

# HOBBIES WEEKLY

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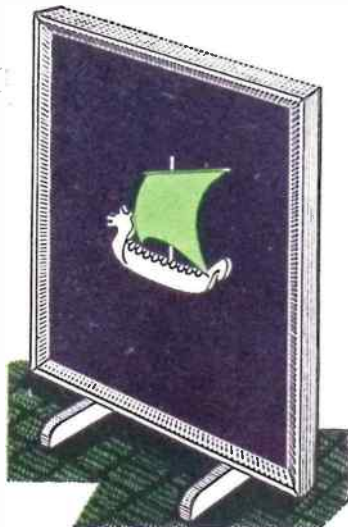
IN THIS ISSUE

	Page
A Viking Firescreen - - - -	33
Model Railways - - - -	34
Subject for Competition - - -	35
Dry Mount Your Pictures - - -	36
Make Your Own Chess Pieces - -	37
My Best-Loved Boat - - - -	38
Document Case - - - -	39
Match Holder - - - -	39
Battery Eliminator - - - -	40
Match Box Labels - - - -	42
When Wines 'Go Wrong' - - -	44
Match Holder Patterns - - - -	47



All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk

## ★ FREE design inside



of a Viking ship in semi-relief complete with war shields and billowing sail.

The hardboard panel is supplied actual size (24ins. by 18ins.) in Hobbies kit and, therefore, requires no cutting. It is framed with four strips of Hobbies No. 11 contemporary moulding. The legs and Viking ship are cut from  $\frac{1}{2}$ in. wood.

Make a start with the frame by mitring the moulding round the hardboard as shown in Figs. (A) and (B) on

Viking ship. Workers will choose their colours to fit in with the existing colour scheme of the room in which the firescreen is to be used. A light blue on the panel would give an ideal setting for the ship, and the frame and feet can be finished in a contrasting shade. When painting the inside of the frame, mask the panel with Sellotape in order to get a good clean edge (see Fig. 2). Make sure that the paint on the panel is thoroughly

# A VIKING FIRESCREEN

**T**HE purpose of a firescreen is to cover up the rather depressing picture of an empty and blackened firegrate. Why not then make a screen which is pleasing to the eye and colourful — to match the gaiety of a room flooded with sunlight?

The construction of the firescreen illustrated is quite simple, and can be undertaken with confidence. It consists of a hardboard panel framed in contemporary moulding and with the addition of legs. A pleasing pictorial scene is added to the panel in the shape

of the design sheet. Take care to cut the mitres correctly, as a bad join will detract from the final appearance. Small gaps will, of course, be filled with plastic wood. Glue the frame all round to the hardboard.

Next make up the feet which are shown full size (4) on the design sheet. Cut two feet from  $\frac{1}{2}$ in. wood and glue them to the frame  $4\frac{1}{2}$ ins. in from the edges as shown at (C) on the design sheet, and in Fig. 1.

This assembly can now be painted and allowed to dry while making up the

dry before applying the Sellotape, otherwise there is a danger of the paint lifting when the tape is removed.

The make-up of the Viking ship (Fig. 3) is quite simple, but gives a pleasing effect. Cut the ship to the outline (piece 5 on design sheet) from  $\frac{1}{2}$ in. wood. If a backward bevel is employed in cutting, that is, sloping inwards to the panel, it will be found that this emphasises the relief effect of the finished model. The bevel can be accomplished by tilting the cutting table of a fretmachine or by holding a handframe at the required angle.

33

FOR ALL HOME CRAFTSMEN  
Over 60 years of 'Do-it-Yourself'

World Radio History

4 <sup>1</sup>/<sub>2</sub> D

The mast (piece 8) and spar (piece 9) are cut from round rod to the sizes shown, and the sail is cut from Crinoline to the outline given on the design sheet. Lash the top edge of the sail to the spar with cord. The spar and mast are also lashed together with cord, as indicated on the design sheet.

Now drill a 1/16 in. hole centrally in the 'deck' of the ship and glue in the mast. The shields consist of nine pieces of 1/8 in. wood cut to shape and glued where indicated by the dotted lines on the design sheet.

Workers will use their own designs and colourings for painting the ship and shields. The figurehead and tail should be a different colour from the body of the ship. When the paint is dry, 'billow out' the sail and fix the bottom corners with small pins to the back and front of the ship, as shown on the design sheet.

When completed, the ship assembly is glued just above the centre on the hardboard panel as seen in Fig. 1. After settling on the position, it will be necessary to scrape away some of the paint on the panel to ensure good adhesion.

Workers will appreciate that there are many variations to the finish suggested for the firescreen. For instance, a suitably patterned paper can be glued to the panel as a background for the ship. It should also be remembered that hardboard can be stained, varnished or oiled.

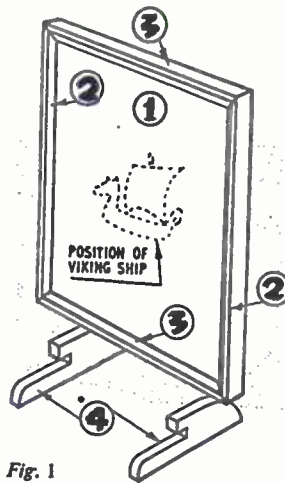


Fig. 1

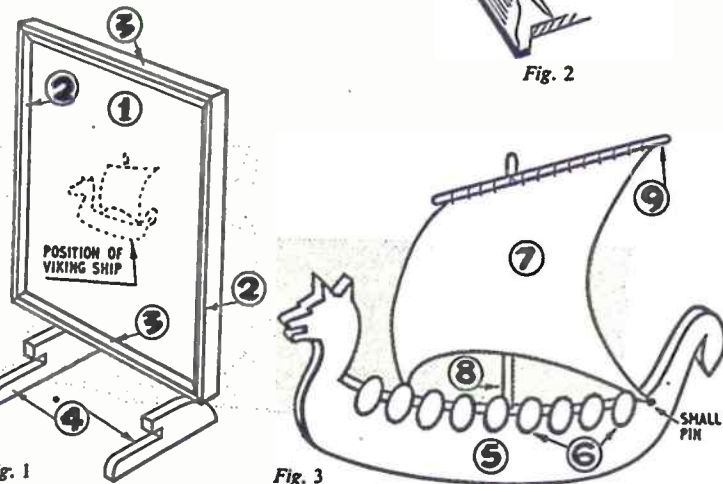


Fig. 3

**Kit Costs only 13/6**  
 Kit No. 3208 for making the Viking Firescreen costs only 13/6 and contains panel of hardboard, moulding, wood, fittings, etc. From branches or Hobbies Ltd., Dereham, Norfolk (post free).

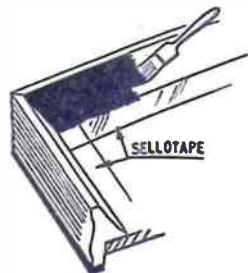


Fig. 2

## Subject for Competition

IT is, perhaps, to be regretted that horse brasses can now seldom be seen where they belong. That is, as adornment for draught horses for which this country was once so well known.

The traditional full dress of these heavy horses included quite a small

### 'Phoney' Photographs

Closing date for our March contest is April 30th. More prizes next month

collection of various brass shapes and designs. A large piece hung on the forehead with several smaller pieces decorating the collar. From the martingale, which is the check-strap preventing the horse from rearing or throwing up his

head, yet another set of brasses was hung.

The brasses are now more likely to be found decorating the wall of a country restaurant or public house, and just lately replicas have been produced for women to wear on dress and coat belts. Fortunately the horse shows are always brightened by a good display of these glistening brasses, and of the trades that still use horses for cartage a few still retain them. This includes some farmers, a few coal merchants and several of the breweries.

A collection of all horse brass designs would run into thousands. The brasses were often handed down the family and it is supposed that many of the designs had special meanings. Unfortunately,

most of the origins of the varying designs and shapes have been lost. The shapes of the heavenly bodies formed the base for many of the designs, while others depicted a trade or showed a form of portraiture. Into these real shapes abstract twists and shapes were often woven.

Each brass had, of course, a slot so that it could be fixed to the harness, but the outer form of them differed. While a majority were circular, others were shaped to blend with the inner design, and some did not even have a separate outer shell. Again, some of the outer rims were scallop-edged but others were quite plain. All, though, greatly enhanced the tradition of the working horse.

## Design a Horse Brass and

# WIN A WATCH!

Ball-point pens will be awarded for the next best efforts

OUR competition this month, in which wrist watches will again be awarded to the winners, is based on 'Horse Brasses'. There are two sections — one for Seniors (16 and over) and one for Juniors (15 and under). A wrist watch will be awarded to the winner of each section and ball-point pens will be awarded to the six next best entries in each section.

### RULES

1. The competition is to design and fret-cut in wood or hardboard a decorative horse brass. The maximum size of entries must be 6 ins. square. The judges will take into account the originality of the design as well as the standard of fret-cutting. Make some inquiries before starting your design and work out a theme before transferring it to wood. Maybe you know of a collection of such horse brasses which might repay study.

2. Entries must be received by the Competition Editor, *Hobbies Weekly*, Dereham, Norfolk, by May 31st and cannot be returned.

3. Winners will be notified and prizes despatched by June 14th. Details will be published in a subsequent issue of *Hobbies Weekly*.

4. The name, full address and age of

the competitor must accompany the entry.

5. An entry must be the unaided effort of the competitor. All entries for the Junior Section *must* be accompanied by the certificate below, or a similar declaration on plain paper, signed by a parent, otherwise the work cannot be considered.

6. Because of Customs regulations and the necessity to adhere to a definite closing date, entries are confined to those from Great Britain and Northern Ireland.

7. The judges' decision is final and no correspondence can be entered into.

### CERTIFICATE (for Juniors)

The entry is the unaided work of \_\_\_\_\_ aged \_\_\_\_\_

Signed \_\_\_\_\_

Relationship \_\_\_\_\_

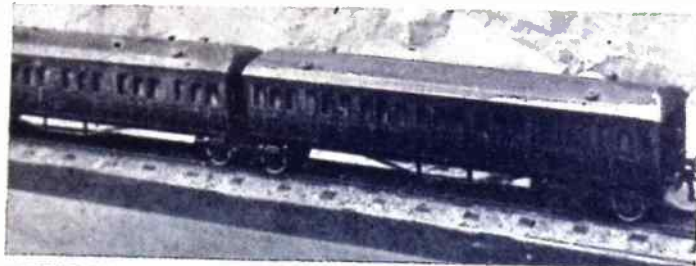
Address \_\_\_\_\_



## MAKE A GUITAR

Next week we shall give full instructions for making a Spanish Guitar. A kit of materials will be available from Hobbies Ltd., and Branches.

## MODEL RAILWAYS



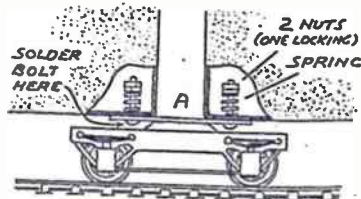
# Articulated Stock

nuts on each (the upper one for locking) and the job is done.

Articulated stock being so closely joined up looks well on a model line. It

By H. A. Robinson

runs solidly in a snake-like way and accommodates itself nicely to curves. Moreover with fewer wheels it offers less resistance to the locomotive, and is economical as it frees a number of bogeys, couplings and buffers for building more coaches.



of the bogeys and solder a flat piece of tin as (A) in the figure across the flat top, and corresponding ones, again well positioned, in the floor of each coach. Run short bolts through both of the holes in (A) and solder to the piece.

Bore a hole — carefully centred — at each end of the piece, and corresponding ones, again well positioned, in the floor of each coach. Run short bolts through both of the holes in (A) and solder to the piece.

With some makes of bogey it is well to solder the bolts to (A) before soldering this to the frame.

Fit the coach ends over the bolt shanks, put on short springs, then two



# Dry mount your Pictures

WHEN we wish to mount a photograph on a card, we have the alternatives of wet or dry mounting. The former involves the use of a suitable adhesive which often seems to find its way to the mount, causes further trimming of the mount if the picture has not been correctly centred and may buckle the whole on drying. Dry mounting has none of these disadvantages, and if you have an electric iron you can do the job as quickly and as effectively as with an elaborate press.

One of the main advantages of this type of mounting is that we can position the print quite easily, and the only special material required is the dry mounting tissue, no more expensive than a photographic mountant. These tissues are a form of shellac sheeting,

as a piece of hardboard, covering with the greaseproof paper for protection and slowly iron until dry. Both sides of the print should be so ironed to ensure perfect dryness, and it doesn't matter if it curls a little.

Where the electric iron has a thermostat control use the lowest heat, and if there is no control, see that it is of moderate heat only and switched off so that the temperature does not increase. With the materials available it is a wise procedure to also dry the mount, again using the protective covering of greaseproof paper.

Next attach a piece of dry mounting tissue to the back of the print and special tacking irons are sold for this purpose. An old spoon handle serves the purpose admirably. You may wish

We are now in a position to mount the print. The mount is laid on the hardboard, face uppermost, and the picture carefully positioned. Here you should see that it lies perfectly square, with its sides parallel to those of the mount, and with equal borders at both sides. Cover the print with the greaseproof paper and apply the iron. When the heat is applied the specially prepared tissue melts sufficiently to bond the print to the mount, but it does not ooze out from underneath.

A word or two on the correct temperatures for both the iron and the tacking iron will not be amiss at this juncture.

If you possess an ordinary electric iron without a control, use only moderate heat, but here is a certain way of



Mounting the print, using a double thickness of greaseproof paper for protection.



The tissue attached, the print can be trimmed to size.

requiring heat for its adhesive properties, and applied with the ordinary domestic smoothing iron. The method is used commercially for photographs, calendars and advertisement cards, but in the trade, large electrically heated presses are used.

The dry mounting tissues are supplied in packets of 25 sheets in various sizes, and being no thicker than paper are easily cut to any size.

Let us see how the process works by using equipment available in almost every home.

It is essential that both the print and the mount are absolutely bone dry. If the latter has been stored in a dry place, so much the better, but prints can attract moisture from the air and are inclined to become damp. To overcome this, take a sheet of clean greaseproof paper, folded into a double thickness. Lay the print on a firm level base such

to cut off the handle and fit into a file grasp for convenient handling. The home-made tacking iron is heated in the flames of a gas ring for a moment to a moderate heat. The exact heat can be judged by a little experiment on a spare piece of tissue. If too hot, the tissue will sizzle and crinkle, while the correct heat will only cause it to become tacky.

With the piece of tissue laid on the back of the print touch it with the 'tacking' iron somewhere about the centre and, perhaps, one or two other spots here and there. This fastens both together while we trim to size. The print is now turned over on to its face and trimmed to any required size. Note that trimming is best left until the tissue is attached, since the latter is then cut to the same size of the print. Always make sure that the corners are quite square, using a set square and sharp knife for trimming.

testing. Moisten a finger, apply it sharply to the iron, and if it just 'sizzles' at the touch, it is right. With the controlled iron you may set the switch to the lowest temperature, testing as above if you wish.

There is a further method of testing the heat by practical methods. If the print leaves the mount bringing the tissue with it, the heat is too low. To remedy this remove one thickness of greaseproof paper. On the other hand, if the tissue sticks to the mount and the print curls off freely, the heat is too great and you must add another thickness of paper. A little testing with scraps of tissue, old prints and mounts will quickly enable you to judge the correct temperature, which, if you have any means of taking it, is approximately 180 to 200 degrees Fahrenheit. You need

Continued on page 37

# Make your own Chess pieces

CHESSE is probably one of the oldest games in the world. Its actual origin and early development are somewhat of a mystery, but it was played in India some 3,000 years ago.

The early Hindu game, called the Chaturanga was played by four players, a dice being thrown to indicate which piece was to be removed. It was not until comparatively recent times, however, that the game developed into the form we are familiar with today.

The Japanese play on a board with 81 squares, but in most other countries the familiar 64 square board is used.

By A. F. Taylor

Chessmen have been made in literally hundreds of designs, some very beautiful and some really fantastic. The best men are made of ivory and vary from quite plain turning to the most ornate and intricate carved designs. Most of the sets, however, are made of wood, ebony for the black ones and boxwood for the others. Stained pearwood and other common woods are used for the cheaper sets, and quite a number are now made of plastic material.

Chess is a game that can be played at any time of the year, and this enjoyment is greatly increased when you have made the pieces yourself. Contrary to common belief, this is not at all a difficult task, and the set described in this article is easy to make and really quite attractive.

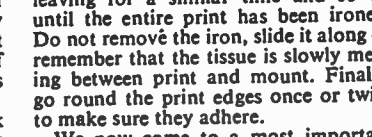
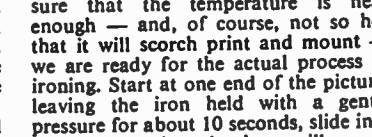
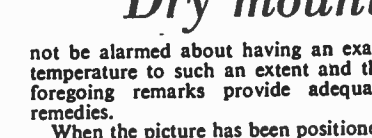
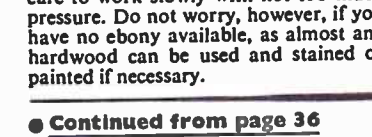
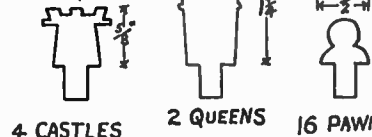
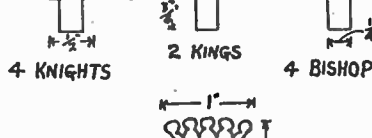
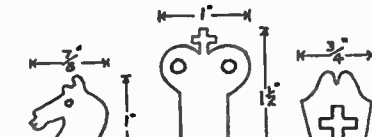
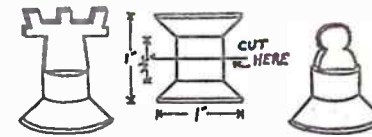
There are 32 pieces to a set of chessmen, half of them being white (called white) and the other half either red or black (called black). Each half set consists of a king and his queen, two castles (or 'rooks'), two bishops, two knights and eight men-at-arms, called pawns.

### Small cotton reels

To make the set we first need 16 small cotton reels which, when cut in halves, will form the bases for the chessmen. Into the centre holes are fitted the different shaped pieces by means of the short stems as shown.

The wood for these top pieces should be about 1/4 in. thick, but the actual size will depend to some extent on the size of the hole in the cotton reel. Almost any kind of hardwood is suitable, but it would be nice if you could get a piece of ebony for the black pieces. Sycamore is a good wood for the white men.

Ebony is a very hard wood to work with, but it is not difficult, and can be cut with a rather fine fretsaw, taking



The numbers you need to cut out of each piece are given in the drawing, together with all the necessary measurements.

### The king and queen

The two most important pieces are the king and queen, and these are, therefore, the tallest, 1 1/2 ins. and 1 1/4 ins. respectively. This does not include the short stem, which is 1/4 in. in each case.

The knights and the bishops are 1 in. high, and it will be seen that a cross is cut out of the centre of each bishop. Although it improves the appearance of the piece it is not however, essential to include this refinement.

Make the stems a nice fit in the cotton reel bases, not too tight, so that the top pieces can be easily removed, and the bases used for playing 'draughts' if desired. It may be only necessary to trim off the corners of the stems to make them fit, and this can be done with a piece of glasspaper.

If ebony and a white wood have been used, it is only the bases of the 'blacks' that will need colouring, but a good effect is obtained by white enamelling all the white pieces and black or red enamelling all the blacks if ordinary white wood has been used.

Larger cotton reels can be used, and the figures made larger, but do not go to the extreme and use bases that overlap the 1 1/4 in. squares of the average chess board. It is, moreover, a good idea to use a smaller size of cotton reel to make the pawns.

Continued from page 36

# Dry mounting Pictures

not be alarmed about having an exact temperature to such an extent and the foregoing remarks provide adequate remedies.

When the picture has been positioned on the mount and we are reasonably sure that the temperature is near enough — and, of course, not so hot that it will scorch print and mount — we are ready for the actual process of ironing. Start at one end of the picture, leaving the iron held with a gentle pressure for about 10 seconds, slide into the next portion the iron will cover, leaving for a similar time and so on until the entire print has been ironed. Do not remove the iron, slide it along — remember that the tissue is slowly melting between print and mount. Finally, go round the print edges once or twice to make sure they adhere.

We now come to a most important part of the operation which will mean

success to the final appearance and avoid any tendency to buckle. Remove the greaseproof paper, laid over the print for protection, and in its place lay on a sheet of plate glass or a sheet of steel plate. Either of these will absorb the heat and keep the print perfectly flat while cooling, ensuring a perfect finish.

This is what most dry mounters forget, or ignore, but if you want a really professional finish, this is the secret. Glass is handy since you can see the print, but if steel is available, see that it is perfectly clean or painted.

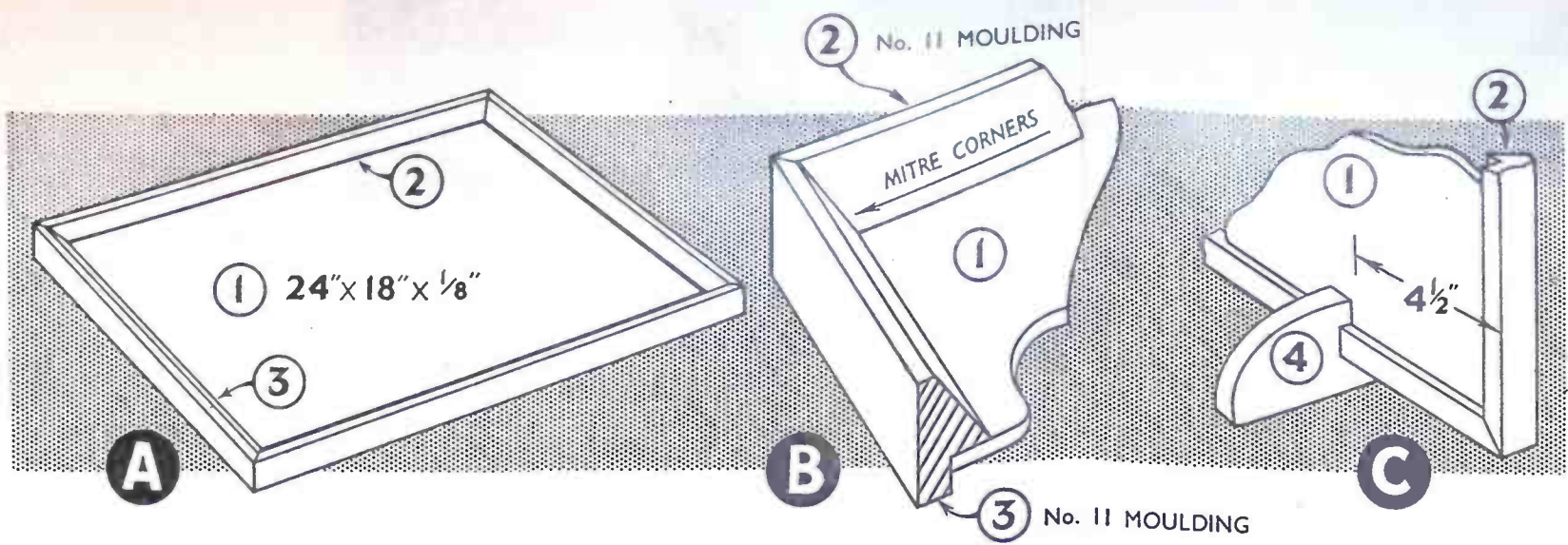
Alternatively, retain the protective sheet of greaseproof paper until the print is quite cool, perhaps a matter of five minutes.

Finally, if you ever wish to remove a print so mounted, to substitute another, this can be done quite easily without damage. All you have to do is to iron it again; using a little warmer iron.



**"THE VIKING" FIRESCREEN**  
WITH VIKING SHIP IN SEMI-RELIEF


No. 3208



SIZE  
25" x 18"

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

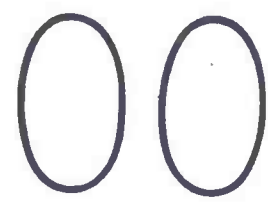
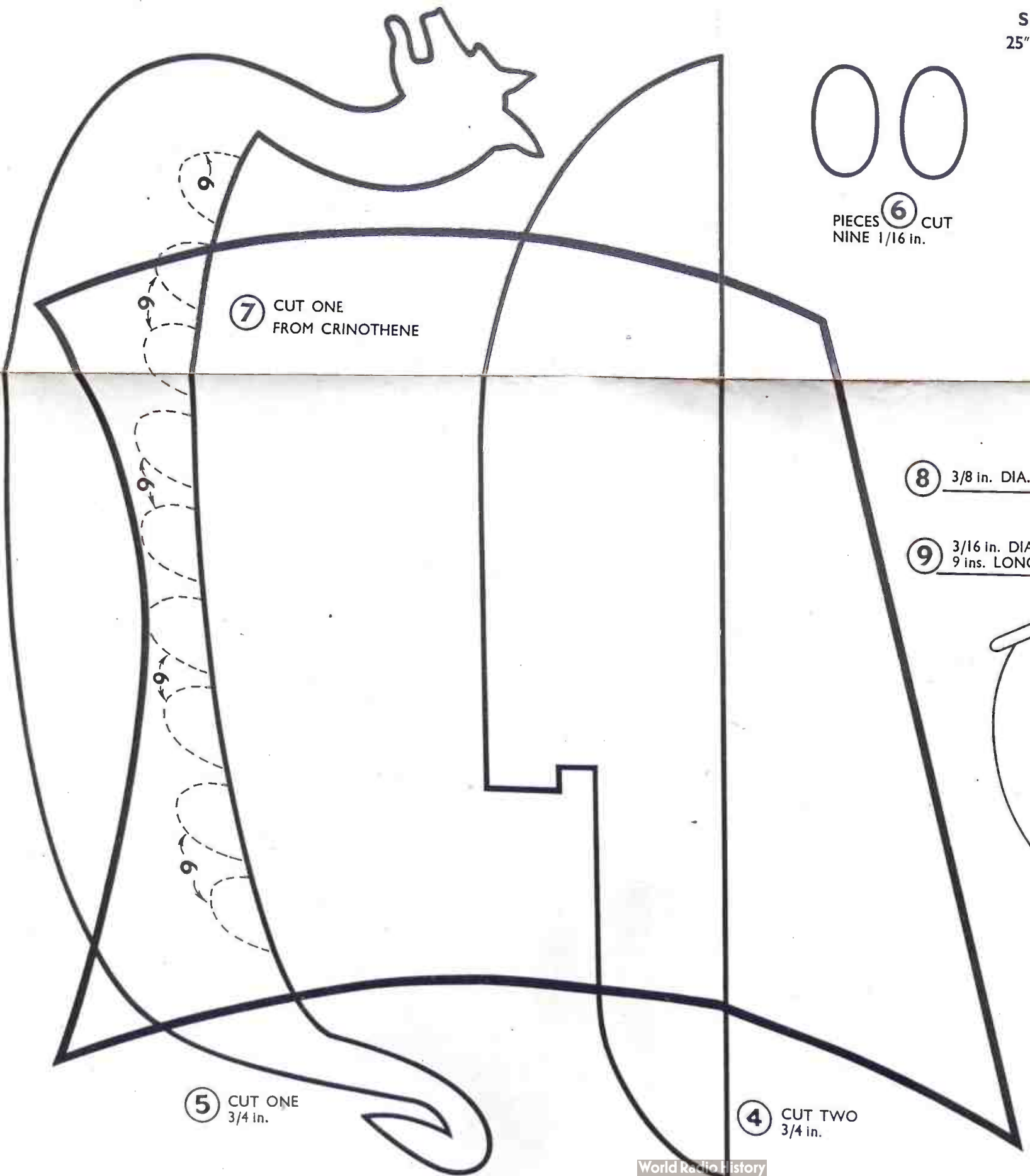
**Use**



**Croid AERO**  
IT'S DESIGNED FOR THE JOB

This pure hot animal glue of great strength needs no mixing or preparation. The Home Outfit consists of 8 oz. tin Croid Aero Glue — Hot Water Container — Handy Brush — 4/- complete.

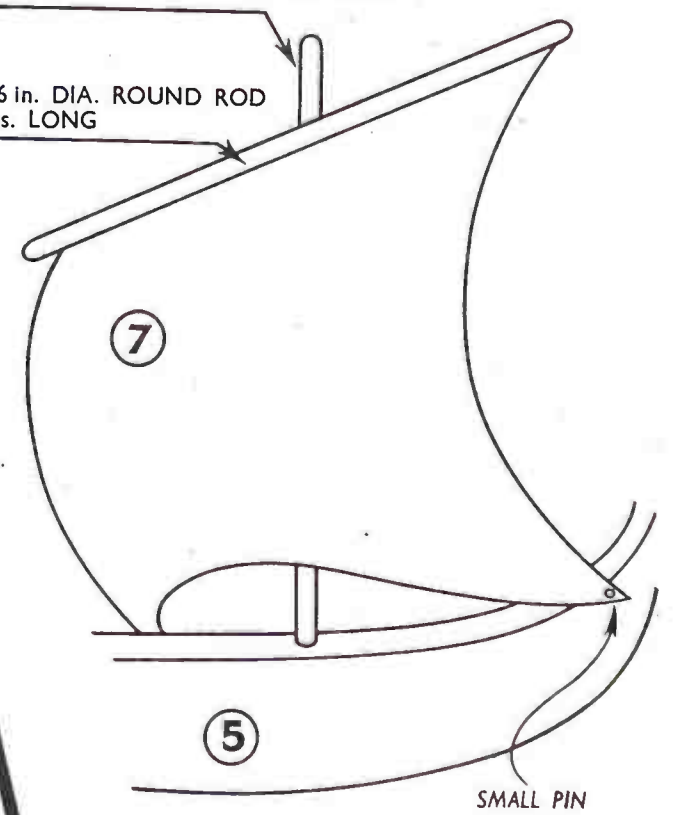
AVAILABLE FROM ALL BRANCHES OF HOBBIES LTD



PIECES ⑥ CUT NINE 1/16 in.

⑧ 3/8 in. DIA. ROUND ROD 9 ins. LONG

⑨ 3/16 in. DIA. ROUND ROD 9 ins. LONG





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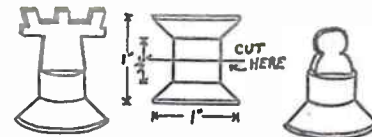
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## Small cotton reels

To make the set we first need 16 small cotton reels which, when cut in halves, will form the bases for the chessmen. Into the centre holes are fitted the different shaped pieces by means of the short stems as shown.

The wood for these top pieces should be about 1/4 in. thick, but the actual size will depend to some extent on the size of the hole in the cotton reel. Almost any kind of hardwood is suitable, but it would be nice if you could get a piece of ebony for the black pieces. Syncamore is a good wood for the white men.

Ebony is a very hard wood to work with, but it is not difficult, and can be cut with a rather fine fretsaw, taking



The numbers you need to cut of each piece are given in the drawing, together with all the necessary measurements.

## The king and queen

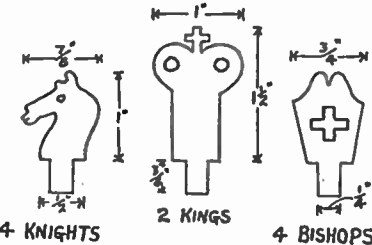
The two most important pieces are the king and queen, and these are, therefore, the tallest, 1 1/2 ins. and 1 1/4 ins. respectively. This does not include the short stem, which is 3/4 in. in each case.

The knights and the bishops are 1 in. high, and it will be seen that a cross is cut out of the centre of each bishop. Although it improves the appearance of the piece it is not however, essential to include this refinement.

Make the stems a nice fit in the cotton reel bases, not too tight, so that the top pieces can be easily removed, and the bases used for playing 'draughts' if desired. It may be only necessary to trim off the corners of the stems to make them fit, and this can be done with a piece of glasspaper.

If ebony and a white wood have been used, it is only the bases of the 'blacks' that will need colouring, but a good effect is obtained by white enamelling all the white pieces and black or red enamelling all the blacks if ordinary white wood has been used.

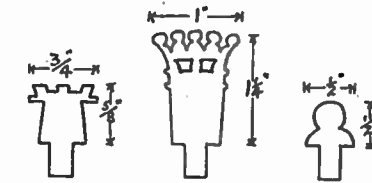
Larger cotton reels can be used, and the figures made larger, but do not go to the extreme and use bases that overlap the 1 1/4 in. squares of the average chess board. It is, moreover, a good idea to use a smaller size of cotton reel to make the pawns.



4 KNIGHTS

2 KINGS

4 BISHOPS



4 CASTLES

2 QUEENS

16 PAWNS

care to work slowly with not too much pressure. Do not worry, however, if you have no ebony available, as almost any hardwood can be used and stained or painted if necessary.

Continued from page 36

# Dry mounting Pictures

not be alarmed about having an exact temperature to such an extent and the foregoing remarks provide adequate remedies.

When the picture has been positioned on the mount and we are reasonably sure that the temperature is near enough — and, of course, not so hot that it will scorch print and mount — we are ready for the actual process of ironing. Start at one end of the picture, leaving the iron held with a gentle pressure for about 10 seconds, slide into the next portion the iron will cover, leaving for a similar time and so on until the entire print has been ironed. Do not remove the iron, slide it along — remember that the tissue is slowly melting between print and mount. Finally, go round the print edges once or twice to make sure they adhere.

We now come to a most important part of the operation which will mean

success to the final appearance and avoid any tendency to buckle. Remove the greaseproof paper, laid over the print for protection, and in its place lay on a sheet of plate glass or a sheet of steel plate. Either of these will absorb the heat and keep the print perfectly flat while cooling, ensuring a perfect finish.

This is what most dry mounters forget, or ignore, but if you want a really professional finish, this is the secret. Glass is handy since you can see the print, but if steel is available, see that it is perfectly clean or painted.

Alternatively, retain the protective sheet of greaseproof paper until the print is quite cool, perhaps a matter of five minutes.

Finally, if you ever wish to remove a print so mounted, to substitute another, this can be done quite easily without damage. All you have to do is to iron it again, using a little warmer iron.



# MY BEST-LOVED BOAT

I KNEW when I first saw her that she was the boat for me. She was an ex-naval dinghy, sea-worthy and solid. A utility boat, at a time when that adjective was a byword throughout the stricken country. Discharged as I was from the forces through ill-health, and slowly recovering, she would help me to gain a confidence that would make me again useful in a community in no shape to carry my load for me.

By T. Merchant

She was 14ft. in length, an open boat, with places for three men to row while one sat at the tiller. There must have been many other identical boats around our coasts, but I have never yet seen one. I often wondered what exactly her purpose must have been. Amongst her gear was a very stout mast and two sets of sails that, properly cut, would have clothed me or provided a modest tent.

Her first voyage after the cheque had changed hands was between where she lay and the harbour of my home town, a few miles away. When I reached Aberystwyth I was sternly reminded that such a trip must have the sanction of an official moving permit. I obtained this; it told me to paint the letters 'A A Z' clearly on the bows, after which she could travel, 'during the hours of daylight and in clear weather', between two points on the coast that were, as far as the boat and I were concerned, remote enough to allow unlimited freedom. The permit described her as a fishing boat.

For six days of the week, my work was located at the next port along the coast, an hour's journey by bus. I prepared the 'Aurora' for this passage, which would be made on the first suitable week-end.

It was early summer, and one Saturday gave promise of a suitable whole day to follow. I cut sandwiches, mixed rum and coffee, found a companion and set out next day at eleven at the top of the spring tide, which would help us southwards even if there was no breeze. Sure enough, there was no breeze, but we moved out to the limit of the permit to take advantage of the ebb tide like a Thames sailing-barge. Taking it in turns to row, we found her surprisingly easy to keep moving at a good pace. We towed two mackerel lines. Soon a light northerly breeze obliged and we hoisted the clumsy sprit-sail and sat back with enjoyment. Never had a boat's wake looked so good; she was my third boat, and I was growing fonder of her with



Aurora in harbour

every roll she gave. Our first mackerel came aboard, others followed quickly and she nearly capsized with excitement.

When we got level with our destination it was low water at the dried up and rock-bound harbour flanked by a shingle beach as undulating as the ground swell that had shaped it. We tacked outwards and inwards until, after two hours' flood, we tacked into the harbour which was very welcome shelter. With three dozen mackerel aboard we were greeted as a fishing boat, and we felt very proud.

I reported our arrival to the authorities at once, coming to attention through force of habit. They surprised me by telling me exactly when I had hoisted sail, caught most of the mackerel, and even when I had drunk my coffee.

Following this I fished a lot from the 'Aurora' in my limited spare time. The fish were a welcome supplement to rationing and the little boat grew quite popular. Then one Saturday before work I put her at anchor where she could be launched at low water, and waded ashore. At three-o'clock three of us set out with a breeze and flowing tide to make it a record trip. My permit stated that 'forced landings must be reported immediately', and the rocky coast, rarely free from breakers, was as

hostile as this order. Once a trip started it had to be completed. We passed close to the hilly shore as the breeze came in irregular spurts, and sent us over to a thrilling angle for a few moments at a time until we reached the shelter of the next piece of high ground. I had by now rigged a bowsprit, and with a large jib and lug-sail she moved far better than with the old sprit-sail. She had a good deep centre-board which helped her to come surprisingly close to the wind. We arrived, fortunately, at high-water, on a heavy groundswell that shook us a little by half-filling the boat despite her ample freeboard.

### Various companions

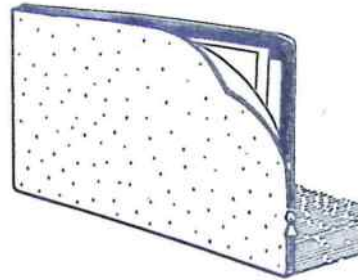
In later trips I placed more and more reliance on the little boat, and took less consideration of the tides in planning the passages between the two harbours. She spent roughly half her time in each harbour. My companions were various, including on one day refugees from Europe, very orthodox Jews whom I let down badly with my tactlessly prepared sandwiches.

Later, I turned more and more to ground-fishing, mostly during the autumn months. With crude but effective tackle, I landed far more fish than a towed line had ever provided. Children became interested in the boat and I took them out, four or five at a time, trusting me far more than their mothers did, who paced uneasily on the quay at first, but later relied on my judgment. Although I had forcibly to stop some of them from climbing the mast, there was never even a case of wet feet.

I fell in love, became engaged, and the 'Aurora' became 'Lydia'. Her namesake did not quite share my enthusiasm, but always encouraged me, and still does to this day. She made occasional trips when the sea was calm, and photographed the little boat from every possible angle.

We were married and moved to another town, and I regretfully parted with my boat. Later on we returned to Aberystwyth, and by a peculiar twist of fate she now lies at anchor close to my bedroom window, having changed her name and ownership several times. Her present owner took me with him once, and I found it difficult to take orders instead of giving them. With a powerful outboard motor and outriggers for mackerel fishing attached to her mast, she put my former fishing efforts to shame.

She often passes me as I make my way out to the fishing grounds in my new boat that bears her former name.



A DOCUMENT case is a simple article for beginners in leather work to make. The dimensions given are suitable for containing folio documents, but these can always be altered to suit individual requirements. The parts are stitched together and a zipp fastener is fitted to the top and one side of the case, which makes for easy opening and closing.

For making the case plastic leather cloth is ideal, as this dispenses with interior lining. Begin, by making a pattern of the various pieces in brown paper. Place this on the face side of the leather cloth, mark around it and cut out. Use either scissors or a leather knife for cutting the leather. The gusset should not be cut into a point, but exactly as in the illustration, otherwise it will interfere with the smooth running of the zipp. Make sure the gusset is cut to the proper length.

Take the zipp fastener at the closed end of the tape and stitch it to the corner of the case, then place it in the correct position and machine stitch it along the top and side to the body of the case. Open the zipp fastener and machine stitch the other side of the tape to the side and top of the case.

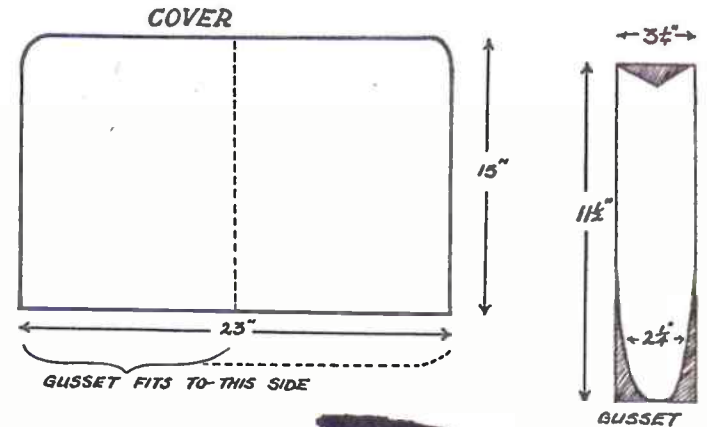
For extra strength stitch a double row through the leather cloth and tape

For leather workers

## DOCUMENT CASE

with the rows of stitches about a  $\frac{1}{2}$  in. apart. Next place the gusset in position. The gusset, incidentally, folds inside the case when it is closed and permits easy access to the contents when the container is opened. For instance, a document case may be easily enough made in one piece and stitched, but it will have a

position at the open end of the case, stitch it to the case from the outside with a single row of stitches. The gusset can be held in position with paper clips while you do this, and it will simplify the stitching. Stitch from the bottom of the gusset to the top. All that remains to be done now is to wipe the article with a



ZIPP FASTENER IS MACHINE STITCHED TO SIDE & TOP OF CASE



limited capacity. The same case fitted with a gusset, as illustrated, naturally, gives a greater capacity, and the contents are much more accessible.

When the gusset has been placed in

damp cloth to freshen it up and remove any marks.

The document case will stand up to a lot of abuse, is very long wearing and will keep its shape indefinitely. (J.M.)

For young fretworkers

## Match Holder

THIS little piece of fretwork is an ideal article for the beginner to make. The whole thing can be made for a few pence in an evening.

Cut the pieces (A), (B), (C) and (E), one of each, from  $\frac{1}{2}$  in. fretwood. Glue them together as shown in the diagram on the pattern page. The block (D), shaped from waste wood, gives just enough clearance for the sides of the match box as indicated in the section.

Cut the overlay (F) from  $\frac{1}{2}$  in. wood and glue to piece (A). The dotted lines show the position.

Clean up all the pieces with glass-paper and give two or three coats of plastic enamel. To insert the matches, simply remove the inner portion of the box and put the outside cover over the block. The matches are now put into the cover, the block causing them to protrude as shown in the illustration. The matches can be struck on the side of the box. (M.p.)

Full size patterns for tracing are given on page 47

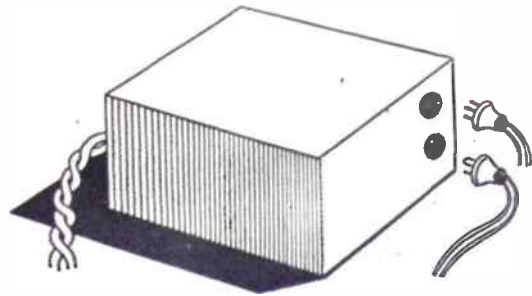




To save running costs

# A BATTERY ELIMINATOR

Described  
by  
F.G. Rayer



**B**ATTERY sets are a firm favourite with radio constructors. They are easier and cheaper to build, and their quality is self-evident. The modern 1.4 volt valve types, with valve heaters supplied with small dry cells instead of the old accumulator, are especially attractive.

The cost of batteries (which must, inevitably, wear out, and do not last as long as one would wish) is the only drawback. For those who have electricity in the house, however, the solution is the battery eliminator. This enables us to power the battery set from the mains while in the home, so preserving the batteries for when we go outdoors (if it is a portable), or when there is a power cut.

The saving is remarkable. The yearly battery bill is cut right down, and in addition, the cost of running the set

components, however, differ in some respects, as will be shown.

The practical lay-out, as seen in Fig. 2, is also the same for both eliminators.

The base-board, in each case, is of 1/4 in. to 1/2 in. thick plywood, measuring 5 ins. by 6 ins. (But do not saw this out until all the components have been purchased and placed experimentally in the positions shown. Differences in components may require a bigger baseboard).

The two end pieces are of 1/4 in. thick plywood and measure 2 1/2 ins. deep by 5 ins. wide. These are glued and screwed to the ends of the baseboard. Two apertures are sawn out with a fretsaw in one of these end pieces. These are to accommodate the plug-in sockets. A single aperture for the mains lead-in is sawn out in the other end piece. The size of these will be gauged from the actual socket strips when purchased.

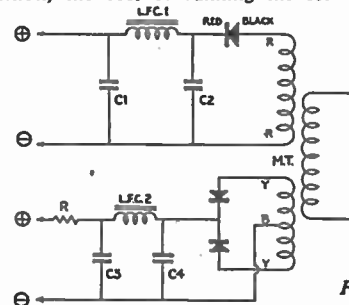


Fig. 1

from the mains is so small as to cost only a shilling or two per year. So there is every incentive to make an eliminator.

An eliminator suitable for A.C. mains only is easy enough to make, and the cost is cheap enough considering the ultimate saving. A 90 V eliminator will cost between 25/- and 30/-, while a 120 V one (for the old type of set) will cost about 30/- to 35/-. The 120 V eliminator could be arranged to provide both 120 V and 90 V outputs.

We will deal first with the 90 volt eliminator, as this may be the one most in demand today. The theoretical circuit of Fig. 1 applies equally to 90 V or 120 V eliminators. The values of the

components, however, differ in some respects, as will be shown.

To proceed with the 90 V eliminator. The first necessity is the mains transformer. This is purchased from the Radio Supply Co., 32 The Calls, Leeds, 2. This rating is as follows. 200-250 V Input. 90 V 15 mA and 4-0-4 V 500 mA

90 V COMPONENTS LIST	
Eliminator Transformer. 90 V	
15 mA. 4-0-4 V. 5 A	9 11
H.T. Rectifier. 90 V 40 mA. H.W.	3 9
L.T. Rectifier. 6-0-6 V. 25 A	2 9
L.F. Choke. 10H. 40 mA. (Midget)	4 0
C1 + C2. 32 + 32 mfd. 275 V	
working	4 0
C3 + C4. 1,000 + 2,000 mfd. 6 V	
working	3 9
120 V COMPONENTS LIST	
Eliminator Transformer. 120 V	
40 mA. 5-0-5 V. 1 A	15 9
H.T. Rectifier. 150 V 40 mA. H.W.	3 9
L.T. Rectifier. 6-0-6 V. 1 A	3 9
L.F. Choke. 10H. 40 mA. (Midget)	4 0
C1 + C2. 32 + 32 mfd. 275 V	
working	4 0
C3 + C4. 1,000 + 2,000 mfd. 6 V	
working	3 9
SUNDRIES	
Miniature Battery H.T. socket strip	
Miniature Battery L.T. socket strip	
Tag Strip (3 way, 1 earthen)	
Variable Resistor. 10 ohms	

output. Price is as in the component list

The same firm will supply the H.T. and L.T. rectifiers. These are 90 V 40 mA H.W. and 6-0-6 V 25 A F.W.

For the H.T. section, smoothing of the output consists preferably of a mid-

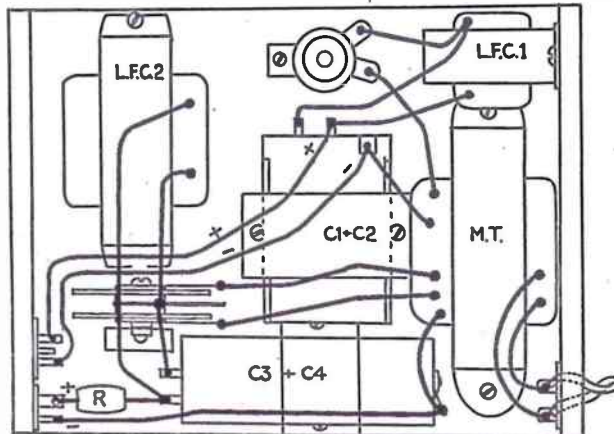


Fig. 2

get low frequency choke and the two condensers C1 and C2. A suitable choke is available from Henry's Radio, 5 Harrow Road, London, W.2, and is rated as 10 H 40 mA 360 ohms. It costs about 4/-. Instead of the choke one can use a 1K to 2K resistor which is cheaper but not quite so good.

The condensers, in a single tub, should be the 32 mfd. + 32 mfd. kind,

of 150 V working and upward. In the writer's case, 275 V working only were available, so these were used. These are obtainable from Henry's Radio, or Radio Clearance. If possible, the tub should be purchased with plastic insulating jacket already provided.

Turning to the L.T. section, we have already specified the rectifier (6-0-6 V 25 A). The smoothing condensers (again both in one tub) have to be of high value — anything from 1,000 mfd. to 6,000 mfd. Recommended is the 1,000 + 2,000 type, 6 V working, available from Radio Clearance, 27 Tottenham Court Road, London, W.1, selling very cheaply at 3/9.

The low frequency choke number two, for low tension smoothing, must be home made. It consists of roughly 300 turns of 20 to 24 gauge enamelled copper wire on an old transformer core. Old transformers are obtainable for a shilling or two from Duke and Co., 621 Romford Rd., London, E.12, or from Alpha Radio, 5-6 Vince's Chambers, Victoria Square, Leeds, 1.

### Space saver

A winding on a piece of dowel would give results, but would not be so good. A resistor could be used in place of the choke, but is inferior. This should be from 10 to 15 ohms, preferably wire wound. The resistor (R) in the low tension section is to adjust the voltage to the correct value. It can be variable for convenience, but can later be replaced by a winding of correct resistance value. This saves space, and will be dealt with in due course. The variable resistor, which is wire-wound, can be of 10 ohms value.

The general lay-out of the components is seen in Fig. 2. The mains transformer (M.T.) and the L.F.C.2 are screwed to the wood baseboard, through the holes provided in the feet. These latter can have a portion sawn off them, if necessary, to accommodate them to the confined space of the baseboard. (See L.F.C.2).

L.F.C.1 is screwed to the end piece of the case, as shown, so that its axis is at right angles to that of the mains transformer.

The tub condensers should be held down firm to the baseboard by metal bands screwed to the wood. These bands can be of thin aluminium, about 1 in. or so broad and of appropriate length, bent round, with holes bored for the screws. (See Fig. 4).

Note particularly that the outer case of the C1—C2 condenser is insulated. If a plastic cover is not provided, then cardboard or insulating tape can be used. The anchoring band will go over the insulation. Seeing that the baseboard is of wood, and, therefore, insulating, it would be possible to dis-

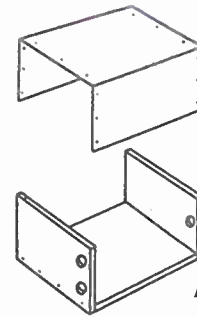


Fig. 3

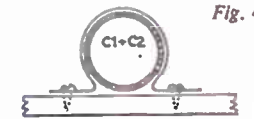


Fig. 4

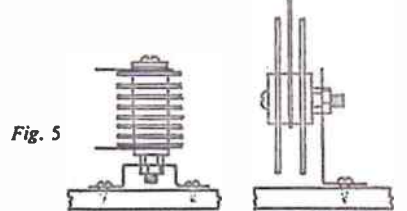


Fig. 5

pense with the insulating jacket, provided special care was taken to see that there was no possibility of the tub or band or screws touching any other item on the board. The chief danger is that the bottom of the tub might slip and touch the side of C3—C4.

The rectifiers should be mounted as shown in Fig. 5. Aluminium brackets are easily made.

Last of all, the plug-in socket strips should be fixed with screws to the corner of the end piece.

Take care, in mounting all the components that there is free space between all of them. They should not come near touching each other, or the metal cover of the case when eventually in position.

The wiring is easy and can be seen in Fig. 2. Use Fig. 1 also as a check. Start with the H.T. leads from the mains transformer. These are red, one going to the black end of the H.T. rectifier, and the other to the outer case tag of C1+C2.

The red end of the rectifier is taken to one lead of the L.F.C.1 and thence to one of the centre tags (positive) of C1+C2. The other lead of the L.F.C.1 is taken to the other centre tag of C1+C2, and from here springs the H.T.+lead. Make this of brown coloured wire, and take to the H.T.+ pin of the socket strip. The H.T.— socket goes to the outer case tag of C1+C2 already joined to one of the red leads of the mains transformer. See that you join the H.T.+ and H.T.— leads to their proper sockets. Reference to battery sockets will prevent mistakes.

Wiring for L.T.

For the low tension section, join the yellow leads of the mains transformer, one to each outer tag of the L.T. rectifier. The black lead of the transformer is led to the outer case tag on C3—C4. From this same tag, take a lead to the negative socket of the L.T. socket strip.

From the red on centre tag of the rectifier, join to the 1,000 mfd. tag of C3+C4 and to one lead of the L.F.C.2. The other lead from L.F.C.2 is taken to

the remaining centre tag of C3+C4. From this tag also a connection is taken to the variable resistor (R) or to the resistance winding if this is used instead. (This will be dealt with in a moment). From the other end of the resistor a connection is taken to the L.T.+ socket.

Finally, attend to the mains input leads. Brown lead is 200 V. Green is 230 V. Blue is 250 V. Cut off those that don't apply and seal with insulating tape in each case.

Take the black lead and other free lead and join to the tag board fixed on the side of the case. To the same tags join the usual lighting flex and lead this out through the hole in the end board. A knot can be tied in the flex between the hole and the tags.

### Voltage adjustment

The voltage adjustment of the L.T. section can be tackled now. For this, a dummy load will be necessary. If the set is the usual four valve, consuming 25 A in the filaments, then an ordinary torch bulb will pass as a dummy load. First, join the bulb over a 1.5 V (U2) cell and observe how intense the light is. Remove the bulb and join over the L.T. output sockets of the eliminator. Switch on and then adjust the variable resistor until the torch glows with the same intensity as with the U2 cell.

The output of the H.T. section can be tested by using a 9K or 10K resistor for a dummy load and using a voltmeter joined to top and bottom of the resistor to test the voltage. If no meter is available, then just trust that the H.T.+ is satisfactory, which it should be, if wiring is correct.

It is the L.T. section that is critical. Too much voltage will burn out the valves. So, having tentatively adjusted the L.T.+ through the torch bulb method, it must be finally adjusted with the eliminator linked to the actual set. The voltage necessary is between 1.3 V and 1.4 V and this can only be ensured properly by using a high resistance voltmeter. If this is out of the question, then

Continued on page 42



## Match Box Labels

# THE WHITE PEACOCK

**P**HILLUMENY (match box label collecting) has been an interesting hobby for many years. Enthusiasts include people in all walks of life and evidence of its increasing popularity is shown by the existence of an association, *The Harrow Phillumenist Club*, which publishes a monthly magazine and catalogues. A recent exhibition arranged by the Secretary of the Belgian *Acomatch Club* was televised. Many rare booklet and label exhibits were filmed.

A wide range of sets covering many subjects has already appeared, most of which may be cheaply obtained through the Association or from various dealers specializing in the hobby, who will also supply accessories such as hinges for mounting labels, black album leaves, etc.

This hobby has a definite educational value. Appropriate notes concerning the designs will help here; there's no knowing where these will end. I have often stumbled on facts (unknown to myself) when writing-up a certain series; for instance, data concerning the Peacock label shown in the illustrations.

This gorgeously coloured creature is associated with Oriental legend and often figures in ancient historical accounts. When first brought to Athens, it is said to have attracted large crowds from the country to see the new wonder bird. Later its numbers increased, and it has since spread throughout the whole of Europe.

The peacock with its feathers of a bluish green tinged with bronze shading, is beautifully shaped and graceful in



movement. In springtime it struts about and spreads out its long, trailing tail, which rises up from behind like an enormous Japanese fan.

Meanwhile, the female, the peahen, a plain, brown unattractive bird, scratches around for insects, totally oblivious to the lordly antics of her proud mate strutting around in his fine feathers.

Of course, like most people, I had a vague notion of this, but the matchbox picture stimulated me to further research. I did not know there were actually *white* peacocks, and white mixed with other colours; that their cry was very loud and very harsh, or that wild peacocks abound in the Indian forests where they are hunted. (R.C.)

● Continued from page 41

## Battery Eliminator

use the following method. First operate the set from the batteries, tuning in a station and setting the volume control so that it is only heard as a whisper. Then switch over from batteries to eliminator and adjust the variable resistance until the station is copied in the same volume as before. The L.T. voltage should be more or less correct with this, but it must be stressed that a first class voltmeter is the only proper way of obtaining correct voltage adjustment.

As stated before, for reasons of space, the variable resistor can be replaced by a fixed resistance winding. This can be wound round some dowel rod. The wire could be Eureka 26 enamelled or copper 36 gauge enamelled. Start with

about 22yds. 36 gauge copper, or 5yds. Eureka 26, and continue cutting off short lengths of wire until the torch bulb lights with the correct brilliance. Then adjust finally with the set in connection. Fix the winding with Durofix and cover with insulating tape.

The value of this resistor varies with the filament consumption of each set. The bigger the consumption, the less the resistance needed, and vice versa. The torch bulb, moreover, will be inadequate as a dummy load for many sets, so it is best to wind a proper substitute. The resistance needed can be calculated

from  $R = \frac{V}{I}$  where V is the filament volt-

age and I is the sum of the amperage of each valve filament. The dummy load can then be wound, using Eureka 26 gauge wire (1yd. = 2.7 ohms) or 36 gauge copper (1.9yds. = 1 ohm).

The 120 volt eliminator is built and adjusted in precisely the same way as the 90 V one described. Different components needed are:—Eliminator Transformer. Output 120 V 40 mA. 5-0-5 V 1 A. H.T. rectifier, 150 V 40 mA H.W. L.T. rectifier 6-0-6 V 1 A. All these obtainable from the Radio Supply Co.

Residual hum due to inadequate smoothing is liable to occur in the low tension section. If it does, it can be cured by fixing another 1,000+2,000 mfd. condenser in parallel with the existing C3+C4. Join tag to tag, and case to case.



Smart  
boy  
to key  
man



## IN THREE SHORT YEARS

If you're 15 or 16 with a mechanical turn of mind, you're all set for a really meteoric success story. For only about 3 years stand between you and one of the Regular Army's highly-paid, important technical jobs—engineering, for example, or surveying. That's provided you get into the Army Apprentices' Schools now. If you do, you're paid and kept while learning the job—with all the fun of a real man's life besides. Places are limited, so grab this chance with both your hands. Send off the coupon immediately. That's your first move.

40 different trades. Sound training—recognised by trade unions—in most kinds of mechanical and electrical engineering, surveying, and many other things.

Pay now almost doubled. When all Regular Army wages had their recent sensational increase, Army Apprentices' pay followed suit—it's nearly twice what it was. Free to you, and worth pounds extra, are board, lodging, clothing, and not least, training.

Sport and holidays. You get 8 weeks off in the year, with pay and free travel to home and back. And at school you can enjoy yourself on the playing fields to your heart's content.

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## WHEN WINES 'GO WRONG'

HOWEVER careful you are with the making of wine, there is bound to be the odd occasion when a batch does not turn out just as you wanted. It may be thick and cloudy, and will not clear properly, or, perhaps it has turned sour and tastes like vinegar.

This article has been written in order to help the large number of home-made wine enthusiasts to overcome their difficulties, and to produce a drink both good in appearance and excellent to taste.

By A. F. Taylor

It is difficult to lay down definite rules which should be observed, because there are so many factors to be taken into consideration. The quality of fruit and flowers used for wine making varies greatly from year to year. A dry sunny season will produce characteristics in the fruit, etc., differing from those generated during a wet period.

This will affect the finished article, but equally important, is where and how the wine is produced. It should be made in a room where the temperature can be kept fairly uniform, the ideal being 60°, but so long as it is not allowed to become chilled, little harm is caused.

At this point we must again emphasize the importance of absolute cleanliness in everything connected with the job. Use clean dry bottles or jars, and if you use a cask, see that it is sweet before you start.

### Producing a clear wine

Only good sound fruit should be used, and these are gathered on a dry day when ripe. Flowers are best picked after a sunny spell when they are fully open, and root crops when mature. There are exceptions and some people, for instance, use bruised oranges, but there is a great element of luck here.

The chief difficulty experienced seems to be to produce a clear wine. Provided a good recipe is followed carefully, most wines will clear if given time; some in fact may take up to a year to do so. Cloudiness is due to the presence of an insoluble substance in suspension in the liquid, which can usually be dispersed by the use of isinglass.

Dissolve some isinglass in a little warm water, and add to the wine, stirring gently to avoid disturbing any sediment which may have collected at the bottom. ½ ounce of isinglass should be enough to treat a gallon of wine, but if you can do it with less, so much the

better. Allow several weeks to elapse (one recipe, in fact, says six months), and then decant into clean dry bottles or jars, but be very careful when doing this, so as not to disturb the sediment in the bottom.

The white of an egg added to a little isinglass previously dissolved in water is sometimes used to clear the wine, while another recipe recommends using whole eggs with the isinglass.

The weather appears to play an important part in the process of wine making. An old recipe for dandelion wine says that 'It should be bottled when finished working, choosing a fine, clear, bright day for the purpose'.

With wine that has turned sour, we have a much more difficult problem, and many writers say that it is impossible to do anything about it. It does, of course, depend on how badly it is affected, and when not too bad, it can be improved, if not entirely cured.

Prevention is better than the cure, and everything should be done to see that it has no chance to turn sour. The whole art of wine making consists of the proper management of the fermenting process, and during this period, the air should not be allowed to come in contact with the wine.

Sour wine is sometimes produced by using too much yeast, with the result that fermentation goes on too long. Some people are over anxious to get it working quickly, and add more than the stipulated amount. It is much better, therefore, to err on the other side and use less than stated. There are some fruits that will start fermenting without the use of yeast, and when this is the case, no addition should be made.

A few fat juicy raisins added to a bottle of sour wine and left undisturbed for several weeks will often improve the quality and reduce the sourness. According to an old recipe, a small amount of ordinary chalk will neutralize the acidity of sour wine, and it is certainly worth trying on a small scale first.

### A use for soured wine

Another recipe records that the bitter taste of beetroot wine can be removed by making another batch of wine extra sweet, and then adding it to the other. Although this advice may prove successful in some instances, it is not guaranteed to cure every case of sourness, and it would be better to try the raisin recipe first.

Wine that has become very sour and cannot be cured need not be thrown away, as it will generally make a very

pleasant mulled drink. This is particularly applicable to elderberry wine, which is an old remedy for a cold, and very good it is. Take about two table-spoonsful of the wine, add a liberal portion of sugar, fill up the tumbler with hot water and drink as hot as possible.

Proper mulled wine should contain spices and the use of these would, no doubt, help to annul the acidity. The spices, such as cloves, ginger or cinnamon, either separately or in any combination, are first boiled with water, and then strained and added to the wine and sweetened.

When wine has finished working, all bottles or jars should be tightly closed with sound well fitting corks. The wine will keep better if the containers are filled practically to cork level, so that there is very little air space. It is also best to lay the bottles partly on their sides, so that the corks are always covered with liquid and, therefore, do not dry up and cause an air leakage.

Wines are often drunk before they are mature, but if ample time is allowed to elapse before they are used, many of the faults will disappear. Six months is the time usually suggested for wine to mature, but much better results can be expected after at least a year.

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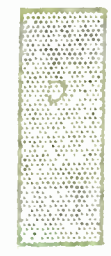
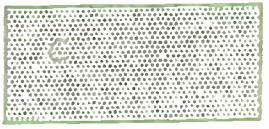
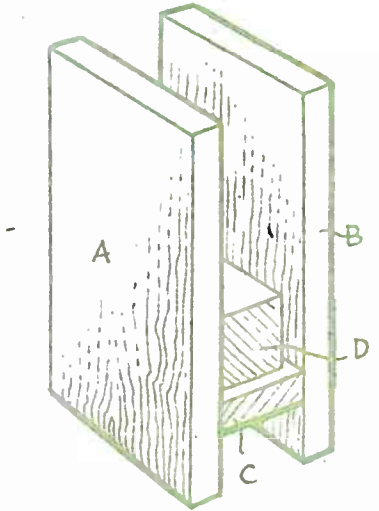
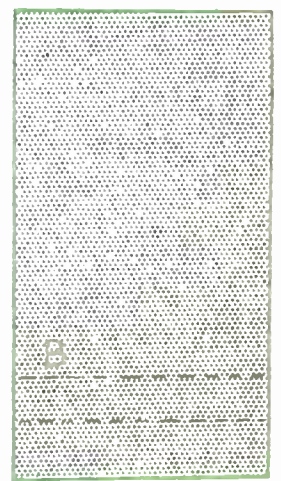
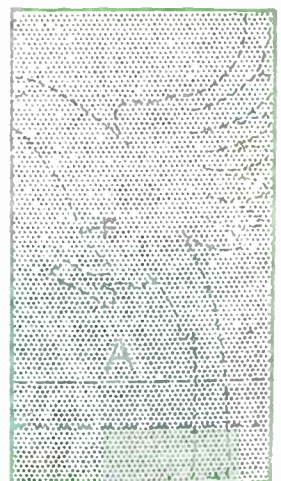
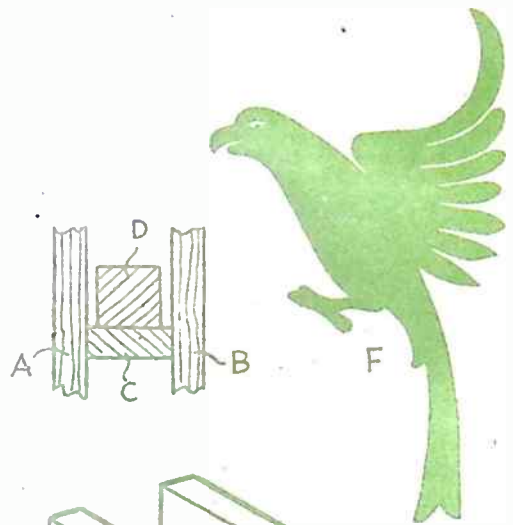
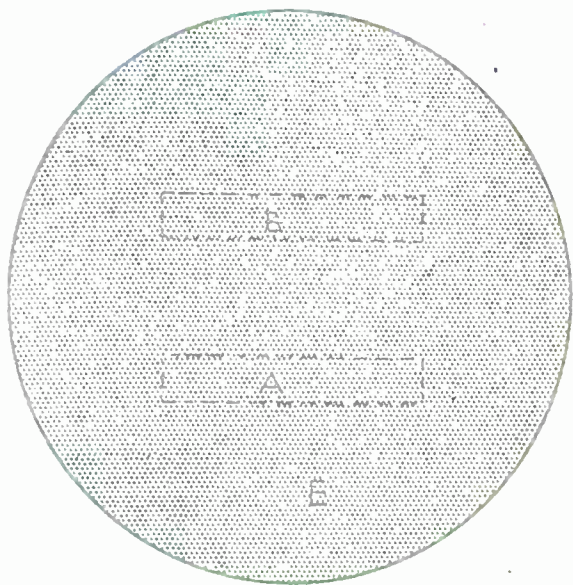
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