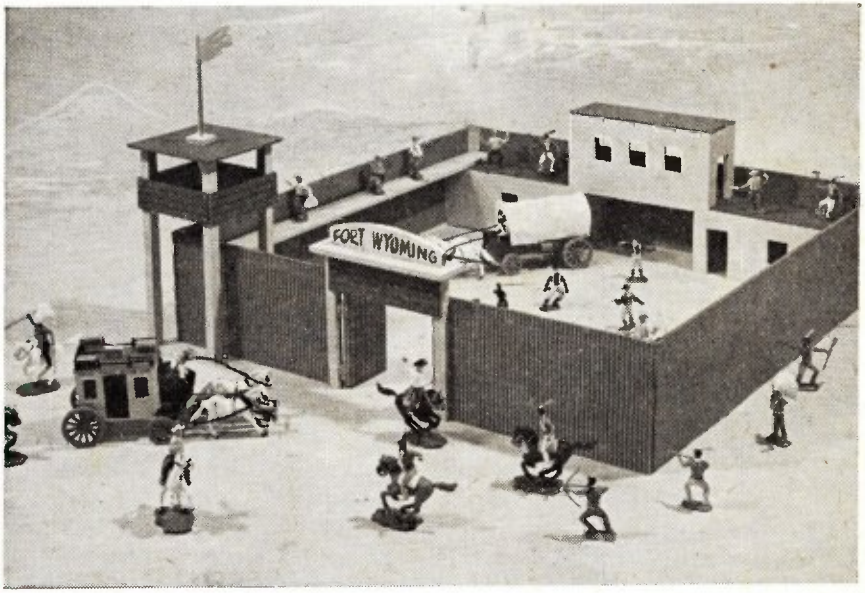
HOBBIES *weekly*

6th MAY 1964 VOL. 138 NUMBER 3569

★ *Free Design*

FORT WYOMING



AN EXCITING REPLICA FOR YOUNGSTERS

Hobbies

FOR CRAFTSMEN OF ALL AGES

6D.

'STAMPS are a country's silent ambassadors', is a statement that is often made when discussing a country or countries that issue an abnormal number of new issues. Many of these are issued for comparatively trivial occasions, and in some cases the number of stamps in the issue is very large, so that the only worthwhile feature is the design.

BRITISH 'COMMEMS'

By L. P. V. Veale

If one thinks for half a minute many examples come to mind — a set of butterflies, of fish, birds, ships, and so on — and generally these come from a country that has very little postal service in the normal way.

It is well worth while occasionally to stop and think just what one gets for the 3d. paid over the counter for a stamp. After affixing it to the envelope, and dropping the letter into the nearest letter-box you set in motion a very complex organization. A postman collects the letter from the box, and takes it to the nearest sorting office. There it is placed into the correct bag so that it may set out on its journey.

The bag is taken by the quickest route. If it is going to a large town, when it arrives it goes direct to the sorting office, and the clerk arranges it in the correct street and in the correct order in that street. The postman delivers the letter possibly 500 miles away from its posting point — and all that for 3d.!

What a contrast with the rates in the olden days, and what a difference in time for delivery. Now we expect a letter to be received almost anywhere in England or Wales within twenty-four hours of posting, and if it takes any longer, then we are tempted to write to the local paper about the delay.

Now let us consider some of our own ambassadors. In this country we have had comparatively few special stamp issues. The first was in 1924, when two stamps (1d. and 1½d.) were issued to commemorate the British Empire Exhibition. As the exhibition was open for a second year, we had exactly the same design for the 1925 issue.

Then in 1929 we had an issue of five stamps (½d., 1d., 1½d., 2½d., and £1) in connection with the ninth Universal Postal Union Congress. Four more stamps came out in 1935 to celebrate the Silver Jubilee of King George V, and in 1940 there was a set of six to mark the centenary of the first adhesive postage stamps (values ½d. to 3d.). Without a doubt there would have been far more made of this centenary had it not been for the war.

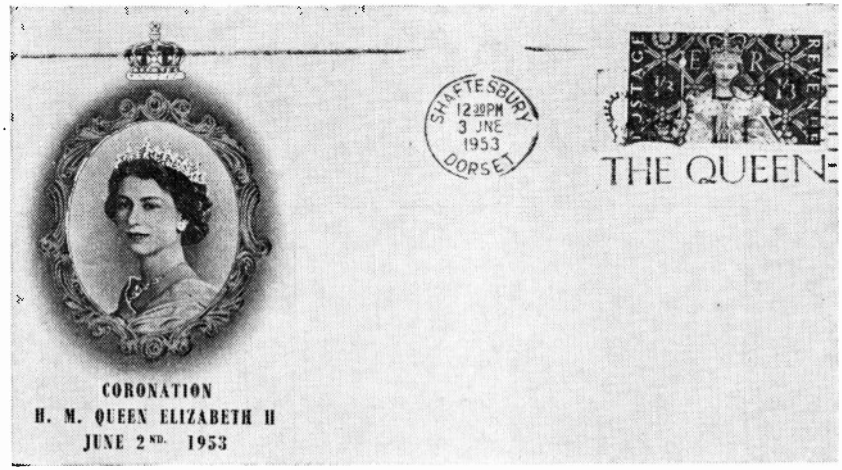
Left: Postal Union Congress May 1929
Centre: The first British Commemorative—the 1924 British Empire Exhibition
Right: The 1957 Inter-Parliamentary Union Conference—only one stamp issued

Then we had the Victory stamps, only two of them (2½d. and 3d.), followed by the Royal Silver Wedding Stamps.

One might almost say that from now on Great Britain started to look for reasons to issue commemorative stamps. Up to this time only the very important events had been commemorated, and these with only a few low value stamps, except, of course, for the £1 Postal Union, and the Royal Silver Wedding.

In 1948 there were four stamps for the Olympic Games. In 1949 (the 75th Anniversary of the Universal Postal Union) there were four more, and in 1951 two others commemorated the Festival of Britain. 1952 saw the start of the new set for Queen Elizabeth II, with the Coronation set of four in 1953. A respite of four years was given until the three stamps which greeted the World Scout Jubilee Jamboree.

One little stamp that is often forgotten (the 4d. blue) came out in 1957 to remind us of the 46th Inter-Parliamentary Union Conference. Here you get an excellent example of how a common stamp



First day cover bearing the 1s. 3d. Coronation Stamp

can be neglected. (Have you got a used specimen of this in your collection?) A great number of people have the unused stamp, but they forgot the used version, with the result that it will cost you far more for a used stamp than for the unused.

The next year (the Sixth British Empire and Commonwealth Games at Cardiff), had three, and again, the used are better than the unused.

The next couple of years were taken up with the issues of graphite lines and phosphor bars until the Tercentenary of the Establishment of General Letter Office claimed two, and the European Postal and Telecommunication Conference had the same.

1961 saw the Seventh Commonwealth Parliamentary Conference, and the same year the Centenary of the Establishment of the Post Office Savings Bank. These were followed by the three stamps marking the second anniversary of the Conference of European Postal and Telecommunications Administration, which was held at Torquay. With a long name like that, it is not surprising that on the stamps there only appears C.E.P.T.

Then we had the three stamps for the National Productivity Year, two for the Freedom from Hunger, and the Centenary of the Paris Postal Conference. National Nature Week demanded two more, and there were three more for the Ninth International Life-boat Conference. Most of these last stamps were issued with the phosphor bars as well, and these should appear in the album just as much as the clear stamps.

We have just had the Shakespearean set, and on 1st July there will be another issue of four stamps to commemorate the 20th International Geographical Congress, which is to be held in London. The values due are 2½d., 4d., 8d., and 1s. 6d. Then on 5th August four more stamps will appear, this time for the International Botanical Congress, which will take place at Edinburgh. These values will be 3d., 6d., 9d., and 1s. 3d.

Now many people rush off to the Post Office as soon as a new issue comes out, and buy a set of the stamps largely to be able to say 'Have you got the new stamp yet'? Then they forget all about getting them in the used condition, so the result is that many of the commemorative stamps that have been issued lately are worth far more in the used state than in the unused.

A very good example of this is the Parliamentary stamp which has been mentioned. A used 4d. stamp only seven years ago, but worth 2s. 6d. now.

A point to remember about our commemorative stamps is that in very nearly every case the highest value shows the best return for expenditure. Look at the 75th anniversary of the Universal Postal Union. The 2½d. is now worth 6d., and the 1s. 0d. is worth 3s. 6d. Just about double for the low value, but three and a half times for the high value (unused). The used is even more noticeable, the 2½d. is 2d., and the 1s. 0d. is 4s. 0d.

The thing to do then is to try to find good specimens of the used stamps from parcels as soon as possible. Unfortunately parcel obliterations are very often heavy. The best way to overcome this is to take a parcel to the post office, and ask the clerk to mark it lightly, and then arrange with the person who is to receive the parcel to send you back the stamp.

GEORGIE FAME

THE speaking voice is still strongly tinged with the accents of Lancashire, but when, eyes closed, he hovers over the keyboard of his electric organ and hollers the blues, 20-year-old Georgie Fame sounds as though he comes right out of America's deep South.

Says Georgie, one-time member of Billy Fury's backing group, The Blue Flames, which he now leads, 'Coloured people have told me that I sing like one of them — and to me that is the greatest compliment I could be paid.'

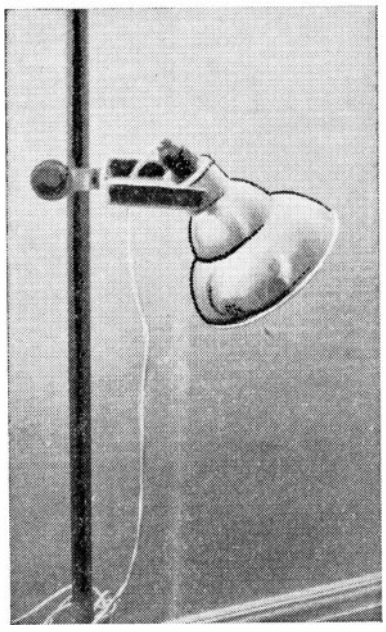
Georgie and The Blue Flames operate from London's Flamingo Club and his driving, earthy music — he calls it 'Rockhouse' — has developed into something of a cult among London's rhythm 'n' blues fans, especially West Indians and visiting Americans.

'Mixing with them has been of great importance in attempting to produce an authentic sound,' says Georgie. 'We have become friends with many of them and this has helped us get the feel of the music better. We knew we were on the right track when we saw them jumping about and really 'digging' the music.

'If I sing like an American, it's something which I do unconsciously, I close my eyes when I sing and I try to put everything into the music. Any feelings I get, like jumping into the air, for instance, I try to convey through the music.'

The sound of Georgie Fame and The Blue Flames was captured on disc at a 'live' recording at the club and Columbia released as a single, *Do The Dog/Shop Around* (DB7193), both taken from an LP, 'Rhythm 'n' Blues At The Flamingo'.

AN INEXPENSIVE LIGHTING UNIT



By B. Sexton

THE equipment consists basically of a reflector pivoting in a U-shaped bracket as shown in the photograph. In turn the bracket pivots on a clip which can be clamped in any position along the length of a 1 in. diameter dowel rod. Because the reflector and bracket pivot separately in different planes the combined result allows the reflector to be directed through an extremely wide solid angle.

Rubber washers, fitted between the pivoting surfaces, increase the friction and ensure that both reflector and bracket remain in any set position. The dowel rod, 1 in. in diameter and 6 ft. long is fixed to a base which comprises a wood platform mounted on two wood strips. To give extra weight, the end of the dowel rod is pushed into a cheap plastic funnel which is then filled with cement.

A plan view of the bracket and clip arrangement is shown in Fig. 1 to which reference should be made during the construction.

The dimensions of the bracket which was made from aluminium, $\frac{1}{8}$ in. thick and 1 in. wide, are given in Fig. 2 and are based on the size of a reflector measuring $2\frac{1}{4}$ in. across the external base diameter. If required, the width of the bracket can be modified to suit the size of an existing reflector, but it is not advisable to use a large, heavy reflector due to the increased leverage exerted on the dowel rod clip. It is advisable to drill the holes after the aluminium has been bent to shape. In this way, the pivot holes can be aligned exactly, thus allowing for any misalignment of the bracket arms which may occur during the bending.

The forming of the bracket, although not difficult, is complicated by the requirement of incorporating a radius on the bends. This radius is necessary because if sharp right angle bends are attempted the resultant strain on the outer surface of the corner will cause the aluminium to fracture.

To form the radius it is advisable to round off the corner of a piece of wood and then bend the aluminium round the wood whilst both wood and aluminium are clamped in a vice. When bending the aluminium, ensure that the bend across the width is exactly at a right angle to the length, otherwise it will be found that the two arms of the finished bracket will not be in line.

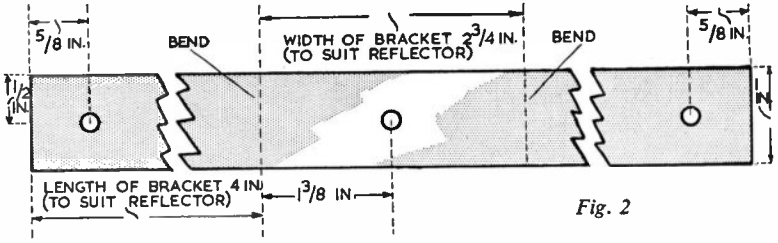


Fig. 2

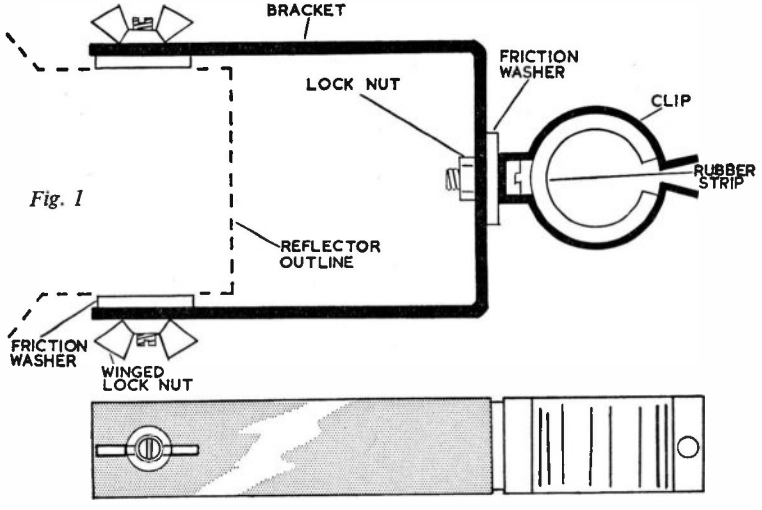


Fig. 1

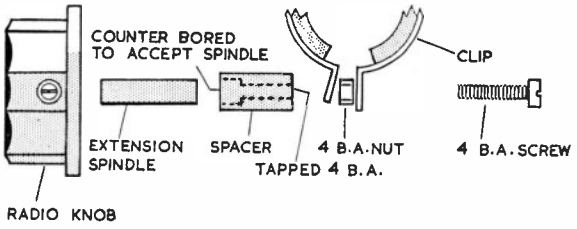
When the bending has been successfully completed, the three holes in the bracket are drilled and tapped 2B.A. The size and type of thread is not important; the specified thread was used only because the pivoting holes in the reflector accepted this size of screw.

When the bracket has been drilled and tapped (the tapping drill for a 2 B.A. thread is No. 26), rub down and remove any burred edges from the bracket with emery paper. After a satisfactory finish has been obtained, the reflector should be held centrally between the bracket arms so that the width of the equal gaps between the reflector and each arm can be measured to obtain the thickness of the rubber washers to be fitted as shown in Fig. 1. Rubber tap washers, obtain-

able in varying thicknesses from the multiple stores, were used. A washer thickness slightly larger than the gap should be chosen so that when the washer is fitted it is compressed to produce the required friction between the reflector and bracket.

The next step is to insert two 2 B.A. countersunk screws from inside the reflector, through the rubber washer and then into the tapped holes in the bracket, but before the screws are fitted, cut a slot in the end of each screw to accommodate a screwdriver blade. The screws are then inserted from inside the reflector and when the end appears through the threaded hole in the bracket, the screw can be turned from outside with a screwdriver until the washer has been compressed sufficiently to obtain the required friction. When this condition has been obtained, the screw is locked in position with a nut which should not be tightened too much or the thread tapped in the aluminium will strip.

The dowel rod clip presents no difficulty and will probably be recognized by some readers as a capacitor clip of the type used in radio and television receivers and is obtainable quite cheaply from repair and service dealers.



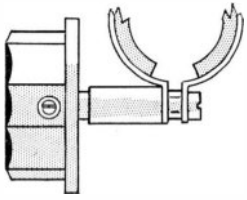


Fig. 3

However, it should be pointed out that there are two types of clips — horizontal mounting or vertical mounting. The horizontal type is required and one should be obtained with an inner diameter of just over 1 in. This increased diameter is necessary because a strip of rubber is to be fitted on the inner surface to ensure a non-slip contact between the dowel rod and clip. The writer used $\frac{3}{16}$ in. rubber and as a result a clip of $1\frac{3}{8}$ in. was used. To adapt the clip, a 2 B.A. clearance hole for a pivot screw must be drilled exactly in the centre of the base.

Before the rubber strip is fitted, a 2 B.A. round-head or cheese-head screw must be inserted through the hole but it may be necessary to file down the edges of the head of the screw so that it seats properly inside the clip. See Fig. 1.

After the screw head has been fitted, the strip rubber is stuck to the inside of the clip and when the adhesive has set a hole must be drilled through the rubber so that a screwdriver can be located in the slot in the screw head. Also the ends of the rubber strip must be examined and if necessary chamfered to ensure that they do not prevent the clip closing when it is tightened round the rod.

Next, a rubber washer is fitted round the pivot screw and then the screw is inserted in the threaded hole in the bracket. The screw must be tightened until the washer is compressed sufficiently to produce the necessary friction. Afterwards, lock the screw in position with a nut.

The arrangement for the clamping adjustment of the clip is shown in Fig. 3. Fitted to a 6 B.A. screw, which is locked to one side of the clip, is a radio control knob with a tapped extension spindle that tightens down on to the other side of the clip. This extension spindle is necessary to ensure that as the control knob is tightened it is held clear of the periphery of the dowel rod.

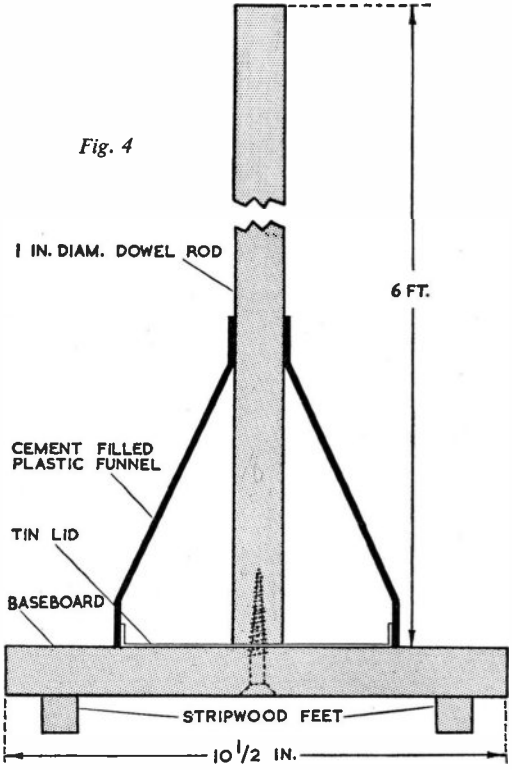
The dowel rod support is 1 in. diameter and approximately 6 ft. long. The base of the unit comprises a wooden platform mounted on two wood strips. To introduce extra weight, the end of the dowel rod is pushed into a cement-filled plastic funnel.

The base is of a simple construction and is shown in Fig, 4. The end of a plastic funnel is cut down and softened by heat so that it can be stretched. Whilst the end of the funnel is pliable, the end of the dowel rod is pushed through until it is level with the top of the funnel. A tin lid is then obtained which will fit snugly inside the funnel as shown. A small pilot hole is drilled centrally in the end of the dowel rod and also in the centre of the tin lid. These holes ensure that when the tin lid is fitted and the holes aligned, the dowel rod is then exactly in the centre of the funnel mouth. The funnel is filled with cement, the lid is fitted and a small screw used to hold the tin lid and dowel rod in alignment. When the cement has set, the small screw is removed and the dowel rod is fixed to the base board by a larger screw as shown in Fig. 4.

If required, two wood strips can be fixed to the underside of the base to act as feet. Finally a bayonet type holder for the lamp bulb is wired and fitted to the reflector.

Two such units have been in use for several months and have proved to be a successful addition to the lighting equipment.

Fig. 4



CARBON and CRYSTAL 'MIKES'

SURPLUS carbon microphones are obtainable at quite low cost, and may be used to work headphones or a loudspeaker. They give a much stronger signal than any other type of microphone, so are most useful when best possible volume is required from a simple amplifier.

By 'Radio Mech'

The carbon microphone has two electrodes or plates, the space between them being packed with carbon granules. One plate is fixed to the microphone casing, and the other to a diaphragm. When sound waves strike the diaphragm, pressure on the granules varies, and this causes a change in the resistance through the granules. It is important to remember that the carbon microphone does not actually produce any electrical output. Instead, it acts as a varying resistance to an electrical current which is provided by some other source — usually a dry battery.

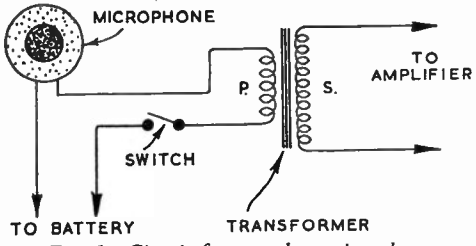


Fig. 1—Circuit for a carbon microphone

Carbon mike circuit

A suitable circuit for a carbon microphone is shown in Fig. 1. Current from the battery flows through the microphone, and through the primary of the transformer. The switch interrupts the circuit when the microphone is not in use to avoid unnecessary drain on the battery.

Dry batteries of the kind used for hand-lamps and torches may be used. A very high voltage is not wanted. Most ordinary carbon microphones work well with a 3V or 4½V battery (2-cell, or 3-cell). If the battery voltage is low, sound output from the circuit is less, but background noise is also reduced. Increasing the voltage increases the output somewhat, but may cause a lot of background noise. It is quite easy to try batteries of 1½V to 6V or so, to find which will be most satisfactory.

Some surplus microphones have an on/off switch fitted in the handle, and the separate switch is then not needed. A spring loaded push switch, which has to be held down to keep it on, is useful, but any type of on/off switch can be employed.

Transformer

The transformer has a low resistance primary, so that current can flow through the microphone readily. The primary is marked P in Fig. 1.

The transformer secondary S has very many more turns, and this provides a voltage step-up, so that an increased voltage is obtained from the secondary. The step-up ratio of a carbon microphone transformer is usually about 50:1 or 100:1.

If a loudspeaker output transformer is to hand, this will often be found to work well as a microphone transformer. Output transformers usually have a ratio of about 30:1 to 60:1. If this kind of transformer is used, it is important to note that the low resistance winding (normally connected to the loudspeaker) becomes the primary, and is wired to microphone and switch. The high resistance winding (usually connected to output valve and high tension) acts as secondary.

The output from the microphone, with battery and transformer, is sufficient to give good loudspeaker volume, with a simple 2-valve amplifier. If a telephone or similar device is to be made, high resistance headphones may be connected directly to the transformer secondary, no further amplification being needed.

Crystal inserts

A crystal microphone uses a special piezo-electric crystal, usually attached to a diaphragm. When sound waves vibrate the diaphragm. the crystal generates an electrical output.

The actual working part of a crystal microphone is the crystal insert, and these are often sold separately for a few shillings. The same type of insert may be used in all sorts of different microphones, to be held in the hand, or to place on a table, or with a high stand, for the floor.

The crystal microphone or crystal insert does not need any battery, switch, or transformer, because it generates the electrical output itself. The quality of reproduction obtained is much better than with a carbon microphone, so the crystal mike is very suitable for musical performances, or all cases where good reproduction is wanted. The output of the crystal microphone is very much smaller than that of the carbon mike with its transformer and battery, however, so an amplifier having three or four valves is generally required.

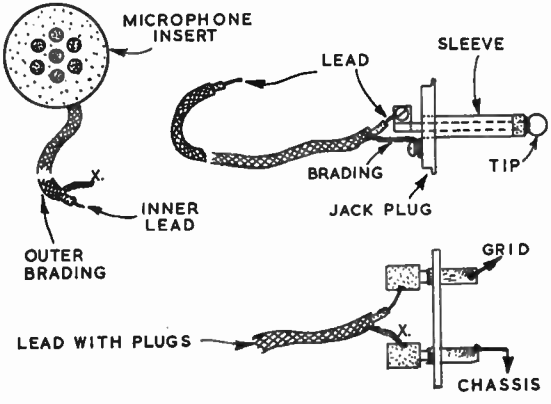


Fig. 2—Crystal microphone insert and screened leads

The crystal microphone should be fitted with a screened lead. This has an inner lead, Fig. 2, covered with insulation, and surrounded by the outer metal brading. This brading acts as a screen for the central wire, to avoid hum or other troubles being introduced. The outer brading may, in turn, be covered with rubber or other insulation.

A jack plug is often used for an amplifier. Such a plug is shown in Fig. 2, with cover removed. The inner lead of the mike cable passes to the tip connector, while the outer brading is taken to the sleeve screw. The pigtail X can be made by unweaving the brading for an inch or so, with a pointed tool. The strands of

● **Continued on page 71**

MAKE THIS RING-A-REEL GAME

ONLY two objects have to be made for this game — the hoops, and the stands over which the hoops will be thrown.

The base of each stand consists of a piece of wood 2¼ in. by 2¼ in., and ⅜ in. to ½ in. thick. Along the top edges is run a ⅛ in. chamfer. On to these bases are fixed three cotton reels, and they can be fixed in two ways.

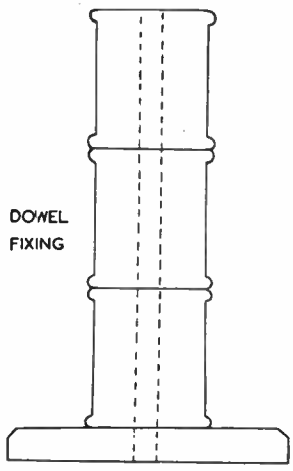
A dowel is run through the centres of the three reels and also through the base, a hole being drilled to receive it. The base can also be nailed from underneath to the reels.

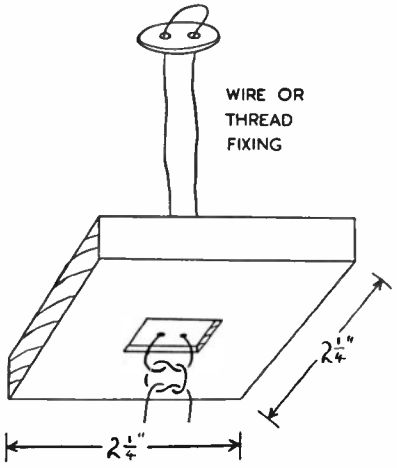
Alternatively a piece of string or thin wire is threaded through a button. The ends are then passed down the centres of the three reels and also through two small holes drilled in the base. The ends are pulled tight and tied, or twisted if wire, underneath the base. If a small groove is cut below then the knot will not prevent the reels and base from standing upright.

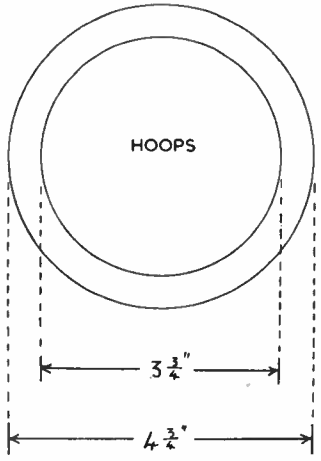
The finished stands should be painted in bright, attractive colours and can be numbered.

The rings are made from cardboard or thin plywood. If the cardboard should be too thin then two pieces can be stuck together.

The outer circle of each ring has a diameter of 4¾ in. and the inner circle (to be cut away) is 3¾ in. These also should be brightly painted.







Any number of stands and rings can be employed when playing, but possibly 6 stands and 5 rings will be found quite suitable. (A.R.W.)

● **Continued from page 70**

CARBON and CRYSTAL 'MIKES'

thin wire are then twisted together, and may be soldered. The insulation must be long enough to prevent any short circuit between inner lead and outer brading.

Some radio sets and amplifiers have pick-up or input sockets which take separate plugs. If so, the inner lead must go to the valve grid circuit. The brading pigtail X goes to the chassis circuit, Fig. 2. If these plugs are reversed, hum and other troubles, such as continuous howling, may be expected.

Using a microphone

When sounds are to be reproduced through a loudspeaker, the microphone must not be too near the loudspeaker, or howling will be caused. This is particularly likely with a sensitive microphone, and when the volume control on the radio or amplifier is turned toward maximum. The cure is to move the mike farther from the loudspeaker, and to place it so that sounds from the loudspeaker do not reach it too strongly.

For singing or speech, the microphone is usually some 12 in. to 18 in. from the performer, though this depends on the voice. For best results, the distance between performer and microphone should usually be fairly large.

For musical instruments, the microphone can be placed a few feet away. An exception is an instrument such as the guitar, where the microphone insert is often fixed to the soundboard. This gives much more volume.

If the circuit has been correctly wired, and all connections and leads are in good condition, enough volume will be obtained when the radio or amplifier has sufficient amplification. A large degree of amplification is wanted for a crystal mike, but much less for a carbon microphone.

Instructions for making

'FORT WYOMING'

THIS grand representation of a typical American cavalry fort will please all youngsters, especially those who watch the television programmes such as Wells Fargo, and Boots and Saddles. It has been designed to cover an area of 24 in. square, but this size could conveniently be reduced by shortening the sides (13). This will in no way affect the buildings and layout in the front and rear, but will save on space if this is necessary.

The stockade sides are made from a specially pressed hardboard called 'bamboo', which gives a real log-like effect on this fine scale model. Further decorative effect is added by the use of reeded hardboard for the doors, roofs, etc, and plywood is used for buildings. The layout contains all the usual cavalry fort features, including accommodation buildings, lookout tower, and firing platforms.

Our photograph on the front cover shows a typical scene which can be set out by an imaginative youngster, and there are many alternative groupings which can be arranged, depending upon the figures available. Notice the stage coach swiftly entering the opened gate of the fort, and on the parade ground there is a covered wagon. The fort is being defended by cavalry troops and scouts against marauding Indians. Effective use can be made of both mounted and foot figures, and the layout gives scope for endless varieties of action scenes.

Hobbies Ltd have a grand assortment of these colourful figures, including the Covered Wagon and Wells Fargo Express Coach. Some of these are pictured on the back page.

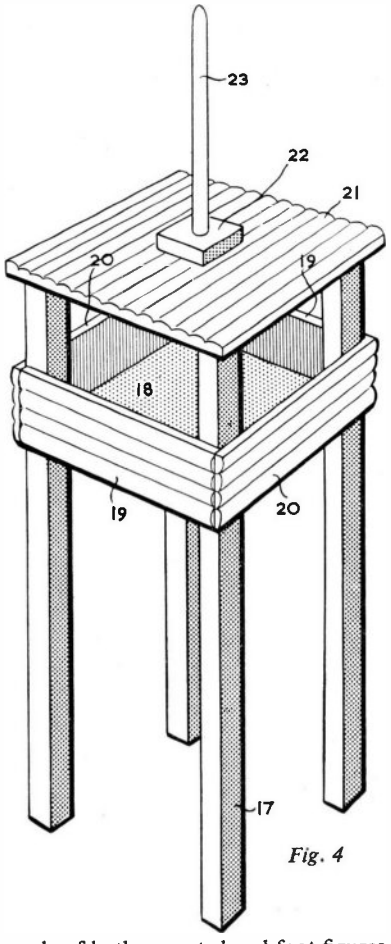
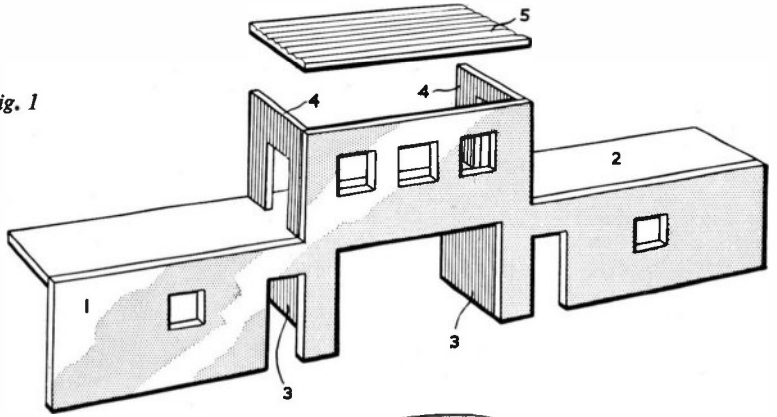


Fig. 4

Fig. 1



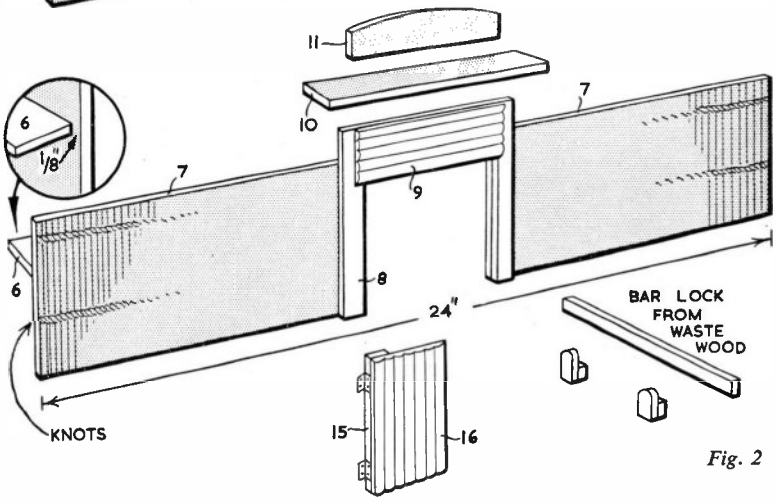


Fig. 2

The make up of the fort is extremely simple, all parts being glued and pinned together. The hardboard is left in its natural state, and needs no extra finish. A little colour can be added where necessary on the wood parts.

Hobbies kit contains everything necessary for building the model including paint, glue, pins, wood, and special hardboard. The only tools required are a hammer, fretsaw, and a bradawl or drill. The hardboard, incidentally, MUST be cut with a fretsaw. A coarser saw will flake the 'bamboo' hardboard on the underside. When cutting the hardboard it is not necessary to line up the 'knots' for the sides and back as 'staggering' will give a less formal effect.

On the design sheet the measurements of the plain pieces are given, but detailed parts are shown full size ready for tracing and transferring to the material. Note that piece 1 is 'half only', this half being traced and transferred in order to complete the whole.

Mark the various parts out on to the ¼ in. plywood and specified hardboard, making sure that all have been accounted for before cutting out with a fretsaw, and cleaning up.

Make a start on construction by gluing and pinning piece 1 to the platform (2). Then add partition pieces 3 and 4, finally capping with the roof of reeded hardboard (5). This assembly is shown in Fig. 1.

Now make up the front as seen in Fig. 2. Pin 'bamboo' pieces 7 to the platforms (6), which should be ⅛ in. in from the corners, and 1⅜ in. down from the top. The entrance is made up from pieces 8, 9, 10 and 11, and the doors from pieces 15 and 16. Note that the doors are hinged to open inwards. A bar lock can be made from waste wood to fit on the inside of the doors, as is clearly shown in Fig. 2.

Finish the stockade by pinning the back (12) to the platform (2) overlapping ⅛ in. each end. Pin the sides (13) to the platforms (14). These side platforms are 1⅜ in. down from the top. Pin the sides and platforms in place to complete the assembly as shown in Fig. 3.

Cut suitable lengths of triangular fillet which will be glued in corners where practicable to strengthen the whole assembly.

The observation tower is made up as shown in Fig. 4. First fix pieces 19 to the uprights (17), the lower edges of pieces 19 being 6¼ in. up from the bottom. Now add the platform (18) pinning through pieces 19. Then add the other two side pieces (20) finishing off with the addition of the roof (21). The flagpole (23) is glued into the step (22). A flag can be added to the mast if required. The tower is free standing, and can be placed in either of the two front corners.

Finish off the model by painting the face of the buildings, the framework of the gate, legs of tower and flagpole, in matt pale blue. The rest of the woodwork (firing platforms, etc) should be in matt dark green. The words 'Fort Wyoming' or a name of your own choice can be added to the name board over the entrance to the fort.

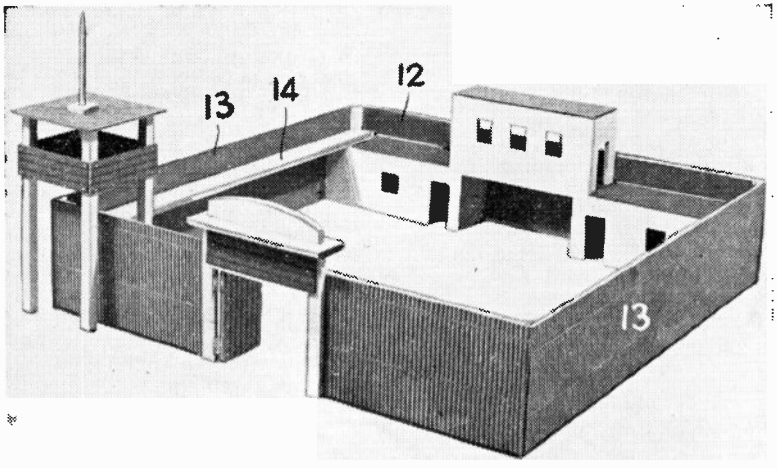


Fig. 3

★★★★★★★★★★★★★★★★★★★★★★

★ ★

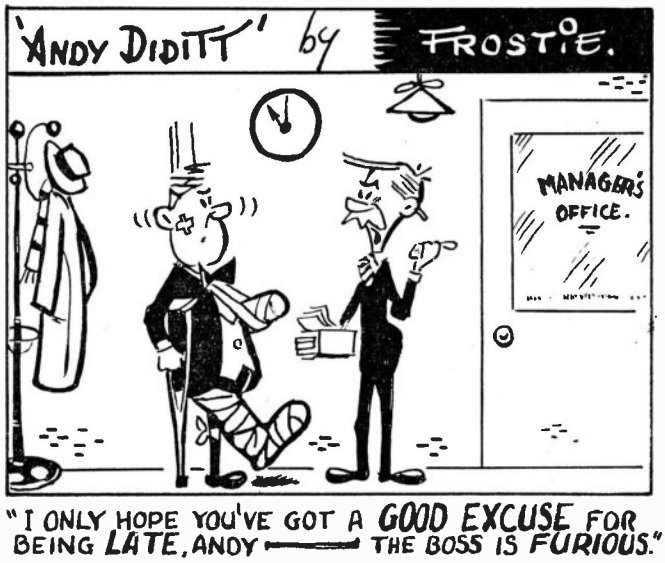
★ **Kit for 19/11** ★

★ ★

★ **Hobbies Kit No. 3569 for making** ★
★ **this realistic Cavalry Fort contains** ★
★ **plywood, bamboo and reeded hard-** ★
★ **boards, stripwood, hinges, screws,** ★
★ **nails, glue, enamels, etc. All for** ★
★ **19/11. Kits from branches, etc.,** ★
★ **or by post (3/6 extra) from Hob-** ★
★ **bies Limited, (Dept. 99), Dereham,** ★
★ **Norfolk. (See page 80 for model** ★
★ **details.)** ★

★ ★

★★★★★★★★★★★★★★★★★★★★★★



NEWS OF GNUS

THE Cologne Zoo management is making picture-taking easier for amateur photographers. Unlike many other zoos throughout the world which require a special photographic permit or keep photographers too far away from cages and compounds to get the shots they want, the Cologne Zoo encourages photography.

The zoo director, who is an avid animal photographer, has set aside special hours during which amateurs are permitted much freer access to the animals than ordinary visitors. In addition an advance letter to the director often results in even more photographic freedom — although no request to photograph a lion's molars at six inches has yet been granted!

So if your holiday plans this year take in West Germany, a visit to Cologne might bring in a new view of a gnu at the zoo. (E)

A novel application

RELIEF PICTURES

PICTURES may be painted with water colours, drawn with crayons, pencil or ink but a novel and fascinating method is the production of pictures in relief. The only tool required is a sharp modelling knife but it is an advantage to use a pen-nib trimmer, which fits into a penholder and is convenient to hold.

You will need a sheet of stiff white paper, the knife and a pencil for the preparation of the basic pattern. And to prevent damage to the table top we suggest a piece of stout cardboard for a cutting board.

By S. H. Longbottom

When good quality white paper is used — something similar to a thin grade of card — the relief portion stays in position after folding and there is no limit to the variations we can produce. For example, we may prepare a relief picture of, say, a bird, cutting and folding small sections to represent the feathers or wings; it may be a flower with petals or a miniature street scene with houses which stand erect with open windows.

In Fig. 1 you will see that we have prepared a small street scene with two houses and a tree. The windows have been cut out and the shutters opened while the buildings and tree stand erect. This is only a simple scheme and you will no doubt realize that it could be amplified to make a small farmyard scene with buildings and animals.

We first make a preliminary sketch, making any measurements which may be necessary to ensure that the windows are of the same size and in alignment. These details are then cut. Note that the window spaces are cut through along the top and bottom and down the centre only, then scored at the sides where they are supposed to be hinged. Doors are cut at the top, bottom and down one side.

It is important to note that the folds are scored with a blunt tool and also that, in the case of doors or windows, these scores are exactly at right angles to the base. If this detail is not observed the creases will be uneven and any discrepancy of the hinging will be apparent. Base scoring of window frames must be at right angles to the sides.

When the details have been cut we can then cut out the outside of the house excepting the base line, which is scored and folded upwards in the erect position. A further examination of the illustration will quickly reveal what has been done. Incidentally, further detailed work could have been done on the tree.

In Fig. 2 you will see a relief picture of a flower. This is first sketched in pencil as already mentioned. The petals are next cut out and we should draw your attention to the centre of the flowers where small triangles have been cut to give a texture. The petals and leaves can then be folded upwards and curved as desired. Note that the stalk is cut down one side only.

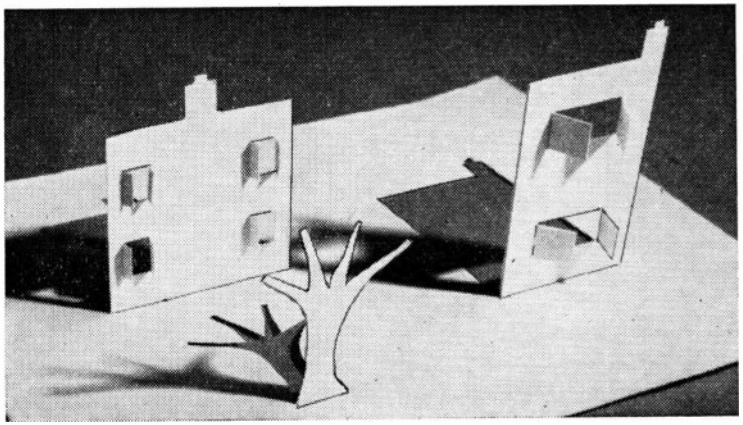


Fig. 1—Basis for a street scene

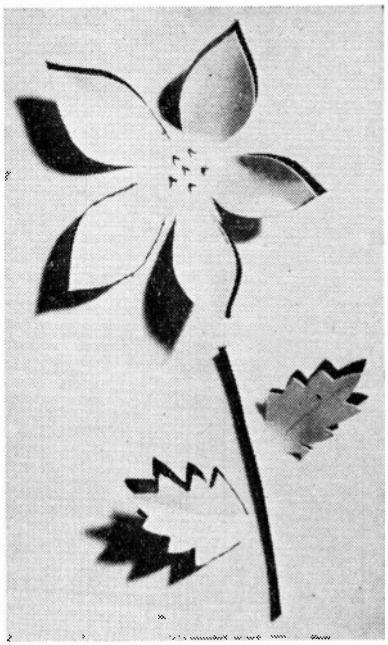


Fig. 2—Relief picture of a flower

Whether these relief pictures are ultimately coloured remains at your discretion but now note some other variations of the process.

You may obtain basic pictures from magazines or painting books and stick these on to some thin card, cutting out the main features as described to make reliefs. Or you may trace any features you like on to transparent tracing paper and then transfer to white paper.

Our two illustrations indicate the different treatments. The houses have been cut and raised to the vertical while the flower is purely a relief picture. Your own pictures may be treated similarly and flowers or animals may be made into relief pictures. Obviously, it is most difficult to make flowers stand upright on slender stalks, although there is no difficulty with animal pictures.

Another modification of this work is the production of repetitive relief patterns. Here it is better to prepare a basic template so that all the shapes will be identical, first tracing them on to the paper in their respective positions. These are then cut out and scored and raised from the paper surface to make really intriguing designs. Triangles, squares, discs and the like can be the motifs for such patterns and the simple methods described will enable you to make all types of fascinating and original relief pictures.

Ledge-&-Brace Door

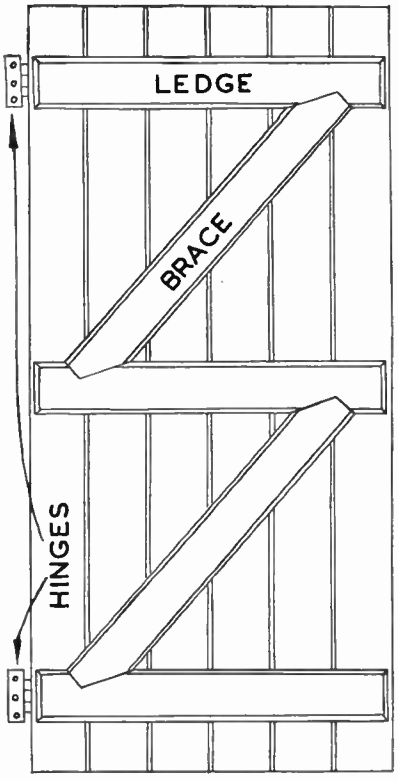
A SIMPLE type of door can be constructed from tongue and groove boarding even if you have little or no knowledge of carpentry. The wood used can be bought in the required lengths, and will only need sandpapering and painting on facing surfaces before assembly. It is a type of door which has many uses — for sheds, chicken houses, lean-to's, small garages, and the like, but is cheap and easy to construct, as well as being strongly made.

The boarding used may be ¾ in. or ⅞ in. thick, and the ledges and braces are 1 in. and 6 in. or 7 in. in width. If the door is to be, say, 6 ft. 6 in. high, the necessary width will be 3 ft. when the outside tongue and groove of the outer boards have been planed off.

Commence by assembling the boarding to the necessary shape, after painting, and place the ledges square across them. It is an advantage to bevel them all round as shown, as this prevents accumulation of water from condensation, etc., and possible warping.

The braces will be bevelled on the edges only. Screw each ledge to an outside board, cramp the boarding, and screw the other ledge ends to the opposing outer board. Turn the door over, and complete by nailing the ledges through. The braces run upwards and away from the hinges for the required compression. Square-end each one part way, then slope to the edge of the ledges as shown. Do not notch the ledges too deeply to take the fitting braces, as the latter must be a tight fit. Slack will allow the door to get out of shape and subsequently warp. Nail the brace into position, and square off the ends of the door to the required height.

Low or smaller doors will need only two ledges, with one brace between. Use white-lead paint for joints to ensure they are well sealed against water. Complete the door by painting or staining as desired. (A.G.)



KEEPING DOVES AS PETS

TURTLE doves are the most adorable pets I have ever kept. When I started keeping them I knew as little about them as anybody.

I keep them in a warm room and spend many happy hours with them. Occasionally I open the cage door and let them fly round the room and perch on my shoulder. They won't fly away because they are a very domesticated strain. Not like a sparrow I once had. She soon flew away.

My doves feed on hempseed, wheat and millet and occasionally lettuce leaves. I also let them have fruit biscuits sometimes and the antics they perform when I give them this little treat provides me with no end of amusement.

I give the female lime, in order to build bones when the young ones come on the scene.

Compared with other birds, doves are very clean and their droppings are dry and for this reason the cage is very easy to keep clean and hygienic.

I don't quite know why I started keeping them in the first place but wouldn't be surprised if I'd been influenced to some extent by watching magicians such as Jimmy Rodgers and Channing Pollock producing them from thin air.

No strain of bird which one keeps as a pet today is wholly wild or wholly domesticated. The nearest variety I know of is the Barbary Dove which has a delicate chuckle — a musical mixture of approval and soft laughter — like the Mona Lisa smile set to music if there is such a thing.

The turtle dove is not a 'show' piece like some domestic pet birds but has an impressive soft plumage ranging from subtle beige to mahogany and on to a rose with a touch of yellow. This is relieved by a 'collar' which is black and marks the slender head from the shoulders, leaving the throat untouched.

The collar, incidentally, does not appear until the bird is 3 months old.

After puberty the young birds mate and the female lays two eggs, roundish rather than the conventional oval shape. These are double yoked.

The male bird is a 'show-off', naturally, and his voice is twice as loud as the female.

When he is annoyed he casts his head on one side and throws 'villainous' glances at you as if warning you to keep your distance or else . . .

The vocal range of these birds ranges from a strong pæan, usually at mating time, through to a soft musical sound.

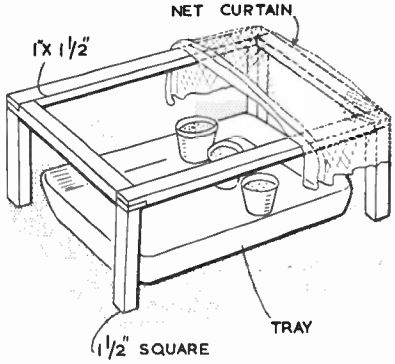
It is interesting to note that it is 3 months or so before the young birds find their voices.

When the young birds do come on the scene they look like prehistoric monsters — so limp and pathetic — not unlike embryo 'flying lizards', but they don't stay that way for long.

Feeding is quite a 'ritual' and unlike the methods adopted by other birds. The parent birds store half-digested food in their crops and when the young birds feed they stick their beaks down the parent's mouths and devour a gummy substance.

Yes, it's turtle doves for me and I can watch them for hours, talking to them and getting a response from them as they coo and answer me. And when they start preening themselves and strutting about the cage as if they were little lords in their own right I feel that it's all so worthwhile. (D.B.L.)

GROW CACTI FROM SEED



MANY cacti and succulents are comparatively easy to raise from seed, if the correct conditions are provided. It is extremely interesting to watch the seeds germinate and develop, eventually taking on their true shape.

The seeds are not necessarily slow in germinating, but many are very slow in developing. It is therefore essential that conditions are not conducive of fungus or algae growth. The first essentials are heat, moisture and slight shade. Night temperatures should not fall much below 60°F, but the daytime temperature could go as high as 90° to 100°F. For this reason May and June are suitable months, usually giving high temperatures under glass. Choose a time of settled sunny weather for seed sowing, making maximum use of the sun. A little bottom heat may be provided if necessary.

To provide slight shade and moisture, a contrivance such as that shown in the diagram may be constructed from odd pieces of timber. The pots are stood in a plastic tray and the whole covered lightly with a piece of net curtain. The latter provides light shade and at the same time allows for a free circulation of air. The shade should continue for the first three or four months until the plants are ready for transplanting.

The seed compost should consist of one part leafmould to six parts of gritty sand. Both are sifted when dry, using a fine sieve (borrowed from the kitchen). Use the fine leafmould which passes through the sieve and the coarse sand remaining in the sieve. Mix together and sterilize by heating in an open tray. It could be put in a moderate oven for about 45 minutes. Use new pots, soaking them overnight before filling.

To fill, first place a small wad of cotton wool in the bottom of the pot, pulling up a wisp or two to the top of the pot. Pour in sufficient compost to come to within ½ in. of the top of the pot. If the pot is stood in a saucer of water the cotton wool should draw up the water to soak the compost and a test should be made before filling all the pots.

Sow the seeds on the surface, spacing them evenly and pressing down lightly. Each pot should be soaked in a dish or bowl of water and the seeds then lightly covered with coarse gritty sand.

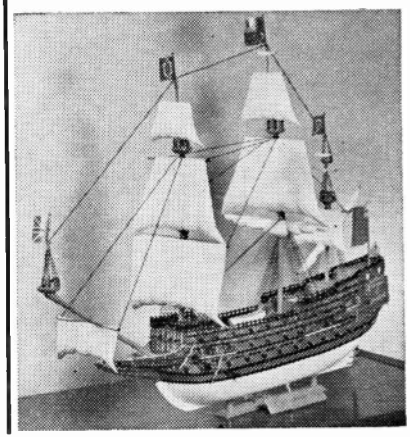
Stand the pots in the tray and keep a minimum of water in the bottom of the tray. This will be gradually drawn up into the pots by the cotton wool keeping them moist at all times. Cover with the net and inspect regularly. It will be an advantage to use boiled water, at least during the first few months of growth.

Germination of some seeds will take place within two or three weeks, and some may develop rapidly. These can be removed after a few weeks, and after three or four months can be watered overhead.

It is unlikely that any will be large enough to transplant during the first season. They should be kept reasonably dry during the winter, only watering once a month and omitting water altogether during severe weather. Make sure that the temperature at this time does not fall below 40°F. (M.h).

THE AIRFIX 'ROYAL SOVEREIGN'

ONE of the most ambitious plastic construction kits to arrive on the modellers' market is the 'Royal Sovereign', Britain's first 100-gun warship, launched in 1637.



The largest number of moulded polystyrene parts ever produced by Airfix for one model — 297, plus a vacuum-formed polystyrene sheet of sculptured sails, coloured flags and rigging — go to make up the model, which costs only 17s. 6d.

Months of historical research by Airfix technicians at museums and libraries ensure complete authenticity of detail in the accurately-scaled model, which measures 17½ in. in length and 16 in. in height.

Another new kit from Airfix is the Douglas Boston III aircraft, used as a torpedo carrier during the war. Measuring 8 in. in length, and in 1/72 scale, the kit costs 4s. 6d. The famous Liberator, another plane in the same series and measuring 11 in. long, can be made for 7s. 6d.

The fourth locomotive construction kit produced by Airfix is for a Saddle Tank J94 in OO/HO scale. This costs 3s.

MODEL CARS by CARMOD

THE Mercedes Benz SSK, the letters standing for 'Super Sports Kurz (short), and the racing version 'SSKL' (licht) were introduced in 1929, and followed on the 36/220 and 38/250 SS cars, which had had so much success since their introduction in 1927.

MERCEDES BENZ SSK 1929

Probably the greatest achievement of the SSK was the 1929 Tourist Trophy, run in pouring rain, when it was driven by Rudolf Caracciola, who, some racing historians believe, was one of the greatest drivers of all time. The 38/250 Mercedes from which the SSK was developed was heavy metal indeed, but the SSK, lightened for competition, although still Teutonic in appearance, had considerable finesse. The Lesney Model of Yesteryear Mercedes 36/220 makes ideal basic 'chopping' material for the SSK, and it is certainly not a difficult model to convert, the task taking something like two hours' use of file and hack-saw.

The first step is to strip the model down to its primary components (except for the wheels and the windscreen, which must be left in place). The stripping is achieved by filing off the two button-ended rivets on the underside of the car. Headlamps and rear seat can be discarded.

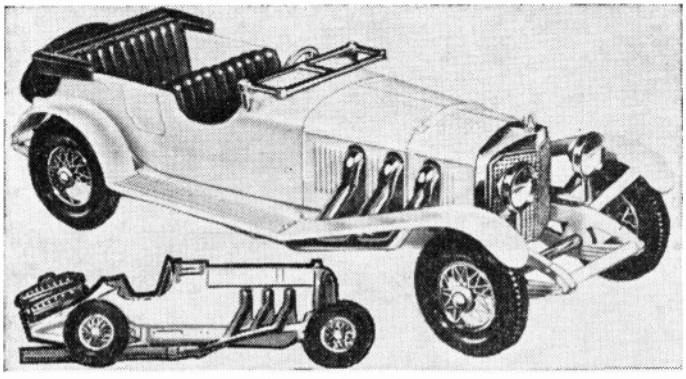
To take the chassis first, wings and running boards must be removed by hack-sawing through the brackets flush with the chassis side members. The chassis can now be shortened by sawing out a section of 4 mm. in width. To obtain a straight line it is best to remove this section immediately forward of the rear springs, after which the two parts of the chassis can now be rejoined, using a metal-to-metal adhesive, and by reinforcing the joint with plastic metal on the underside of the chassis platform.

Attention can now be given to the body. The scooped-out arm-spaces on either side must be enlarged (see illustration), and the rear end of the body should be cut off with a tapering cut, starting 15 mm. behind the windscreen. This cut should be angled so that the base of the body meets the chassis at a point approximately 5 mm. in front of the rear spring terminations. The removed rear end can now be prepared for relocation by sawing off the two sides to a line as close as possible to the inside angle.

After the removal of the rivet from the rear end this can now be reset with a metal-to-metal adhesive, so that the top is just below the line of the bonnet. The floor can now be cut across a line approximately 17 mm. from the dashboard.

It is necessary to file the sides of the rear body so that they make a close fit over the rear springs. This can only be done by trial and error. The exhaust pipe should also be shortened to suitable length.

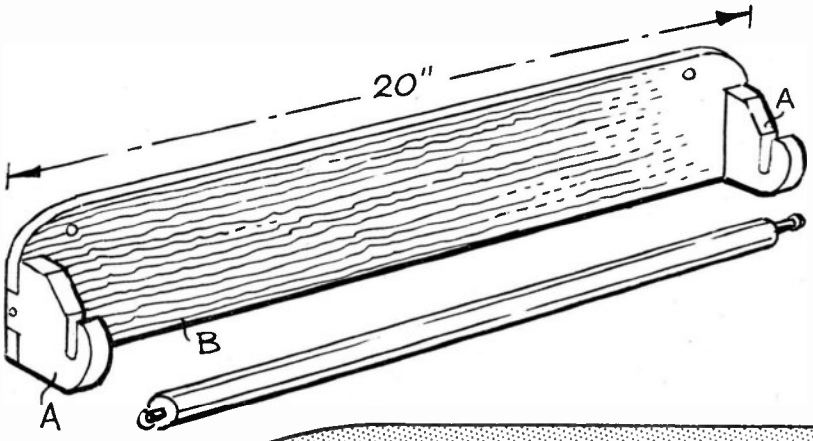
The car can now be reassembled with the front seats relocated to allow them to make contact with the back of the car. Gaps in the rear end are filled with plastic metal, and the two spare wheels are set in before this material has hardened, so that they slightly overhang the rear. The gaps which were caused by the removal of the headlamps should also be filled with plastic metal. After touching up the raw parts with white paint, the model is completed.



The Matchbox model and its conversion

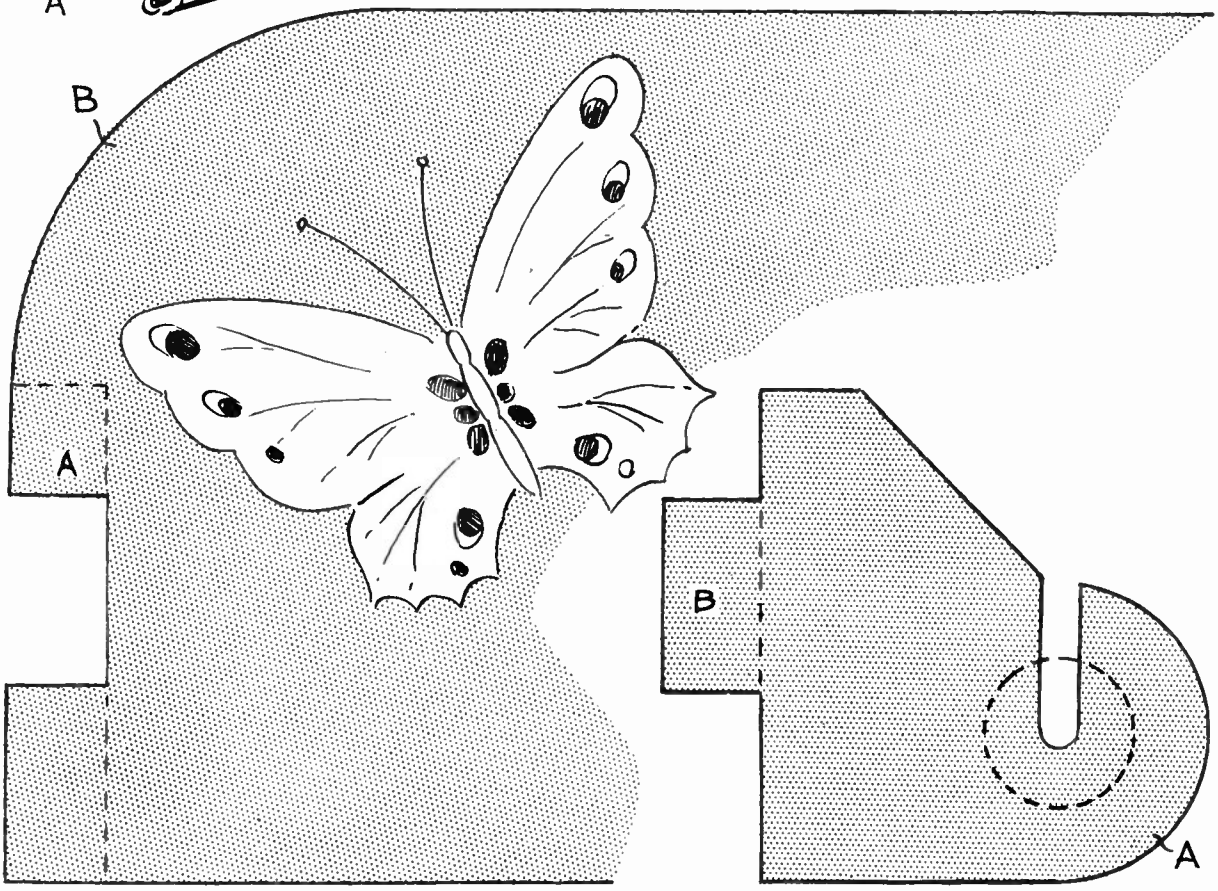
The next article in this series will deal with the Paddy Hopkirk Mini Cooper S, 1964 Monte Carlo Rally winner, and Works Cooper Mini in racing form, using Corgi basics.

TOWEL RAIL



MAKE the towel rail from ½ in. wood, cutting two ends A and one centre piece B. The centre piece is 20 in. wide as suggested in the sketch. The roller is of ¼ in. or 1 in. diameter round rod, with a round-head screw at each end.

Clean up, and give two undercoats, finishing with a top coat of high gloss paint. The centre piece is decorated by adding butterfly transfers along the whole length. Take the butterflies from the Decorette transfer No. 173, costing 2s. 3d., postage 3d., from Hobbies Ltd., Dereham, Norfolk. (M.p.)



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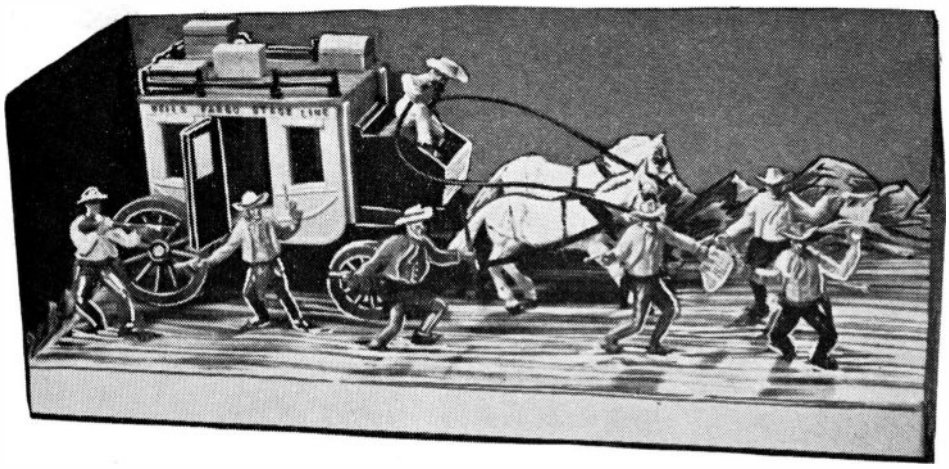

STAGE COACH

A Wells Fargo replica Stage Coach with driver and two galloping horses; even luggage to go on top. Also 6 fast-drawing cowboys in various action poses.

Boxed set complete (Post 1/6) **13/11**

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4 standing, in various actions, 2 in high. (post 6d.) **2/9**

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4 standing, all different actions, 2 in. high. (post 6d.) **2/9**

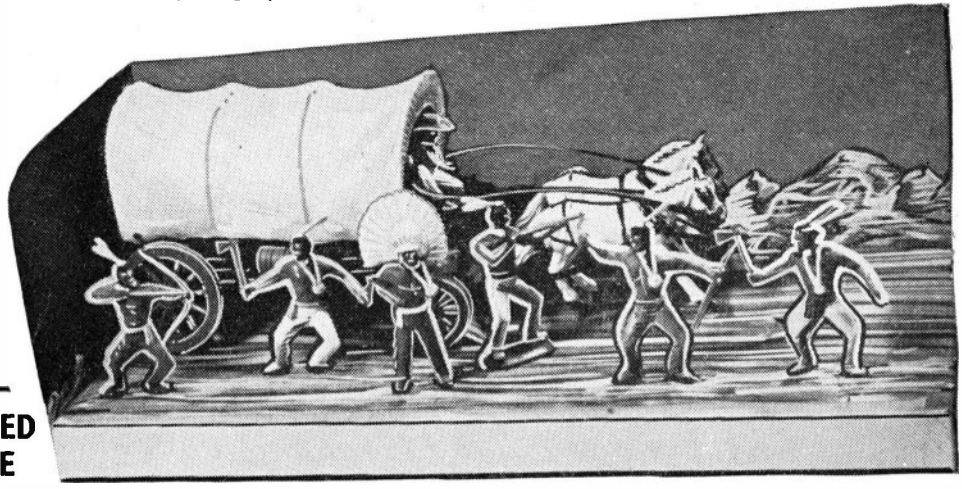
INDIANS

3 mounted, all different actions, 3in. high (p.9d.) **6/11**
4 standing, in various actions, 2¼ in. high. (post 6d.) **2/9**

COVERED WAGON

A typical 'Wagon Train' Wagon with driver and two galloping horses. Six attacking Indians with various weapons.

Boxed set complete (post 1/6) **13/11**



ALL MULTI-COLOURED AND UNBREAKABLE

PIECE 8.
CUT ONE 1/4 in. PLYWOOD.

9

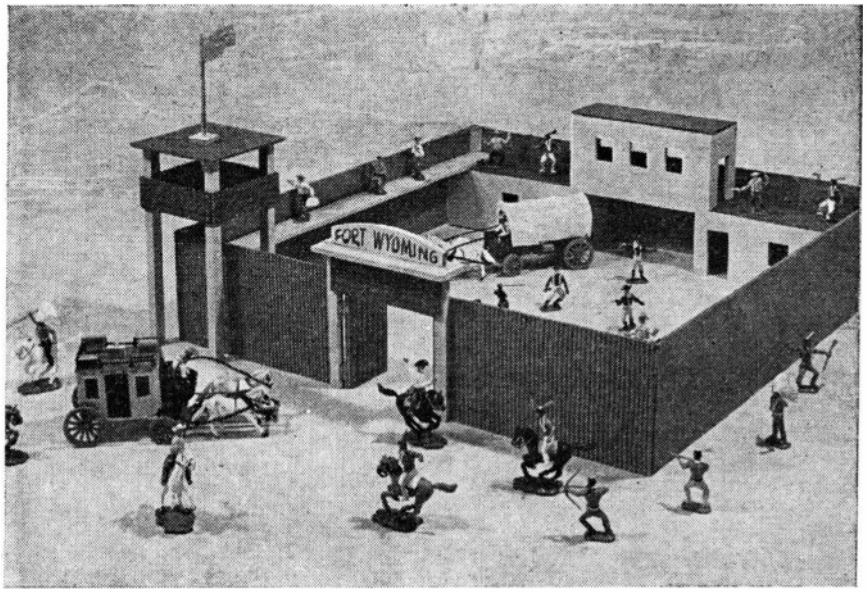
PIECE 2. CUT ONE 1/4 in. PLY. $23\frac{3}{4}$ in. BY $2\frac{1}{2}$ in.
PIECES 3. CUT TWO 1/4 in. PLY. $3\frac{1}{8}$ in. BY $2\frac{1}{2}$ in.
PIECE 5. CUT ONE 1/8 in. REEDED HARDBOARD 8 in. BY $2\frac{3}{4}$ in.
PIECES 6. CUT TWO 1/4 in. PLY. $8\frac{7}{8}$ in. BY $1\frac{1}{2}$ in.
PIECES 7. CUT TWO 1/8 in. BAMBOO HARDBOARD $9\frac{1}{2}$ in. BY 5 in.
PIECE 9. CUT ONE 1/8 in. REEDED HARDBOARD $5\frac{1}{2}$ in. BY $1\frac{3}{4}$ in.
PIECE 10. CUT ONE 1/4 in. PLY. $6\frac{1}{2}$ in. BY $1\frac{3}{4}$ in.
PIECE 12. CUT ONE 1/8 in. BAMBOO HARDBOARD 24 in. BY 5 in.
PIECES 13. CUT TWO 1/8 in. BAMBOO HARDBOARD $23\frac{3}{4}$ in. BY 5 in.
PIECES 14. CUT TWO 1/4 in. PLY. $23\frac{3}{4}$ in. BY $1\frac{1}{2}$ in.
PIECES 15. CUT TWO 1/4 in. PLY. $4\frac{1}{8}$ in. BY 1/2 in.
PIECES 16. CUT TWO 1/8 in. REEDED HARDBOARD $4\frac{1}{8}$ in. BY $2\frac{3}{8}$ in.
PIECES 17. CUT FOUR 1/2 in. SQUARE STRIPWOOD 9 in. LONG.
PIECES 19. CUT TWO 1/8 in. REEDED HARDBOARD 4 in. BY $1\frac{3}{8}$ in.
PIECES 20. CUT TWO 1/8 in. REEDED HARDBOARD $4\frac{1}{4}$ in. BY $1\frac{3}{8}$ in.
PIECE 21. CUT ONE 1/8 in. REEDED HARDBOARD $4\frac{7}{8}$ in. SQUARE.

PIECES 4.

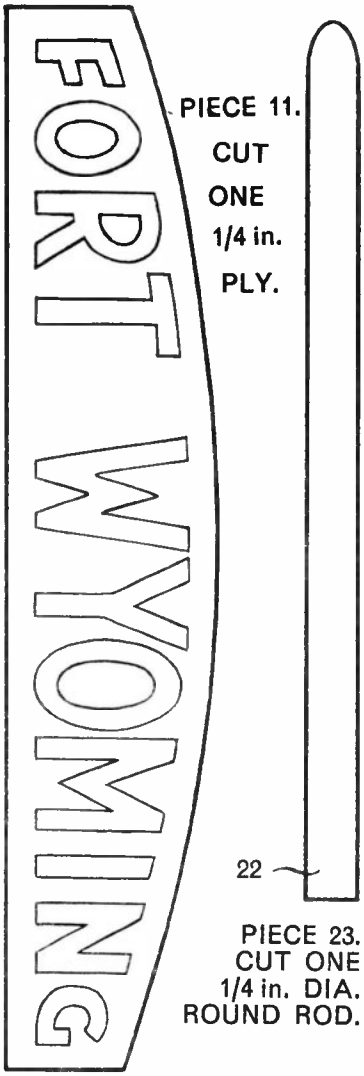
Hobbies DESIGN

No. 3569

FORT WYOMING CAVALRY FORT



SIZE: 24 in. SQUARE.

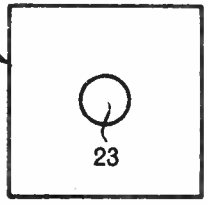


PIECE 11. CUT ONE 1/4 in. PLY.

22

PIECE 23. CUT ONE 1/4 in. DIA. ROUND ROD.

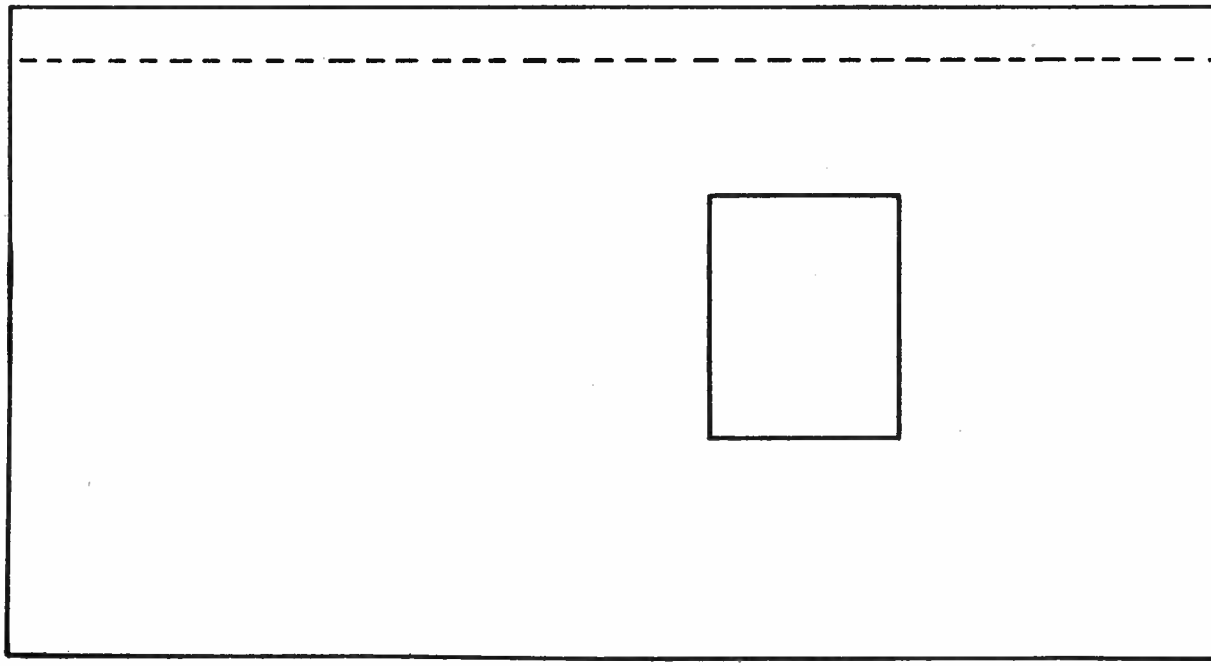
PIECE 22. CUT ONE 1/4 in. PLY.



A KIT OF MATERIALS FOR MAKING THIS DESIGN IS SUPPLIED BY HOBBIES LIMITED, DEREHAM, NORFOLK.
PRICE ON APPLICATION.

CUT TWO
1/4 in. PLYW

PIECE 18.
CUT ONE 1/4 in. PLYWOOD.



1/4 in. PLY.

23

DESIGN IS SUPPLIED BY HOBBIES LIMITED, DEREHAM, NORFOLK.
PRICE ON APPLICATION.

4.
WO
PLYWOOD.

PIECE 1.
CUT ONE 1/4 in. PLY.
(HALF ONLY SHOWN).

CENTRE LINE

4

2

3

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