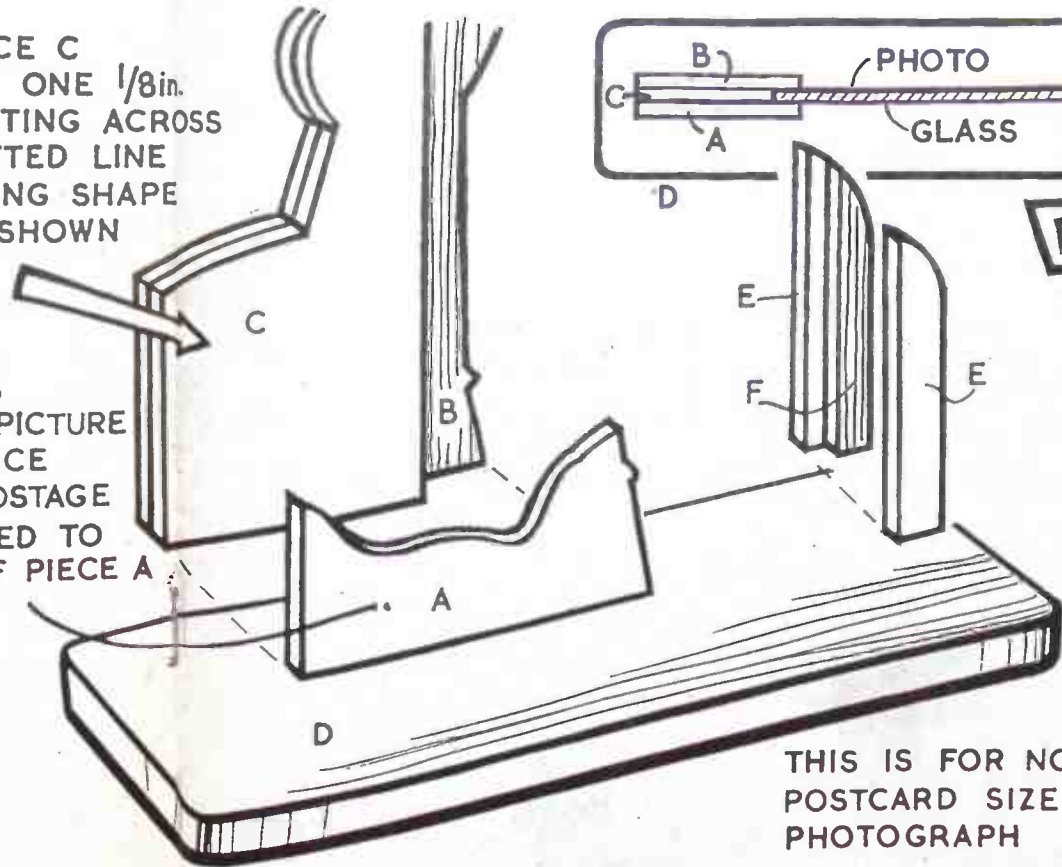
PIECE F CUT ONE

$\frac{1}{8}$ in.

PIECE C  
CUT ONE  $\frac{1}{8}$ in.  
CUTTING ACROSS  
DOTTED LINE  
GIVING SHAPE  
AS SHOWN

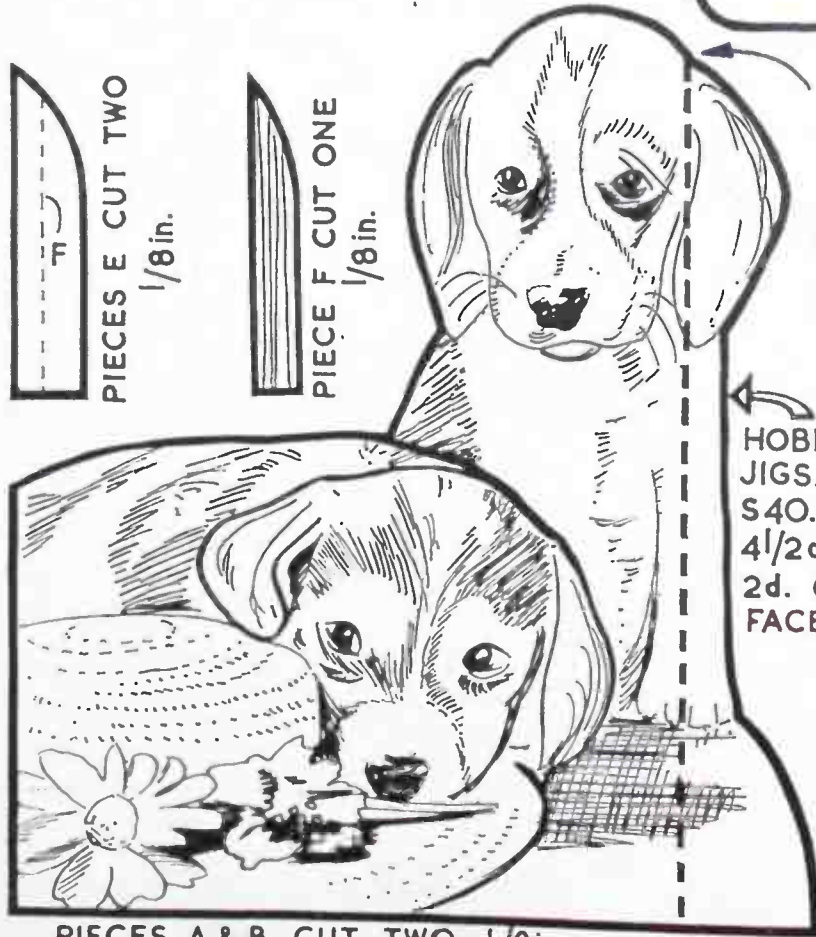


**PLAN**



HOBBIES  
JIGSAW PICTURE  
\$40. PRICE  
4 $\frac{1}{2}$ d. POSTAGE  
2d. GLUED TO  
FACE OF PIECE A

THIS IS FOR NORMAL  
POSTCARD SIZE  
PHOTOGRAPH



PIECES A & B CUT TWO  $\frac{1}{8}$ in.



for example at a party, wedding, or meeting — and it is a good plan to record your talk and listen to this for any defects. Some of the scripts of early radio talks were specially prepared to show where pauses should be made, or emphasis placed on certain words. Now you may test your own speeches.

#### Languages

Also connected with speech is the learning of foreign languages to acquire correct accents and pronunciation. The original recording may probably be

## Educational Purposes

obtained from a co-operative linguist or teacher of a language. Actually, hearing the spoken word is much more effective than endeavouring to learn from books, although it is acknowledged that the latter are essential for correct grammar.

Other ways of acquiring a record are by means of broadcasts from both home and overseas services.

#### Music

The music lover can capture lots and lots of his favourite tunes but if he happens to be either a singer or instrumentalist he can again analyse his own faults by recording his own performances.

You may record the performance of an acknowledged artist, play your own interpretation — and listen to the difference. You may make a few mistakes, the phrasing or pedalling may be faulty, and these errors will be instantly recognised. Again, the better performance will give you a better idea of the correct tempo, so if you match the two

and concentrate on listening to your own performance with a critical ear there is little doubt that this use of the tape recorder can be a boon.

For those who can manage to tap out a tune on the piano 'by ear' the recorder will again prove welcome, for the tunes can be collected and studied — or perhaps a 'duet' arranged. Incidentally, for skilled enthusiasts it is possible to make a double or treble recording on a tape to make records of duets played by one person, but the timing must be perfect.

#### Amateur Dramatics

The amateur actor can record his part just like a speech and listen to it for the purpose of learning and at the same time listen for errors. In fact, a small group can record an entire play and then make a careful criticism. There is little doubt that this is an ideal way of checking the dialogue in a play and one of the main advantages to a producer is that he may stop the play-back at any time, repeat, and if necessary demonstrate how the words should be delivered for maximum effect.

#### Miscellaneous

Apart from the above mentioned it will also occur to you that conferences, meetings and all kinds of similar functions may be taped for records or educational purposes. Speeches may be filed or used to convey the spirit of the meeting to other members of a group. This applies mainly where a delegate attends a conference and is required to report to his group. Many people will find a tape recorder handy for making on-the-spot reports, thereby eliminating the necessity for making lengthy written notes.

Group activities can be recorded, e.g. scout groups, and these may be exchanged with other groups.

It is possible to purchase tapes for playing in the same way as discs for record players and there is little doubt that in the course of time there will be a wide variety of tapes available. It is also possible that our libraries will begin to stock these for educational and scientific purposes.

So far as the whole family is concerned the uses are too numerous to mention. Family parties and social occasions can be recorded, but what appeals to me most is the possibility of recording the voices of some of the junior members and filing these for the future — they will make some interesting revelations!

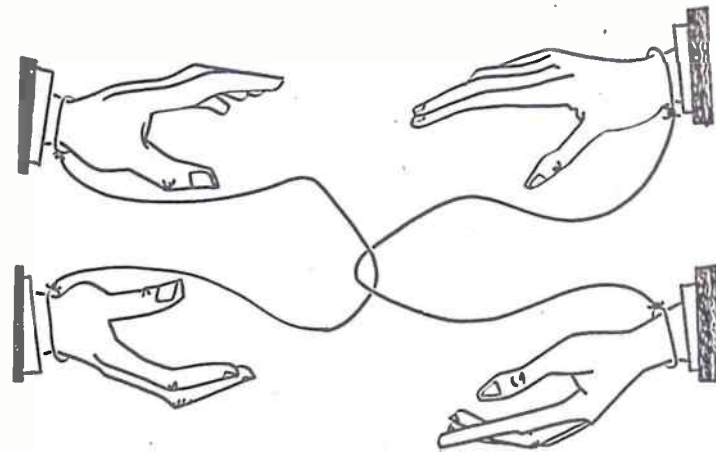
In a previous article I mentioned the use of tape commentaries in conjunction with colour transparencies and you may be interested to learn that this particular project has been developed considerably

● Continued on page 315

JACK and Jill are in a pretty predicament, for their Uncle Jim has just set them a strange puzzle with string. First he tied the ends of a three foot string firmly, but not tightly, to Jack's wrists. Then he did the same to Jill, using a similar string; but before securing the string to Jill's second wrist, he passed it behind the string between Jack's wrists. Thus the children are very loosely tied together. Their problem is to separate themselves without cutting the strings or untying them at their wrists. How would you have done it?

Uncle Jim had to come to the children's assistance. First he formed the string between Jack's hands into a little loop. Afterwards he passed the loop underneath one of the string cuffs on Jill's wrists — going towards her hand. Then he brought the loop over Jill's hand and back again through the cuff of string — and so released his young relatives. Try it for yourself and see how it's done.

The puzzle belongs to a branch of geometry called Topology. (A.E.W.)



● Continued from page 314

## RECORDING

so that many lectures are now available. These are mainly concerned with travel in the British Isles with colour slides, background music and commentary and are in constant demand. No doubt you will appreciate that this one idea has created a most interesting new hobby and the shows are greatly enjoyed by audiences in hospitals, schools and by various groups. This means that the whole of the equipment has to be transported to wherever a lecture is to be given but the work is such that it calls for another interested assistant and a mutual hobby develops.

Since we have been mainly concerned with the family aspect of the tape recorder in the home and some of its uses we do not consider it necessary to deal with the commercial usage. Many offices now use some form of recorder for dictating letters but these machines are not always suitable for music and have their limitations. At the same time we cannot entirely ignore the fact that recording by tape is widely used commercially, while broadcasting and television authorities rely on these methods for most of their productions. We do not have the same facilities for recording or the soundproof studios, echo units and the like, but with a little care we can make some excellent tapes providing we recognise our limits. (S.H.L.)

## A BEWITCHED KETTLE

HAVE you ever gone to raise a kettle 'full of water', only to find that it seemed to jump up, almost wilfully, into your hand? Then you discovered that the kettle was really empty. You believed that it would be heavy with water and so your brain commanded your arm and finger muscles to deal with a big weight. Your unnecessarily large exertion, suddenly applied, brought the kettle up with a jerk. Perhaps you were startled.

Manual work is more tiring when we 'over-exert' our muscle power. We should always try and deliberately 'feel the weight' of any object or tool we wish to pull or push, and endeavour to control the precise quantity of energy we expend.

Imagine that, unbeknown to you, a friend has filled one of an identical pair of coffee tins with nails. He puts the containers before you, states that they are both empty, then requests you to lift them together, one in each hand. In this case you would find that one of the tins (the heavier one) would, for an instant, seem riveted to the table. Your brain would not have expected an 'empty' tin to put up so much resistance. (A.E.W.)

## ALL TIED UP

## Miscellaneous Advertisements

ENJOY WRITING? Then write for Profit. Send for 'Writers' Handbook' (free) detailing countless opportunities for beginner or experienced. — Writers' Ring (HW), 5 Edmund Street, Birmingham.

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THE use of roses and other summer blooms for indoor decoration during the dismal dark days of winter would appear to be a luxury beyond the average purse. However much the housewife may adore flowers, it is during the winter, when their morale-boosting presence is most needed, that the garden produces little or no bloom. And the price in the shops is usually too high to admit of purchase except on the rare and particularly festive occasion.

Here is a method, however, whereby any housewife may surprise her friends, please her family, and confound the housekeeping budget by producing on the table the lovely flowers of summer, whilst the blizzard outside hurls the snow in cloudy drifts across the frozen fields.

It is a method which may be adopted by anyone possessing patience and a delicate touch. The results will be found to more than repay the time and trouble spent.

#### Wooden frame

To begin with, a wooden frame is required. The dimensions are not critical, but it must be long enough to accommodate the flowers on their stems when these are laid lengthwise in the frame. Also account must be taken of the types of flowers to be treated, as mentioned later. Dimensions of the frame will vary accordingly. Any timber of about 1/2 in. thickness may be used.

Having nailed the frame together, cut a piece of small mesh wire netting, slightly larger in area all round than the frame. Turn down the overlap of netting on each side of the frame, and tack in position, as shown in the illustration, thus forming a simple kind of sieve or riddle.

Cut a piece of plywood or hardboard some 4 or 5 in. larger all round than the frame to act as a removable stand or base.

The frame and stand completed, purchase some silver sand. This is easily and cheaply obtained from any pet store. The quantity will, of course, depend on the size of the frame. You will want enough to cover the flowers when they are placed in the frame. Although the sand, when bought, may appear to be clean, particular care must be taken to ensure that it is completely free from dirt. To satisfy yourself on this point, place the sand in a large dish, and fill it with water. Stir, and then drain away any scum which may rise to the surface. Repeat until no scum rises. Now spread out the sand on a large tray, and leave to dry.

When you are satisfied that the sand is completely dry, place the tray in the oven, and leave it there until the sand becomes hot.

## TRY THIS METHOD FOR PRESERVING SUMMER FLOWERS



#### Waxing the sand

The next stage is important. It is the waxing of the sand, and is most essential. Each grain of sand must be coated with a film of wax to allow the particles to slide off the flowers when they are eventually lifted from the frame. If unwaxed, the sand would cling to the flowers, spoiling the preservation.

To accomplish the waxing there are two methods to choose from. The first, suitable when only a small quantity of sand is to be waxed, requires an ordinary household candle. Hold the candle in the hand, and quickly stir the hot sand with it, making sure that all the sand is ultimately stirred. This will result in all the grains of sand becoming covered by the wax.

The second method, to be used when a larger quantity of sand is to be treated, is performed by putting a small piece of wax, beeswax or household candle into the hot sand, stirring it well, and thoroughly with a stick or spoon. Avoid the mistake of using too much wax.

All is now ready for the preservation of the flowers. Place the frame on its base, netting side, of course, touching the baseboard, and pour sufficient waxed sand into the frame to just and evenly

cover the netting. Arrange the flowers singly over the sand bed. They must not touch each other. Take care to spread the petals in their natural position. Having thus arranged the first layer, pour sand over the flowers until they are completely hidden. Arrange another layer, and cover with more sand, continuing the layers until all flowers are used or the frame is full.

Carefully remove the frame, complete with base, to a dry and sunny position. If a spell of hot dry weather is being enjoyed at the time, so much the better. An ideal spot for the frame would be a greenhouse exposed to the rays of the sun. Failing such conditions, keep the frame in a room where there is a constant warm temperature, near the fire or kitchen boiler. If drying is performed under natural conditions, such as in the greenhouse or in a sun parlour exposed to frequent direct sunshine, it will take ten days to complete, but a fortnight should be allowed if the flowers are dried indoors.

At the termination of the drying period, take the frame and its base to the workshop or kitchen table. Lift the frame from its base, and very gently shake the sand from the frame. The sand

will run out, leaving the flowers resting on the wire netting.

Remove with care  
This is where the delicate touch comes in. Lift out the flowers very gently, and



Filling 'cupped' flowers

with extreme care. They will be very brittle. Place them carefully on the shelf of a dark room or cupboard, and leave

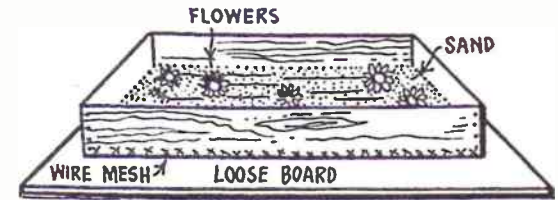
for three or four days. The immediate placing in darkness is imperative, as this stops the fading of the natural colours.

If kept from direct sunlight the flowers thus preserved will last for years. At all times avoid leaving them in damp conditions.

The most suitable flowers for preserving are the daisy type, but success with these will lead to more ambitious attempts and roses, violets, anemones, narcissi, wallflowers, jasmine, almond blossom, etc, will prove to respond well. White flowers are not very suitable, in fact, the brighter the colour the better the result. Make sure that the flowers to

be treated are freshly gathered and quite dry.

With cup-shaped blooms, the interiors must be carefully filled with the sand. This applies to such as tulips and daffodils. In the case of roses and carnations, in order to keep their true shape they may have to be placed in the frame in an almost upright position in order that the sand may be poured in between the petals, and the depth of the tray will have to be taken into account when making. A little practice and common sense will resolve each individual method of treatment, and the results will give much pleasure. (E)



The first layer

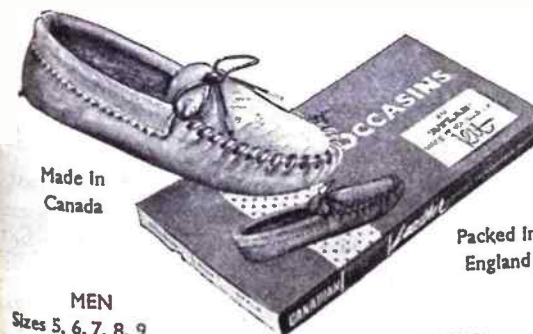
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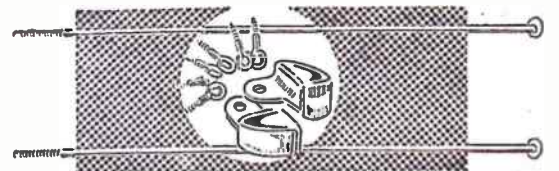
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# Recipes for various products

FOR those who have achieved a successful pencil sketch it is a sad experience to see it deteriorate by blurring caused by rubbing. The fixing of pencil drawings can of course be done with professional outfits, but the expense can be avoided and a good result obtained with a commodity available in every home. This is starch. Make up a starch paste as for laundry use and thinly brush this on to the drawing. When dry the drawing will be permanent and may be handled without fear of blurring.

## Amber solution

Amber chips or scrap amber articles can be used to make a useful cement or varnish. As a cement it is especially valuable for mending glass or earthenware, simply being painted on and the parts allowed to dry out and harden for a couple of weeks.

To make the cement, cautiously heat a weighed quantity of amber in an iron ladle. When it is semi-fluid gradually stir in an equal weight of boiled linseed oil which has previously been heated. When uniform the cement should be stored in a screw-capped jar to protect it from the air.

By thinning this cement to brushing consistency with genuine oil of turpentine you will have an excellent varnish for high class small work.

## Polishing paste

A rouge-based polish for final high gloss production on metals can be made up by melting together in a water bath 2 parts by weight of paraffin wax (candle wax), 25 parts of tallow, 50 parts of stearic acid and 3 parts of camphor. When uniform remove from the bath and stir in 20 parts of ferric oxide (rouge). Continue stirring until the whole sets, otherwise the ferric oxide will settle to the bottom, whereas an even suspension should be aimed at.

This polish is applied on a cloth buffer, surplus being buffed off with a clean cloth when the desired gloss has appeared.

## Old bronze finish on copper

The antique bronze patina effect can be given to copper articles by chemical means. Warm together 100 c.c. of 30 per cent acetic acid, 30 grams of sal ammoniac and 10 grams each of ordinary salt, cream of tartar and copper acetate, stirring well until the liquid is almost boiling. Allow to cool and coat the copper with the mixture. Let it stand aside for 48 hours, brush off the dried mixture and buff up the metal. A lightly

waxed brush may then be used to bring up the highlights.

## Casting mixtures

While plaster of Paris gives a fine grain cast, it is not hard enough for many purposes. Where a fine grain stone hard cast is required other materials must be used. Powdered silica is an

By L. A. Fantozzi

excellent base. A simple mixture consists of equal volumes of silica and cement. Mix this with water to a dough and cast. This will give a greyish cast. If a white is desired, mix equal volumes of silica and calcined magnesite and make this to a mortar with a solution of 2 ounces of magnesium chloride in 3 fluid ounces of water (or a multiple of these amounts). Cast in the usual way and leave for two days before removing from the mould.

Either of the mixtures may be coloured with ordinary mineral pigments, such as ferric oxide and yellow ochre.

## Black shoe cream

A top quality shoe cream is easily made. Melt together in a boiling water bath 4 grams of carnauba wax and 14 grams of beeswax. Meantime dissolve 2 grams of soap and 2 grams of water soluble Nigrosine in 40 cc. of boiling water. Turn out the flame under the wax water bath, stir in 40 cc. of genuine oil of turpentine and when thoroughly hot stir in the boiling soap/Nigrosine solution. Continue stirring until luke-warm, when the cream may be poured into a clean jar for use.

## Marble to metal cement

A cement is occasionally needed to fix marble to metal. Intimately mix 1 part by weight of sal ammoniac, 30 parts of plaster of Paris and 20 parts of iron filings. Now mix this powder to a paste with dilute (about 30 per cent strength) acetic acid, apply it to the marble and clamp the two together. The time when

the clamp may be removed may be ascertained by exposing a little of the paste on a slip of metal. When it is stone hard the metal/marble join will also be firm.

## Oxidising silver

A simple method of oxidising silver is to use a cold dilute solution of liver of sulphur. Dissolve 1 ounce of liver of sulphur in 1 gallon of cold water. The silver must be clean and free from surface grease. Clean it with metal polish and then remove grease by swabbing with dry cleaning fluid, avoiding handling the surface with the bare hands after degreasing. Immerse the article in the liver of sulphur solution. The silver rapidly turns black. Remove it, rinse well, dry it and buff up the highlights, if necessary using fine pumice powder and water, followed by rinsing and drying. The exposed highlights will, of course, darken after some exposure to the air, for this is normal with silver. To preserve the effect it is therefore necessary to give a coat of transparent lacquer.

## Brass rubbings

Those who take and collect rubbings of church brasses and inscriptions may welcome a home made rubbing composition. This may be cast into the handy form of sticks for rubbing over the paper placed on the brasses in the usual way.

Melt together 2 ounces of suet and 6 ounces of beeswax. Stir in 1 ounce of lampblack and at once pour into the moulds. The moulds can consist of upright metal tubes pressed into dabs of modelling clay on a board. When cold slide out the cylinders of rubbing composition and wrap in plastic film or metal foil.

The lampblack, of course, gives a black rubbing, but other pigments may be used in its place, if a different colour is desired.

## Brown pigment

A cheap brown pigment for colouring paints and other media can be made from sawdust charcoal and ferric oxide.

The sawdust, which should be fine, is put into a press lid tin, the lid of which has been punched with holes. Set the tin in the fire. Smoke soon issues from the holes and takes fire. When the flames go out the process is at an end and the tin may be removed and allowed to cool. Charcoal powder remains in the tin. Mix this with enough ferric oxide to give the shade you desire.

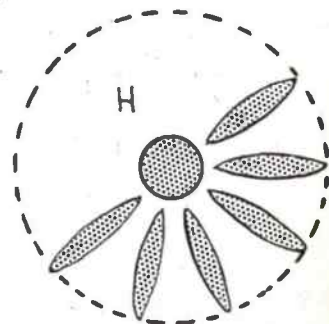
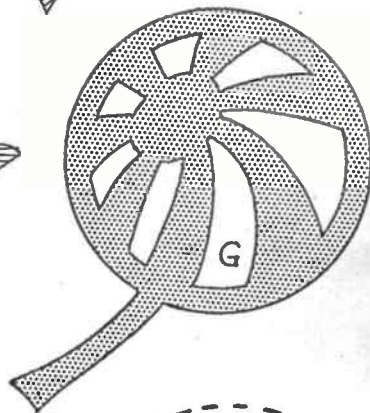
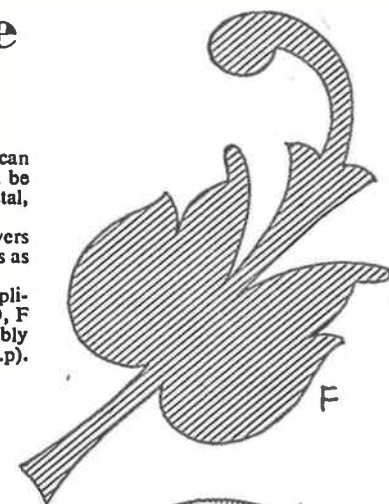
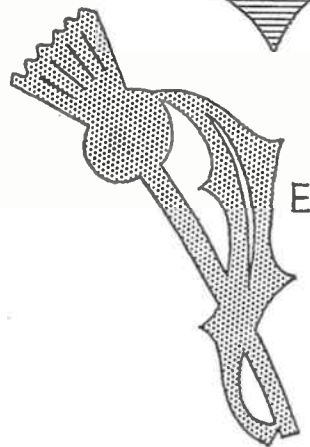
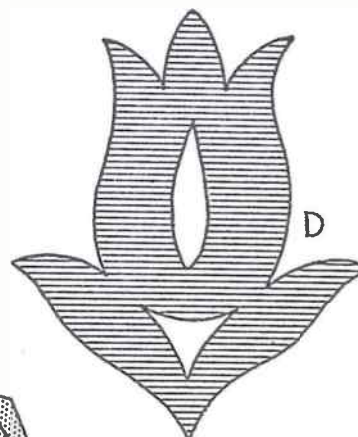
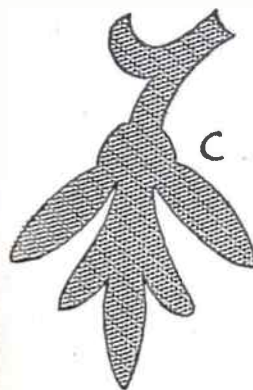
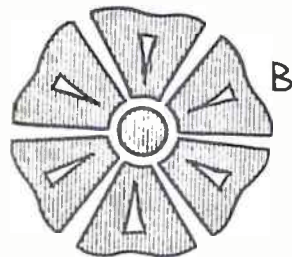
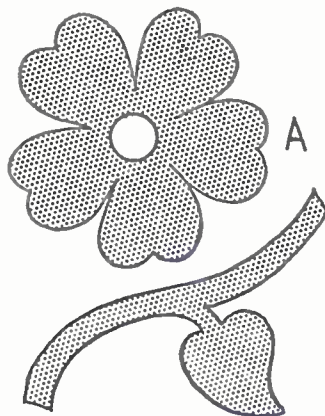
Use these floral motifs on your various projects

# Decorative Overlays

THE flower motifs shown here can be used as overlays and should be cut from wood, plastic or metal, using a Hobbies fretsaw.

The shapes A, B and H show flowers with petals, B and H having the petals as separate pieces.

Shapes C and E could well be duplicated to give a border effect, whilst D, F and G could be enlarged considerably without losing their effect. (M.p.)



319



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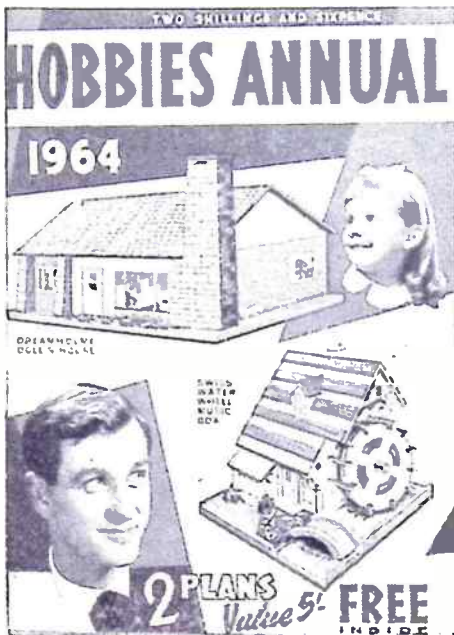
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## JENNY MOSS

She did. Roy liked them and so did independent recording manager Joe Meek and the result was Jenny's first disc, *Hobbles*, with lyrics by Roy Pitt, released on Columbia DB7061, backed with *Big boys*.

Jenny, who lives in Wigan, has been playing the part of Lucille for over two years. She was given the job because her father broke a 26-year-old habit and bought a Saturday evening newspaper instead of the usual sports edition. Jenny spotted an advertisement for a new TV serial and immediately wrote off for an audition.

Jenny is 18 years old, and playing the part of a girl of 14 makes complications in her life.

'For instance,' she says, 'often when I



am out driving in my convertible, people tell me that I am not old enough to be in charge of a car! If I am seen having a drink or smoking a cigarette in public, then I see a lot of eyebrows being raised. But the most deflating experience was during a personal appearance, when an eight-year-old girl exclaimed: 'Cor, you're not a girl at all — you're a woman!'

Jenny is a great admirer of The Beatles, Billy Fury, Helen Shapiro, Adam Faith and Brenda Lee. She has taken a leading role in 'Live it Up', a film featuring also Gene Vincent, Patsy Ann Noble, Kenny Ball and Sounds Incorporated.

Jenny's hobbies are swimming, horse-riding, and country walks.

AN estimated 34,000,000 people see Granada-TV's 'Coronation Street' each week — but it needed only one viewer to put Jenny Moss, who plays the part of 'pop'-crazy Lucille Hewitt, on record.

In the programme Lucille ran away from home, having announced her intention of becoming a pop singer. She was found hiding unhappily in an archway by the redoubtable Ena Sharples and the two of them teamed up to sing 'Sealed with a kiss.'

Watching was music publisher Roy Pitt who was impressed by the way that Jenny sang. He contacted her, asked her to tape-record some songs for him to hear.

THE Chiffons — four girls who come from The Bronx and Upper Manhattan — have combined their voices and musical talents to produce one of today's most successful vocal groups.

## THE CHIFFONS

been singing for six years. She's a jazz fan and a judo enthusiast.

JUDY CRAIG, is the comedienne of the group and keeps the other girls amused with her keen sense of humour. It is her voice usually heard in the lead.

SYLVIA PETERSON, has been singing for seven years and is a graduate of the

High School for Fashion Industries.

The Chiffons were brought together by Ronald Mack, now their joint manager with William Rigler. Mr. Mack, who gave the girls both coaching and encouragement, also wrote their hit record, 'He's so fine,' released in this country on Stateside SS172.



The girls are in the same age group (they describe it as 'the late, late teens') and line up as follows:

BARBARA LEE, has been singing for the past five years and until recently worked for the New York Telephone Company. She enjoys sports, dancing — and singing.

PATRICIA BENNETT, is a graduate of James Monroe High School and has

Create an impression with . . .

## SILHOUETTE DECORATIONS

SILHOUETTES of local or nationally-known buildings, made of black paper, are easy to make, and surprisingly effective as wall decorations. As the material they are made from is inexpensive, they can be of any size, and so can be used in a number of different ways.

Very large silhouettes, for example, can be used to decorate the walls of a hall or room to be used for a club, church or school social event. A few silhouettes, taped round the walls as shown at A, form an extremely simple way of making a bare room look most attractive. The solid black shapes of the silhouettes always make them look larger than they really are, and made from 20 in. by 25 in. sheets of paper, gummed together if necessary for a tall or long shape, they can look most impressive.

a garden fete, for example, they can be pasted to large sheets of paper which may then be pinned to the wall. (B). The inexpensive variety of paper known as sugar paper is ideal for this, or even large sheets of brown wrapping paper can be used.

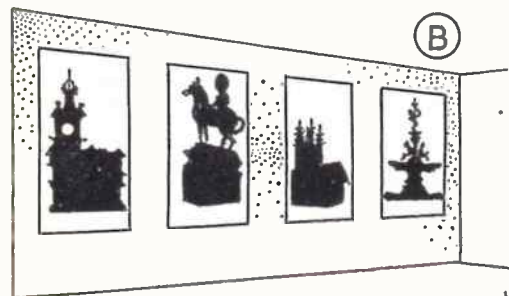
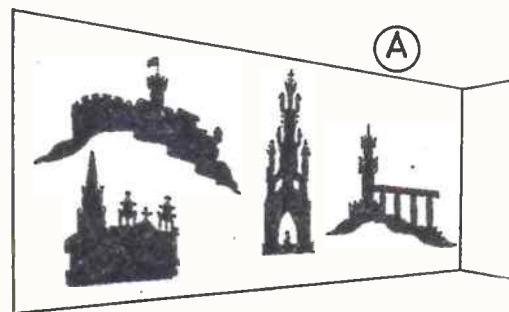
Each silhouette is made by first drawing the outline of the chosen building, either from a photograph, or better still, from real life. For even the most ornate building this is easier than it sounds since only the outline detail is involved. A little practice will demonstrate the truth of this. The sketch can then be re-drawn on the large sheet of black paper. One simple way of doing this is to draw the four lines of a 'Union Jack' pattern on both sketch and black paper, transferring the detail which appears in each section of the small sheet to the appropriate section of the

to give the true shape of the building.

The choice of subjects is so wide as to be embarrassing. One good plan is to mix nationally known or internationally known outlines with buildings of purely local interest. This certainly taxes the competitors' wits, for even a familiar building may look quite unrecognisable when its appearance is not expected.

After correctly recognising the Taj Mahal, for instance, it could prove very misleading to think that the faintly oriental outline shown at D also came from the East. It is, in fact, very English, being the Butter Cross in the town of Whittlesey, in East Anglia, an answer which might escape even some of the inhabitants!

Filling a sketch book with silhouettes, all carefully drawn and filled in with Indian ink, can, of course, be a fas-



inating and rewarding hobby in itself; besides teaching one to use one's eyes, it also makes a fine introduction to the study of architecture.

(A.L.)

Besides being decorative, the silhouettes can also be used as a game or competition during an interval in the proceedings, the winner being the person who can name the largest number of outlines shown.

If the silhouettes cannot be taped directly to the wall, as in a marquee in

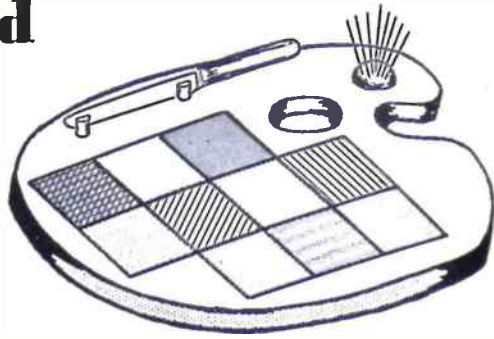
larger one. All that then remains is for the shape to be cut out with scissors.

Some subjects may appear at first to be too box-like to make a reasonable silhouette, but by choosing a suitable angle, revealing features can be shown. At C, for example, the two cut-out panels in the roof, which show white, do much



# Tiled Cheese Board

By  
Stuart  
Martin



undertaken, the surplus wood being cut off before the final shaping takes place.

### Recess for tiles

When all the shaping is completed the recess for the tiles should be carefully cut into the top surface of the board. This is done with a chisel, taking care to see that the required depth is kept constant over the whole area. This depth will be in the region of  $\frac{3}{8}$  in. depending on the type of tile used. This depth should be gauged to allow the surface of the tiles to come flush with the top of the board.

The pieces of tile themselves are 2 in. square and can be cut from standard square tiles. The individual pieces should be as brightly coloured as possible so that they will represent the colours on an artist's palette.

Cutting 2 in. squares of tile is quite simple. The line of the cut is marked on the surface of the tile with a soft pencil and then, using a straight edge, the pencil line is scored with a glass cutter. A point to watch is that the score marks extend to the edge of the tile and that the tile is placed on a firm surface while it is being cut.

Still keeping the tile face upwards a match stick is placed under one edge of the tile in line with the score mark. Then with firm finger pressure on each side the tile can be broken evenly along the line.

### Cut tiles first

It is advisable that all the pieces of tile be cut out before the recess for them is added to the board. The pieces of tile can then be laid on the board in their correct positions, allowing a thin space between each, and a check made to see that the edges of the recess are in the correct position. Any slight alteration can then be made, if necessary, to allow for any variations in size due to unequal cutting.

When the recess for the tiles has been made the two holes should be drilled for the pieces of  $\frac{1}{8}$  in. diameter dowel which form the knife holder. These holes should be drilled to a depth of  $\frac{1}{2}$  in.

Once these operations on the base have been completed it should be sanded to a smooth finish; paying particular attention to the edges and the inside of the thumb-hole.

When all the surfaces are completely smooth the half ball for the cocktail sticks can be added. This is simply a 1 in. or  $1\frac{1}{2}$  in. diameter wooden ball (which can be obtained

Continued on page 325

THIS novel cheese board in the shape of an artist's palette with brightly coloured tiled squares is simple to make and will be an attractive item on your table. It has holders for a knife and for cocktail sticks so that cheese may be easily cut and served. In addition the board is hygienic as the tiled surface can be wiped over and the thumb-hole can be used to hang up the board when it is not in use.

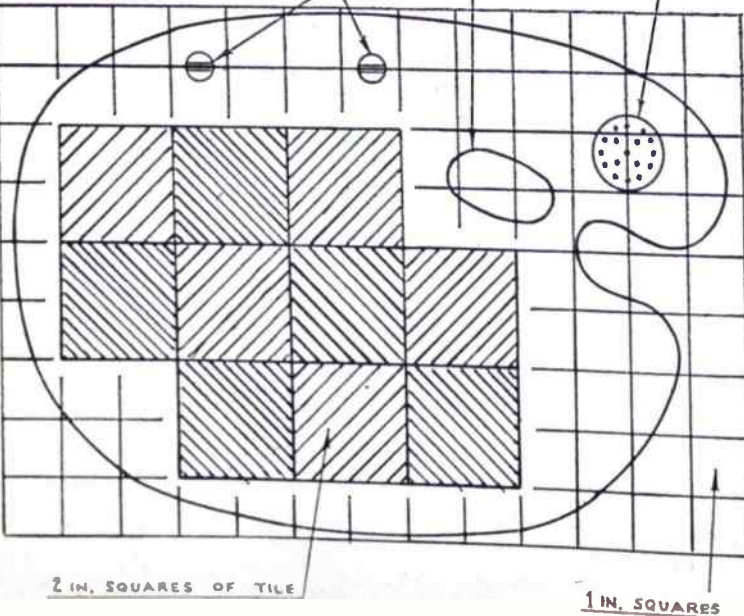
For the board itself you will need a piece of wood 13 in. long, 9 in. wide and  $\frac{3}{4}$  in. thick. The first step is to transfer the curved shape of the palette to the wood in order that it may be cut out and shaped. The easiest way to do this is to reproduce the grid of 1 in. squares on a large sheet of paper and then carefully add the shape of the palette and the thumb-hole. At the same time the shape of the area occupied by the tiles should be indicated.

When all the necessary drawing is finished the shape can be transferred to the wood by using a sheet of carbon paper and tracing over the outline which you have just drawn.

Once this has been successfully added to the wood the cutting out can be

$\frac{1}{2}$  IN. DIA. DOWELS WITH CENTRAL SAW-CUT FOR KNIFE. DISTANCE BETWEEN MAY BE VARIED TO SUIT BLADE LENGTH.

HALF OF WOODEN BALL DRILLED  $\frac{1}{8}$  IN. DIA. AND STUCK TO BOARD.



A new craze

# TRY THESE WORD DOODLES

WHY throw away all your old magazines and newspapers when you can use the printed letters in them for an absorbing new pastime? Cut out a selection of large bold black-against-white headlines, story titles and advertisement slogans, acquire some black paper and a pastepot and you are all set to try your hand at making 'word doodles'.

By A. E. Ward

The principle of the game is to arrange the individual letters of a word, so that the meaning of the word is illustrated. This is done by pasting the letters neatly and thoughtfully upon the dark paper.

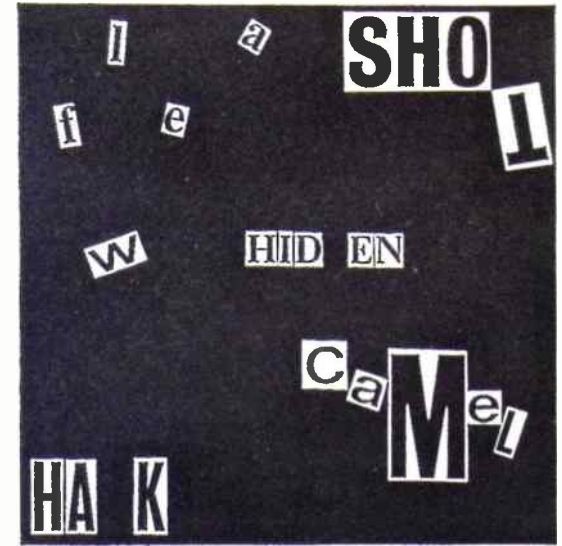
Thus, as you will see amongst the examples given, the letters of the word 'FLEA' are made to 'jump', the third letter of the word 'HAWK' soars like a hovering bird, and the five letters of 'CAMEL' are arranged to resemble a beast of the two-humped variety. The upturned letter in 'SHOT' and the missing letter in 'HIDDEN' are self-explanatory.

Would be word doodlers will wish to invent original subjects. Once you start doodling with words, you may find it difficult to stop, and your friends will soon be infected with the craze when you show them your own efforts.

One rule that you must remember is

that the doodle must never involve any additions to the letters in the particular word involved. The word 'LOOK' with 'eyespot' drawn in the middle letters would not be a very good word doodle. However, sometimes it will be permissible to mutilate letters slightly.

Also, letters may be omitted if this is done obviously and with humorous intent. Note the missing 'D' in 'HIDDEN' Letters of contrasting sorts and sizes may also be used together to achieve certain effects.



Try arranging the word 'FLIP' so that the dot over the eye is being flipped away like a pellet. Set out 'BROODY HEN' with a little word 'HEN' sitting upon two large O's in the word 'BROODY', curved to suggest a nest...

Make a collection of word doodles upon separate black cards to entertain visitors — or make a sheet of word doodles to be framed as a very unusual wall decoration. At your next party, supply your guests with all the materials necessary for a 'Word Doodling Contest'.

Continued from page 324

## TILED CHEESE BOARD

from any do-it-yourself store) cut in half and with a series of  $\frac{1}{8}$  in. diameter holes drilled in it at random. Each hole should be drilled at right angles to the curved surface and the depth of each hole should be constant at  $\frac{1}{2}$  in. The completed holder can be attached to the cheese board with impact adhesive.

The knife holder is made from two pieces of  $\frac{1}{2}$  in. diameter dowel each 1 in. long. The dowels should have a saw-cut in them down a diameter to a depth

of  $\frac{1}{2}$  in. Each dowel should be assembled in its hole with impact adhesive, taking care to see that the slots are in line.

It now only remains to add your pieces of tile, but before this operation is undertaken the cheese board should be finished in whatever method is decided upon. A good range of colours is available in wood dyes and one of the lighter shades would be ideal. The board can be either left in its stained state or, as an attractive alternative,

finish, it can be wax polished.

Finally the squares of tile are added, pieces being selected and arranged so that the same colours are not placed next to one another. The tiles may be retained using special tile adhesive or they may be fixed in a perfectly satisfactory manner using ordinary impact adhesive. The tiles should be allowed to set over-night and then the spaces between them should be grouted in with a white cellulose filler. The joint should be finally finished by running along it with a small piece of stick with a rounded point.

# 'Soap Bubble' and other Recipes

**B**LLOWING soap bubbles has always been a popular amusement, the liquid used being a solution of soap. Unfortunately, the bubbles made from this solution rapidly disappear, bursting before we can catch their lovely colouring, so here we prescribe a recipe for one which will give bubbles a much longer life. In fact, if the air is reasonably calm you may expect them to survive for half an hour or more.

rubbing on the back with a light pressure. The copies are quickly made and need not be left in contact more than the time taken to rub the back of the paper. Note that it is sometimes advisable to lay strips of paper at the sides and the base of the original to act as guides when taking copies.

After completing your copying the original may be erased from the tray by wiping with a damp sponge. If the surface becomes uneven or broken you may melt slightly and allow to set.

## Adhesive for labels

If you have ever experienced the annoyance of labels leaving bottles of solutions or shiny surfaces you may welcome a handy recipe for a really strong adhesive. Here it is.

Take a little starch, an equal amount of gum arabic and three times as much granulated sugar plus a little water. Heat this mixture very slowly until it takes the form of a syrupy liquid. This adhesive can be bottled at this stage but

must be well stoppered. Such an adhesive is almost a guarantee against labels coming unstuck.

## Waterproof Matches

If you are a Scout or camper you may like to know how to prepare matches so that they will be waterproof. This may sound stupid but if you have ever been caught in a storm and found your matches dripping wet when you particularly needed a hot drink you may welcome this simple idea.

Melt a piece of candle in an old tin container and dip the matches in the liquid. The matches should be dipped into the liquid as far as possible; otherwise although the dry heads may ignite the flame will fizzle out if the stick is damp. Allow the dipped matches to dry on a sheet of newspaper and do not return to the box until the wax is hard. Note this word of caution. Be careful that the wax does not come in contact with a naked flame while melting or you may start a fire!

## By S. H. Longbottom

Take a piece of good quality soap and make into a really strong lather with the aid of hot water. Allow this solution to cool, when most of the froth will have disappeared; then add half as much glycerine as solution. The former is miscible with water and it should be stirred in slowly and the solution stored in a well-stoppered bottle. A stock solution will maintain good condition for quite a while but it should always be shaken before using.

## Hectograph Composition

If you have ever had to make a lot of copies of letters you will realise the value of a hectograph or duplicator so here is a simple device you can make.

We need a tray to hold the hectograph composition and you will find the lid of an empty biscuit tin to be ideal for this purpose. The composition is made from the following ingredients:

3 ozs. Scotch glue, 8 ozs. glycerine, a few drops of oil of cloves.

Place the Scotch glue in a little warm water and melt. Add the glycerine and the oil of cloves. While the mixture is still fluid it is poured into the tray and allowed to set. Note that it will be found better to melt the glue in a double saucepan — or a tin standing in a larger one holding hot water.

When you are ready for duplicating the original letter, notice or whatever it is, it should be written on good quality paper with hectograph ink. The latter can be obtained from most stationers' shops and is sold in several colours. Allow the ink to dry naturally and on no account hasten by use of blotting paper. Place the paper on the jelly-like surface of the duplicator, rub the back with a duster and leave in position for five minutes. The original is then peeled away leaving a copy on the composition. Further copies may then be obtained by applying blank sheets and

# MOTHS BY MAGIC

**I**T is not only women who use perfume to attract the opposite sex. Female moths have, for instance, developed the technique to a fine art. The heady scent which they produce is irresistible to all the males of the species within range. Intoxicated, they come fluttering around, often flying considerable distances to reach the source of such a fascinating fragrance.

One evening in May, some years ago, I put a newly emerged female Poplar Hawk moth in a perforated zinc cage and left it out of doors for a while. Later on, I observed several males hovering about the cage. During one season my female moths of six species attracted at least thirty males. I counted fourteen Goldtails, seven Buff Ermings, four Garden Tigers, three Buff Tips, one Elephant Hawk, and one Puss.

The female moth flies very little before mating, preferring to rest near her place of emergence, emitting her potent perfume, and awaiting results. By way of contrast the male is very active, flying hither and thither until he picks up the captivating scent trail. This he does by

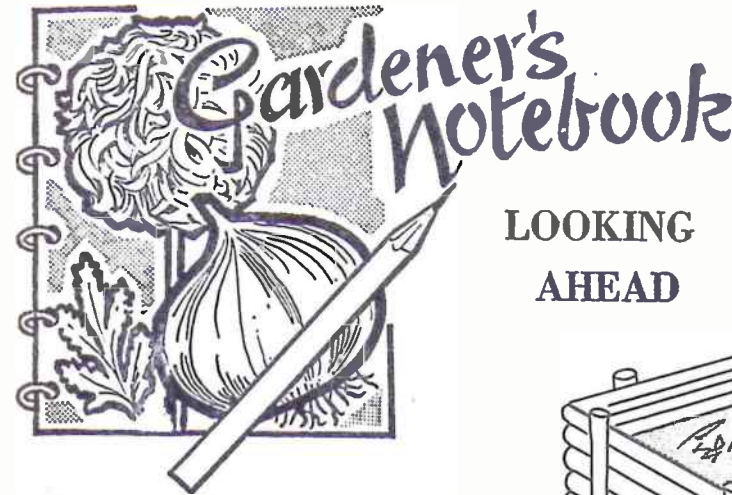
means of his antennae or feelers, feathery or fern-like organs which can detect the scent molecules from some distance away. He simply homes on to the 'target', steering the right course according to which of his two feelers receives the highest stimulus.

The scent is so strong that even a cage from which a female has been removed will continue to attract males for a time. After mating, however, the female loses her 'glamour', and flies away to locate suitable food-plants on which to lay her eggs.

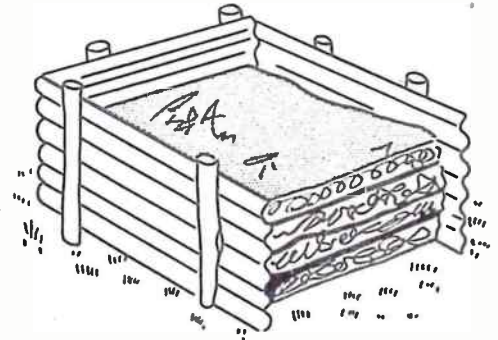
Many moths are also attracted by the scent of flowers, so in more ways than one, the seemingly dark and sombre world of the moth is enlivened by a wonderful atmosphere of olfactory delights.

Any nature enthusiast wishing to have a go at attracting some male moths should choose a warm evening for the experiment. If the locality is suitable, all one requires is a newly emerged female moth, a well-ventilated container... and a little patience.

(J.W.N.)



## LOOKING AHEAD



Corrugated iron makes a good container for compost

**T**HE keen gardener appreciates the hot summer weather when the sun will shrivel and kill uprooted weeds. It is only necessary to hoe from time to time to ensure a weed-free garden. What a different tale in September. The sun has lost its power and weeds quickly root again after a shower.

It is claimed that if you can keep the garden free from weeds during May and September it will be free for the rest of the year. Not exactly true, perhaps; but there is a good deal of sense in the saying, never-the-less. It is during these months that growing conditions are ideal.

It is no use hoeing and leaving the weeds in September; they must all be raked off and removed. Pay particular attention to small pieces of annual meadow grass, seedlings of white dead nettle, and small off-sets of creeping buttercup. These weeds will increase in

size rapidly and if not removed or checked will make cultivation difficult later on.

In the herbaceous border small weeds must be pulled by hand from amongst perennial plants such as phlox and michaelmas daisies. Plants which have died down may be covered with a half inch layer of peat. This will discourage germination of weed seeds, protect the plants and also mark their position.

Weeds such as ground elder and bindweed will increase underground and

should therefore be forked out. Watch out for long runners of bindweed, for these will tip-root and produce new plants.

Annual plants such as chickweed and groundsel should not be allowed to flower or they will produce seedlings for years. It will take a very well made compost heap to destroy their seeds.

The lawn, too, needs some attention and September is a good time to apply a selective weedkiller. The grass should be

growing strongly and the weeds will be more susceptible to the treatment.

The weeds themselves can eventually go back on the garden to provide humus. They should be properly composted, using a compost accelerator. Three sheets of corrugated iron can be used as shown in the illustration. Drive posts into the ground and simply stand the sheets inside the posts. The compost will hold the sheets in place. Build the heap and add the accelerator according to the maker's instructions. (M.h.)

## R.M.S. QUEEN ELIZABETH MODEL



World-famous Cunarder the R.M.S. Queen Elizabeth has been launched by Airfix.

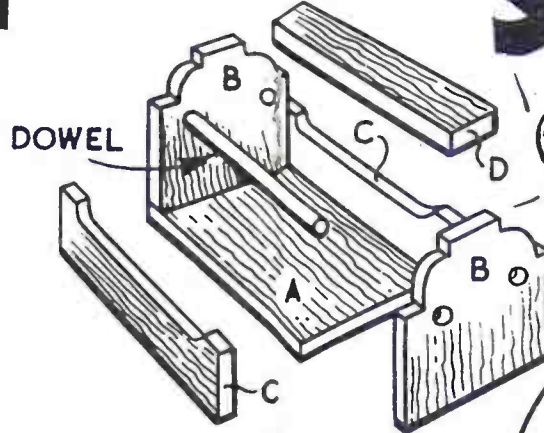
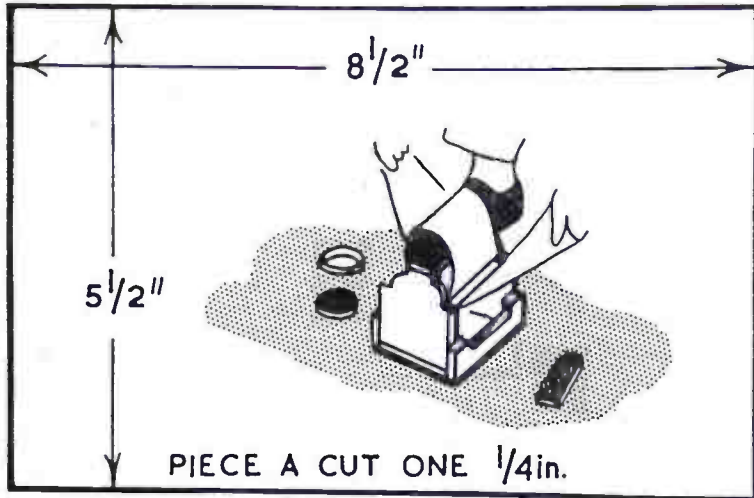
This is the second in the Airfix range of British liners made to the constant scale of 1:600 — the same scale as Airfix warships — and is finely detailed even to the correct flags to be flown from the port and starboard yard-arms. Length of the completed model is 20½ in., and the kit, costing 10s. 6d., contains 131 precision-made parts.

The Queen Elizabeth (83,673 tons) is the world's largest liner, 1,031 ft. long, and nearly three times as high as St. Paul's Cathedral. As a troopship during the war she steamed 492,635 miles, and carried 811,324 passengers.

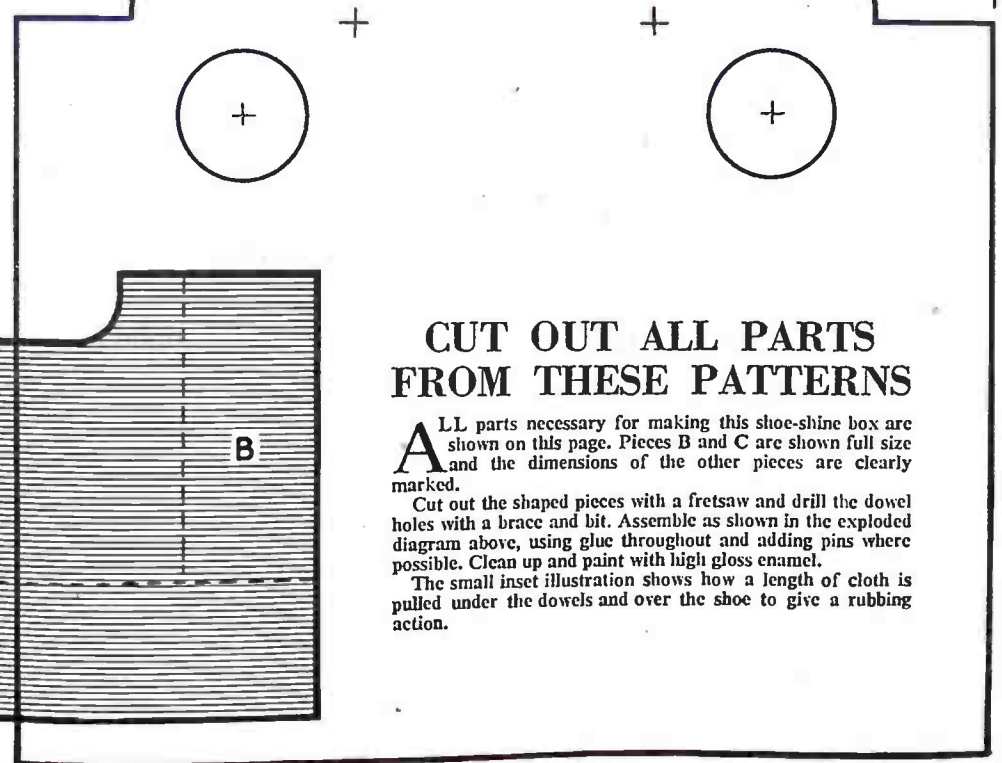
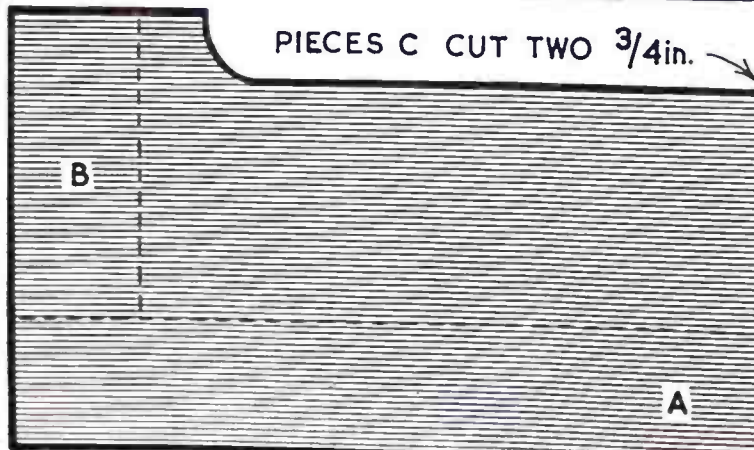
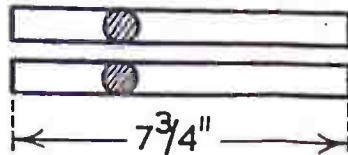
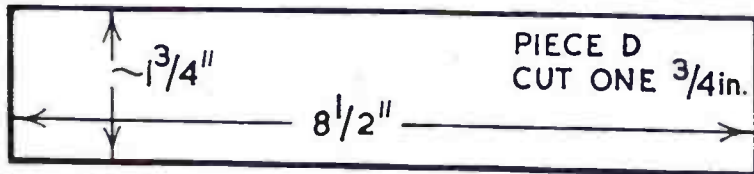
# A PRACTICAL GIFT

MAKE THIS NOVEL

# SHOE SHINE BOX



PIECES B CUT TWO 3/4 in.



CUT OUT ALL PARTS FROM THESE PATTERNS

ALL parts necessary for making this shoe-shine box are shown on this page. Pieces B and C are shown full size and the dimensions of the other pieces are clearly marked.

Cut out the shaped pieces with a fretsaw and drill the dowel holes with a brace and bit. Assemble as shown in the exploded diagram above, using glue throughout and adding pins where possible. Clean up and paint with high gloss enamel.

The small inset illustration shows how a length of cloth is pulled under the dowels and over the shoe to give a rubbing action.

PRINTED IN ENGLAND

# THE PHOTO PROJECTOR

THIS instrument projects an enlarged image of opaque pictures, such as photographs, drawings, illustrations cut from periodicals, and so on. The image is thrown on a screen at a convenient distance, and photographs and pictures up to 3 in. by 4 in. may be used in the projector, the image on the screen being in natural colours. It is also possible to project enlarged pictures of some natural objects of a fairly flat type, such as pressed leaves and flowers.

The projector is made in the form of a box, with small feet, so that air can enter at ventilation holes at the bottom. This box has sides of  $\frac{1}{4}$  in. or  $\frac{3}{8}$  in. plywood, so that front, bottom, and back can easily be secured with panel pins. The top is secured by small screws, so that it can be removed to change the lamps.

## Reflectors

Fig. 1 shows the projector with top removed, and two 60 watt pearl domestic lamps are used for illumination. Two reflectors are made, to keep direct light off the lens, and help increase the brightness of the picture. These reflectors consist of the two halves of a clean tin, about  $4\frac{1}{2}$  in. to 5 in. high, and  $2\frac{1}{2}$  in. or so in diameter. The tin can be cut with tin snips, or even strong scissors. The lid is not required. The bottom is cut away sufficiently to clear the lampholders, and the reflectors are held with two or three small screws or sprigs.

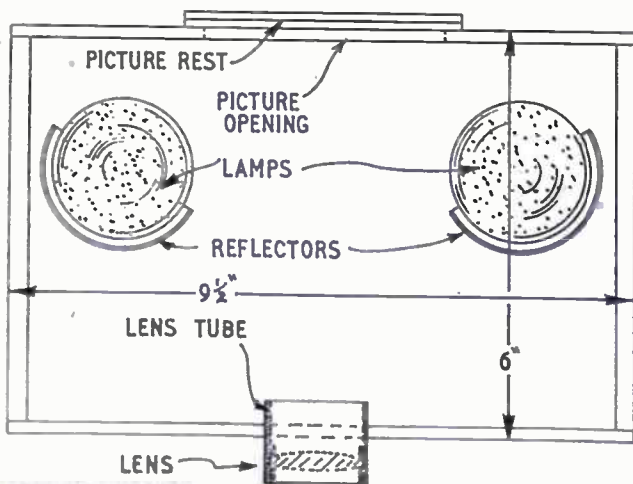


Fig. 1—Top view of projector

The box is  $9\frac{1}{2}$  in. wide, and two holes each  $1\frac{1}{8}$  in. in diameter are cut with a fretsaw, to take the lampholders. The box is 6 in. from back to front, but this may be changed, if wished, to suit a lens of different focal length, as described later.

## By 'Modeller'

A horizontal opening 4 in. by 3 in. is cut in the centre of the back. In the centre of the front, a hole  $1\frac{1}{2}$  in. in diameter is cut, to take the lens tube. (The size of this hole can also be changed to suit other lenses.) The box is 6 in. high.

Three or four  $\frac{1}{4}$  in. diameter holes are made near each lampholder, and front, bottom, back, and sides can then be assembled. Meeting surfaces can be smeared with glue, before nailing. Four small feet are also cut from scrap wood, and are fitted with glue and panel pins. The whole box can be glasspapered and painted, when the glue is hard.

The top is 6 in. by 9 in., and four or five holes are made above each lamp. A piece of tin about 8 in. by 3 in. is bent to the shape shown in Fig. 2, and screwed on. This acts as a light trap, while allowing hot air to escape. Four small screws

will fix the top in position, when construction is finished.

## Picture rest

A strip of wood 5 in. by  $\frac{1}{2}$  in. by  $\frac{1}{4}$  in. is glued level with the bottom of the 4 in. by 3 in. aperture, and a piece of hardboard, 3-ply, or other thin wood 5 in. by 4 in., is securely fitted with glue and panel pins or screws, which pass right through into the back. This forms a gap and rest for the picture, photograph, or other object to be projected, which is placed as in Fig. 2.

## Lamps

Two insulated pendant type holders are fitted in the holes, and held in place by the shade rings. Two or three yards of good quality flex, as used for table lamps, should be fitted with a plug to suit the lampholder or socket from which current will be drawn.

The two holders in the projector are wired in parallel (Fig. 3), and the wire must be threaded through the holder caps, so that these may be screwed on afterwards. About 9 in. of flex will be needed between the holders. The ends are bared, and securely fitted to the holder terminals. The insulated cap is then screwed on. To wire the second holder, place the cap on the wire, and also on the main lead. Bare the ends of the 9 in. flex, and main lead, and twist the ends tightly, and secure them in the holder terminal holes. The cap is then fitted.

A lead-through type of switch may be connected in the main flex lead, if wanted. This allows the projector to be switched on and off.

The two lamps are inserted, and the top screwed on. Two 40W bulbs will give quite good illumination. A pair of 60W or 75W lamps, naturally, give brighter illumination, but generate more heat. The holes described allow air to pass through the projector, to avoid overheating.

## Lens

The lens fitted has a considerable influence on the picture obtained on the screen, as would be expected. Ordinary magnifying glasses and similar single lenses can give surprisingly good results, and will suffice for average purposes.

The lens is held in a cardboard tube. This can be done by making a tube which is a suitable size for the lens, then gluing two narrow strips of thin card inside the tube, one each side the lens.

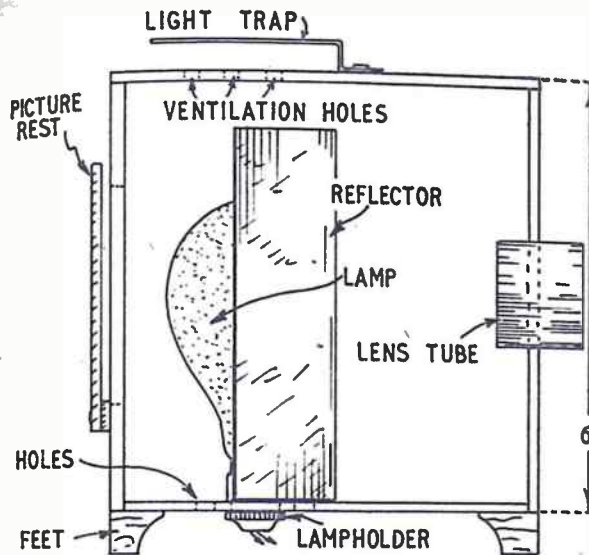


Fig. 2—Projector seen from side

The lens tube is a push fit in the hole in the front of the projector, so that distance between object and lens can be adjusted.

For the dimensions given, the lens needs to have a focal length of about  $4\frac{1}{2}$  in. However, lenses of other focal lengths can be used, provided the distance between object and lens is adjusted to obtain a sharp picture.

The greater the diameter of the lens, the brighter will the picture be. As large lenses are expensive, one of around 1 in. to  $1\frac{1}{2}$  in. diameter may be fitted.

If necessary, the focal length of a lens to hand can be found by holding the lens in front of a sheet of white paper, and adjusting the distance between paper and lens until a sharp image of some bright, distant object is cast on the paper. The distance from lens to paper is the focal length. When the lens is fitted in the projector, it should be roughly  $1\frac{1}{2}$  times the focal length from the object. For example, a 4 in. focal length lens will need to be roughly 6 in. from the photograph, postcard, or other object.

## Using the projector

The best screen is one of fairly glossy, smooth material, as this reflects light well. White paper is suitable. Materials such as cotton or other cloth do not reflect the light very well. Some wall surfaces of light tone are quite good.

The room should be as dark as possible. At first, the position of the lens may need modifying, to obtain a picture of suitable size.

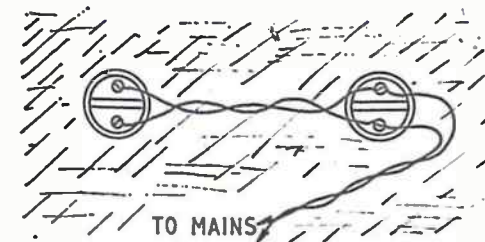


Fig. 3—How the lampholders are connected

gives a picture both of reasonable size, and fairly bright.

The projected image should be sharp in the centre of the picture, but with ordinary magnifying lenses, some sharpness will be lost towards the edges. This cannot be avoided (unless a more costly projecting lens is fitted), and is not too important with most subjects. Should the lens be very poor, a card disc with a central hole can be placed close against it, so that light cannot pass through the edges of the glass.

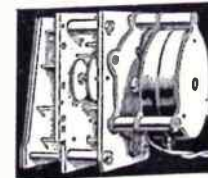
The photo or other subject must be inserted upside-down. The image on the screen is reversed. This is not very important with many pictures, sketches, and photos.

If written matter is included, or the picture must be the right way round, this can be achieved by placing a small mirror in front of the projector lens. The projector is first turned at 90 degrees to the screen, then moved backwards, so that its lens is about level with the centre of the screen. The mirror, which should be on a stand, or otherwise mounted, is placed at 45 degrees to the lens and screen. The image will then be the right way round.

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Cheap and simple

# A 4-LAMP CHANDELIER

THE materials for this simple but attractive chandelier are readily available. The arms of the chandelier are made from three lengths of one inch diameter dowelling and the whole construction should only take a few hours.

Fig. 1 shows the dimensions of the arms and how they are fitted together. Curve out the ends of the short pieces with a file so that they fit snugly against the long piece. Glue them in position and then fit a six inch diameter hardboard disc over the joints. Screw in eight 1/4 inch round head screws from underneath through the hardboard into the dowelling.

File down a 1/4 inch flat on the upper end of each arm (Fig. 2) and drill through a 1/4 inch and a 3/16 inch hole as shown.

At this stage the work can be painted or oak stained, which blends in with

most colour schemes. After the job has dried screw in four eye-hooks, one in each arm.

Into the 1/4 inch holes at the ends of the arms screw in the four lamp-holders

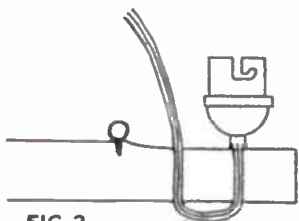
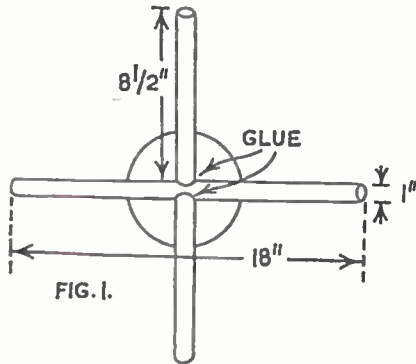
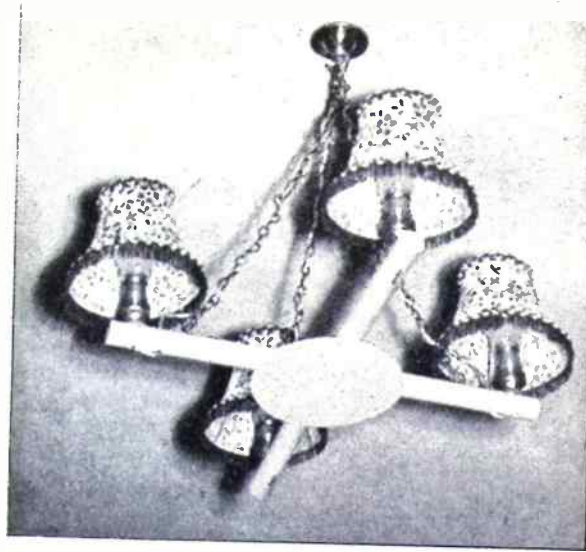


FIG. 3.

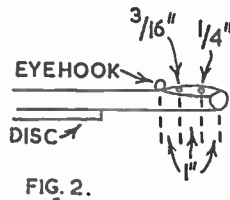


FIG. 2.

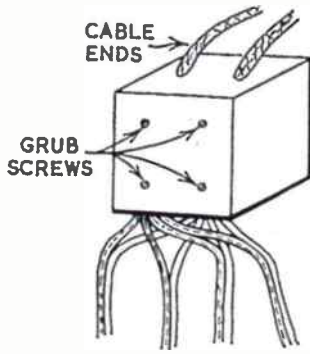


FIG. 4.

322

(Fig. 3). Do not force them in too tightly, but if necessary make the holes a little larger until they screw into the arms easily. Thread one end of 28 inches of lighting flex of a suitable colour (there are many colours on the market) through the 1/4 inch hole of one of the arms. Dismantle the lampholder, thread the flex through and connect it up as shown. Only about 1/4 inch of insulation need be removed from each conductor, which is then firmly attached to the terminals by grub screws. Remember that one conductor is connected to each terminal.

Obtain four chains and a single hook to the ceiling-rose. Attach the chains to the eye-hooks on the arms and carefully thread the flexes through the links, finally pressing them through the hole in the ceiling-rose. Now turn off the power at the main switch. Remove the old lamp fitting and ceiling rose, thus leaving the two cable ends protruding through the ceiling.

It will be necessary to get an assistant to hold the chandelier while it is connected to the cable ends by means of a connecting block (Fig. 4). Note that one conductor is taken from each flex and connected to one connector terminal, thus leaving the remaining wires to be connected to the other terminal. The ceiling-rose with the chains that are already supporting the chandelier are now screwed into position.

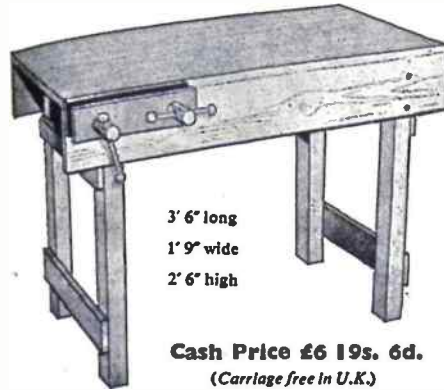
All that remains now is to fit in bulbs of suitable wattage, and clip on four attractive shades. 60 watt bulbs give a good, brilliant light, but a more restful effect is obtainable from the 40 watt variety. (G.A.W.P.)

## TOOLS FOR



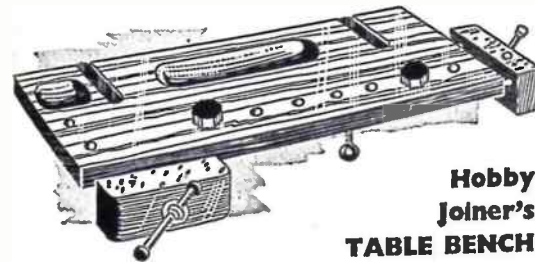
## THE HANDYMAN

With a bench like this you can work to your heart's content. Perfectly rigid, but can be easily taken apart if space is required. Best selected timber, complete with hardwood vice with twin screws. Easy payments £2 down and 6 monthly payments of 18s.3d. Ask for agreement form.



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1' 9" wide  
2' 6" high

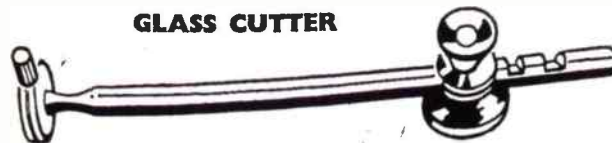
Cash Price £6 19s. 6d.  
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Hobby Joiner's TABLE BENCH

Cramps to kitchen table to provide an ideal working surface for cutting, shaping and assembling small parts. The spaced holes and pegs permit work to be held for planing. Two sturdy vices, two metal cramps. Size 37/6 20 in. long. Made of seasoned hardwood for years of service. (post 2/9)

GLASS CUTTER



Cuts circles 1 1/2 in. to 10 in. diameter. Can also be used for straight cuts. The tool is housed in a pivot, the top of which serves as a thumb rest and adjuster nut lock. It has three cutting wheels.

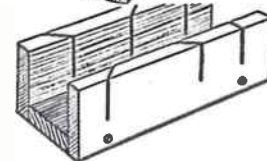
PRICE 9/6, postage 6d.

Available from all Hobbies branches, or by post from

No. 1 MITRE-CUTTING TOOL AND CORNER CRAMP

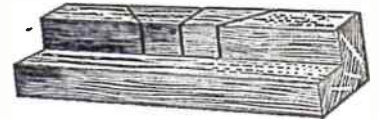


Will cut mitres on moulding and similar work up to 4 in. wide. (post 3/-) 55/-



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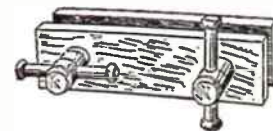


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WOOD BENCH VICE



A strong hardwood vice which can be screwed to the work bench. A real serviceable tool, well made and fitted with hardwood screws. 12 in. long. PRICE 9/-, postage 2/-

HOBBIES Ltd, (Dept. 99), DEREHAM, NORFOLK

# Replies to Readers

## Milli-watt Meter

HOW can I construct a meter to measure the output of transistor radios (various impedances) in milli-watts? (W.C. — Sale.)

POWER in watts can be found by  $V^2/z$  (multiply voltage by voltage, and divide result by circuit impedance).  $1,000mW = 1W$ . An A.C. meter will allow the voltage to be measured in the normal audio frequency range. This voltage is developed across a resistor. The resistor value should equal the impedance needed. E.g., if the set uses a 3 ohm speaker, wire a 3 ohm resistor in place of the speaker, and measure the voltage across this resistor. The meter scale may be calibrated in mW, if desired, by working out the current for various powers, as above.

## Dimmer for Multi-lights

WILL you please supply the formula for making a dimmer for a bank of lights — 68 by 60 watt lamps at 240 volts A.C. (L.C. — Hull.)

THE lamps will consume 68 by 60W, or 4,080W. Current at full brilliance will be  $4,080/240$ , or 17 amperes. Current at reduced brilliance will be lower, but for reliability the resistance coils are best rated at 17A. or more. Eureka resistance wire coiled in free air is rated as follows:

s.w.g.	Current.	Temperature.
11	19A.	100C.
13	20A.	200C.
15	16-8A.	300C.

Resistance per 100 yd. is 10.1 ohms for 13 and 16.5 ohms. for 15 s.w.g. Lamp resistance at full brilliance is 240/17 or approximately 14 ohms. At least this resistance would be required on the dimmer. Construction might be simplified by using electric fire elements. A 1kW element passes approximately 1,000/240, or 4A., its resistance then being 240/4, or about 60 ohms. Four 1kW elements in parallel would pass 17A.

## Guitar Pick-up

I AM trying to make an electric solid guitar and wonder if you could send me details how to make a not very expensive magnetic pick-up. (R.R. — Wandsworth Common.)

IF the strings of your guitar are of metal (steel) an earphone with diaphragm removed may be secured below the strings at their point of maximum vibration, the earphone being at such a height that the wires of the guitar are very close to the poles of the magnet. This will give very pure reproduction, although volume is slightly reduced. The output from the microphone or earphone should be amplified by a radio receiver or amplifier.

## Transistor Convertors

COULD you give details for a transistor convertor giving about 230/250 volts output at 130/150 watts? I have a large 6-volt motor-cycle battery and hope this will be sufficient input for the convertor. (D.S. — Bristol.)

IT is unfortunately impossible to provide individual circuits in a reply. Details of transistor convertors will be found in the Mullard reference manual of transistor circuits, available from Mullard House, Torrington Place, London, w.c.1.

## Miscellaneous Advertisements

ENJOY WRITING? Then write for Profit. Send for 'Writers' Handbook' (free) detailing countless opportunities for beginner or experienced. — Writers' Ring (HW), 5 Edmund Street, Birmingham.

UNDER 21? Penfriends anywhere — details free. Teenage Club, Falcon House, Burnley.

50 DIFFERENT STAMPS FREE to approval applicants enclosing 3d. postage. Beginners, Medium.—J. Armstrong, 11 Griseldale Gardens, Purley, Surrey.

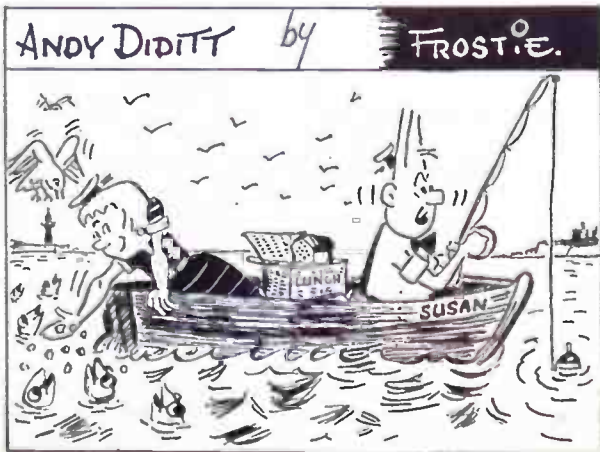
100 DIFFERENT stamps free! Request 1d. upwards discount approvals. — Bush, 53 Newlyn Way, Parkstone, Dorset.

PENFRIENDS home and abroad, all ages. S.a.e. for details. European Friendship Society, Olney, Bucks.

FREE — Interested in Marquetry? A special leaflet 'Making Pictures in Wood' by the fret-saw method is free for the asking. Send to HOBBIES LTD, DEREHAM, NORFOLK.

## HOME BILLIARDS FOR FAMILY FUN

Tables in 3 sizes, 4 ft., 5 ft., and 6 ft. from 28. 6d. to £16. 16s. 0d., including cue-stick and billiard balls, cues, markers, and rest. Available at all branches. Send for full details from HOBBIES LTD, DEREHAM, NORFOLK.



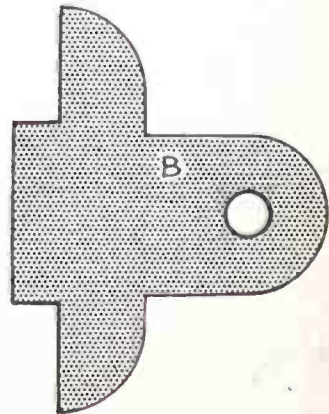
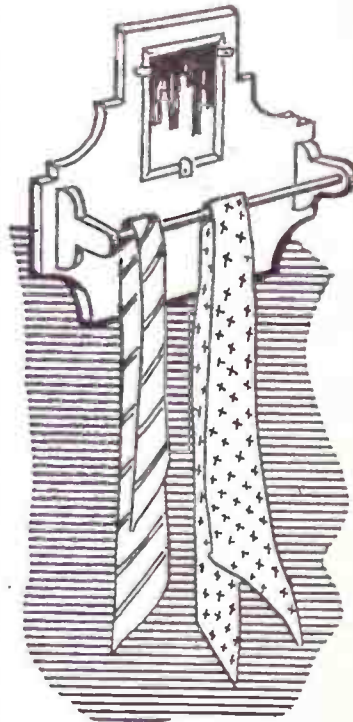
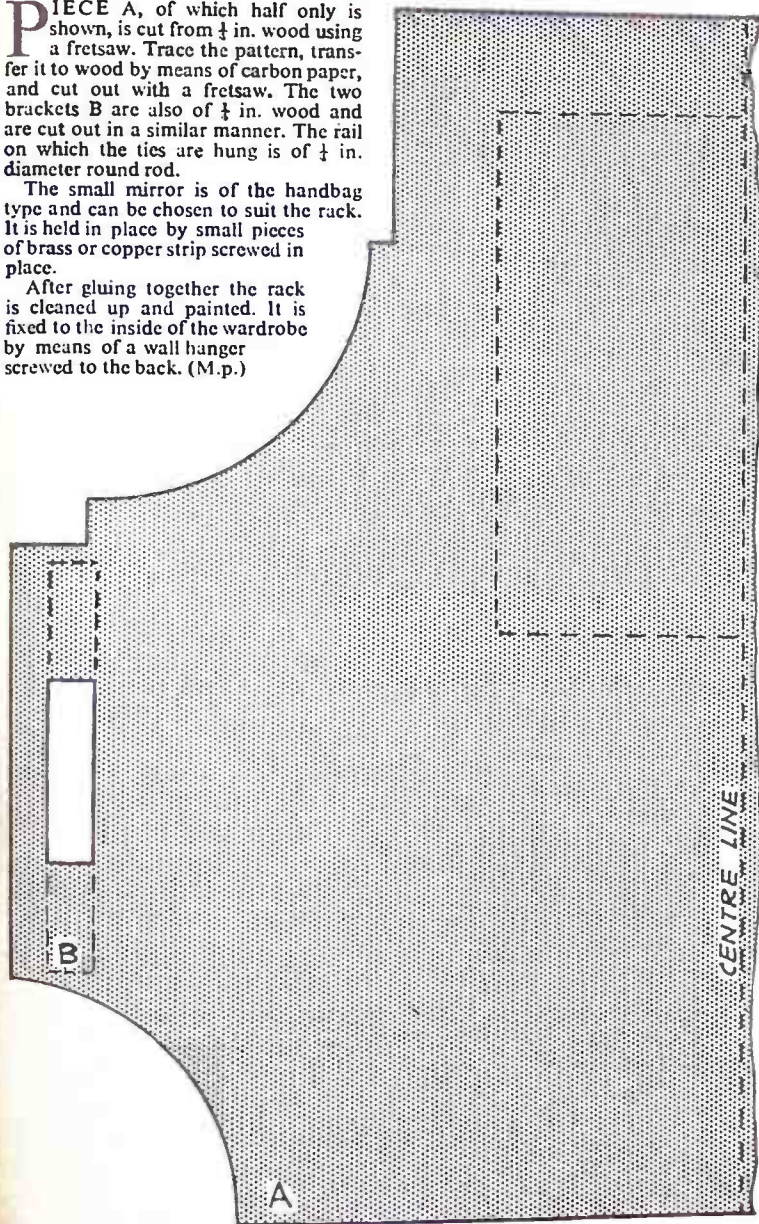
'S' FUNNY, THE FISH DON'T SEEM TO BE BITIN' TODAY, MA'

# Use these Patterns for a Tie Rack

PIECE A, of which half only is shown, is cut from  $\frac{1}{4}$  in. wood using a fretsaw. Trace the pattern, transfer it to wood by means of carbon paper, and cut out with a fretsaw. The two brackets B are also of  $\frac{1}{4}$  in. wood and are cut out in a similar manner. The rail on which the ties are hung is of  $\frac{1}{4}$  in. diameter round rod.

The small mirror is of the handbag type and can be chosen to suit the rack. It is held in place by small pieces of brass or copper strip screwed in place.

After gluing together the rack is cleaned up and painted. It is fixed to the inside of the wardrobe by means of a wall hanger screwed to the back. (M.p.)





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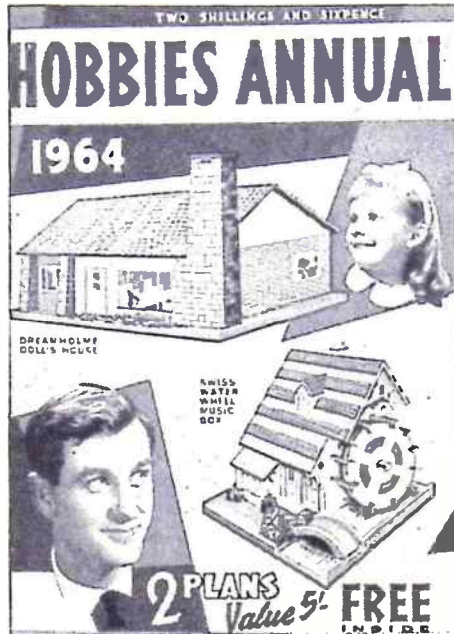
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