MODEL LANCASTER PATTERN SHEET FREE INSIDE

Hobbies WEEKLY

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Plug in and you get the answer from this ELECTRIC ENCYCLOPEDIA

THIS novel article is just the thing to make for a youngster. It is interesting and instructive giving correct answers to a series of questions on the subject chosen. The idea is quite simple and intriguing. You put one plug in for the question and by trying the other plug in the various numbers you get the correct answer when the appropriate lamp lights up.

Animals is the subject selected for example here, and the model will show what country any particular animal comes from.

For Plane Recognition

The interest in the model can be greatly extended by replacing animals by other subjects, natural products for example, and birds, insects, reptiles, and so forth. Or why not have a range of aeroplane names, with the answers showing whether bombers, fighters, etc., and their makers?

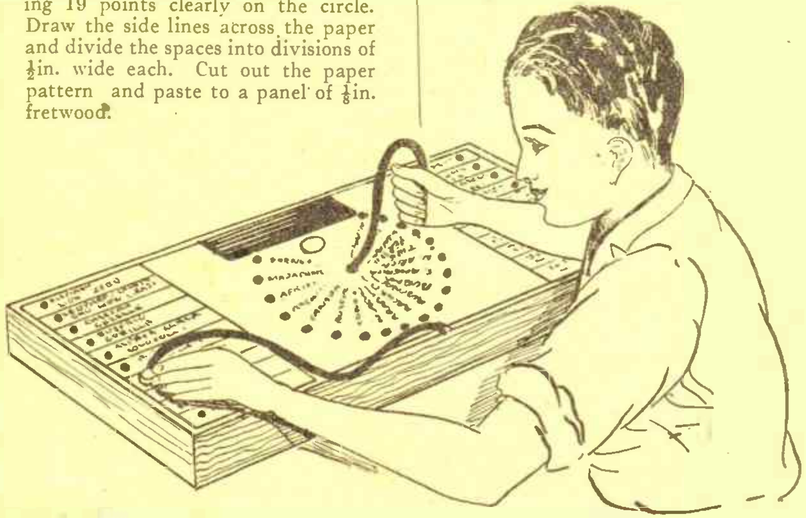
In use, the bottom plug is pushed into any hole 1 to 20, and kept there with a pressure of the finger. The centre plug is then tried in any of the holes 21 to 39 and when the lamp lights up the correct answer is shown.

On a sheet of white, good quality paper, mark a rectangle to the dimensions given in Fig. 1. Run a line across the centre and in the middle of the line mark A. At the top draw the cut-out B, and below this mark point C. At A strike the 4in. dia. circle.

Divide this into 24 equal parts, and omitting the top 5, mark the remaining 19 points clearly on the circle. Draw the side lines across the paper and divide the spaces into divisions of ½in. wide each. Cut out the paper pattern and paste to a panel of ⅛in. fretwood.

The panel should be 7ins. by 14ins. Paste the paper to it with one side and end level with a side and end of the panel so that when cut out a strip 14ins. by 2ins. and 5ins. by 3ins., will be left over. These pieces will be wanted later on for rims so take care of them.

A second panel will be wanted.



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This is a soft wood one, 5ins. by 11ins. and ¼in. thick, the same size as the pattern so no waste will ensue The ⅛in. panel, which will be called the cover, is now temporarily nailed to this.

Get a ⅛in. drill bit, and on a line drawn ½in. from each end of the panel drill a hole in the centre of each division and also on the 19 points marked on the circle. These holes should penetrate the cover and enter the panel below about half way.

Connect the screw contacting the lamp with one of these, and to the other solder a second length of flex, marked flex, 2. Fix a lamp in the hole and a battery in B. Bring the ends of the flex leads together and the lamp should light up. Get this right by adjusting the contact screw of the lamp or the battery contacts if necessary.

From the pieces of wood laid aside for the rims cut two strips 11¼ins. long and two 5ins. long, and as near

screws 1 and 35 being connected together, press the bared ends of the flex leads to them, one to each, and the lamp should light up. Note that screws 1 and 19 are both connected to the same point.

Now cover the bottom of the base with a sheet of cardboard, glued over. Trim the edges of this to the base and fix the rim pieces round with glue and nails. These rims will stand up above the base from ⅜in. to ½in. Give the rim a coat of stain and varnish.

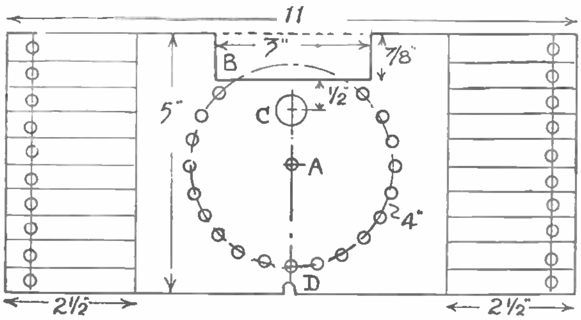


Fig. 1—How to mark out the top

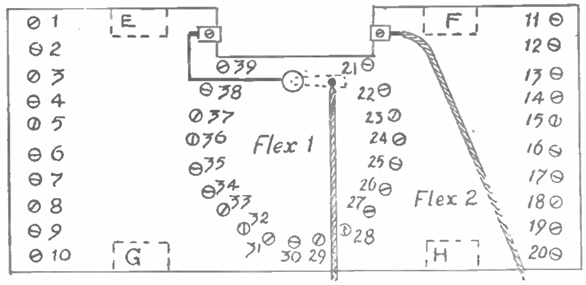


Fig. 2—The numbered contacts and flex leads

Now saw out the cut-out B. At point C drill a very fine hole through both panels, they are then separated.

In the cover alone, drill a ¼in. hole through at A and a ⅛in. hole through C, and at the bottom cut out the notch D, ¼in. square. The ¼in. thick panel which is the base, is shown at Fig. 2.

In each of the ⅛in. holes drive a ⅜in. No. 4 round-headed brass screw. These, for reference, are numbered 1 to 39, as shown. At point C, bore a ⅜in. hole through for the lamp, a 2-5 volt one.

Electrical connections for this lamp are made as follows. Cut a right-angled notch in B to within ¼in. of the lamp hole, and in this drive a brass screw far enough to make contact with the lamp, when the latter is in. Fig. 4 shows this screw.

Contacts

For the second contact, cut a strip of springy brass (terminal of a flash lamp battery). Turn the base over and chisel out a recess ⅛in. deep, as in Fig. 3, in which the brass strip can lie and cover the lamp hole, as shown. Fix in position with a ⅜in. long brass screw.

This screw will stick out above the base, of course, and should have its tip filed to a flat. To this top solder a length of single flex, marked on the diagram as flex 1.

The battery connections can now be made. These are two strips of springy brass again, about 1¾ins. long. They are bent as shown in Fig. 4, and fixed, one at each end of B with brass screws.

to 1in. wide as the wood allows. The remaining bit left over is cut into 8 pieces, the pieces being glued together in pairs to form 4 spacing blocks.

These are glued to the base where shown in E, F, G and H. The screw heads should now be pencilled 1 to 39 to assist in connecting up correctly.

These connections are not shown in Fig. 2, they might prove rather con-

Fig. 3 — The strip recess

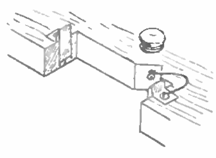


Fig. 4—Contacts to the lamp

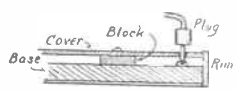


Fig.5—Section showing plug

fusing, so are enumerated as follows. 1 to 35, 2 to 21, 3 to 33, 4 to 36, 5 to 30, 6 to 25, 7 to 37, 8 to 38, 9 to 22, 10 to 32, 11 to 39, 12 to 29, 13 to 26, 14 to 31, 15 to 28, 16 to 23, 17 to 34, 18 to 24, 19 to 35, and 20 to 27.

Connecting is easy enough. Get some thin D.C.C. or enamelled copper-wire, such as would be used to make electric bell coils, and cut into suitable lengths. Bore the ends of each and slip the bored ends under the correct screw heads, and tighten up.

It will be as well to test each connection as made. For example,

Now push flex 1 through the centre hole in cover and flex 2 in notch D. Press the cover down to the base and screw it to blocks E to H. Cut the flex to suitable lengths, flex 1 being long enough to contact any screw 21 to 39, and flex 2 screws 1 to 20.

Fit each flex with a wander plug, such as is used in wireless sets to connect to H.T. and grid bias batteries. The sectional view, Fig. 5, shows the toy and how the plugs, inserted in the holes in the cover, can contact with the screw heads below.

Suggested Questionnaire

The following names, or group of names, should now be neatly printed against each hole in the cover :—

1—Elephant ; Lion, Zebu ; 2—Leopard, Cheetah, Gnu, Lion, Giraffe, Hyena, Hartbeest ; 3—Cheetah, Gazelle ; 4—Buffalo, Caribou, Marsh Deer, Moose ; 5—Alpaca, Llama, Colocolo, Guanaco ; 6—Chimpanzee, Gorilla ; 7—Orang-outang, Banteng ; 8—Lemur ; 9—Coyote, Elk, Skunk, Caribou ; 10—Tufted Deer, Yak ; 11—Puma, Jaguar ; 12—Banteng, Sambur ; 13—Camel, Dromedary, Hartbeest ; 14—Camel, 15—Kangaroo, Opossum, Koala, Wallaby, Platypus ; 16—Reindeer, Saiga ; 17—Eland ; 18—Okapi ; 19—Panther, Cheetah ; 20—Viscacha ; 21—Africa ; 22—Canada ; 23—Russia ; 24—Congo ; 25—W. Africa ; 26—Arabia ; 27—Argentine ; 28—Australia ; 29—Burma ; 30—S. America ; 31—N. Africa ; 32—Tibet ; 33—Persia ; 34—S.W. Africa ; 35—India ; 36—N. America ; 37—Borneo ; 38—Madagascar ; 39—America.

OUR FREE DESIGN FOR A NON-FLYING MODEL LANCASTER

Our Pattern Sheet this week is for making in wood a simple model of the famous Lancaster Heavy Bomber. The work is easily undertaken from the full-size patterns and complete instructions as printed . A kit of planed boards for all parts is also supplied by Hobbies Ltd. It is obtainable (ask for No. 2504) at Branches for 3/2, or from Dereham, Norfolk for 3/9 post free.

A number of practical hints contained in these

FRETWORK NOTES

THE cutting of thin fretwood is often a disastrous undertaking for the beginner, but if carried out properly there is no reason why it should be. Wood 1/16in. thick is usually put on as overlays or for bending to shape on models, but such thin material is naturally very fragile and needs handling with care.

One way out, of course, is to use the thin plywood, but a disadvantage as in the case of all plywood—is that the edges always show the grain of ply. Moreover, plywood cannot always now be obtained. So it is best to use the real wood whenever possible, even though it takes more care in using.

First and foremost, be sure to have a sharp blade for your handframe or machine and do not force the saw through wood too quickly. Naturally the blade cuts such thin material very easily, and is apt to run away with you. Have perfect control.

Take an even, steady stroke, working the saw quickly up and down without actually pressing forward too fast. Remember as you turn into the grain of the wood, the saw is apt to run forward quicker than it does across the grain, and keep a restraint on it accordingly.

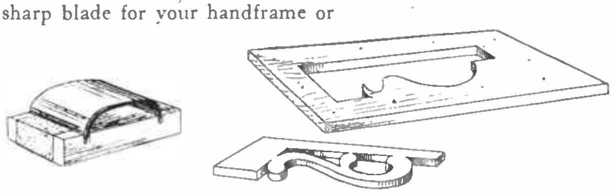


Fig. 1—The waste wood used as a frame for glasspapering

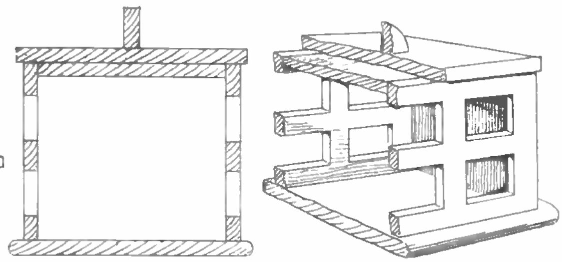


Fig. 2—An elevation drawing and the same article in perspective

Stiffening Parts

It is a good plan, always to fasten another piece of wood to the thin piece. This makes the part stiffer, and so renders it less likely to break. A piece of $\frac{1}{4}$in. wood is used, and it is nailed to the thin piece with some of those thin fretnails which are quite cheap.

Have the nail longer than the combined thickness of both pieces, in order that some of it can be bent over on the underside. Put the thin board on top with the pattern pasted on in the usual way. Drive the nails round outside the design of the part to be cut with a few more in the frets which are later to be cut out.

Frame for Cleaning

In cutting the part leave these until the others have been taken out, and then go round the outer edge last of all. The outer part which is cut away should be kept as a whole piece if possible. Then, when the pattern is to be cleaned, it can be used as a framework to hold during glasspapering.

Nail this frame to the bench, and lay the design in it. It will then be quite flat and easily cleaned with the glasspaper used on a block or the proper holder (see Fig. 1).

There are some readers apparently who cannot always understand the detail drawings on a design sheet, or know the meaning of technical terms in instruction articles. A few words of explanation will soon put them wise, and be helpful in making them understand construction more easily.

One of the most common drawings is a " section " and a typical example is shown at Fig. 2. Now this drawing is merely a side view of the article if it were cut in two through the middle. You will see certain parts in the section at A are shaded and others are not.

Those in outline are parts which help to form the whole piece, but have no actual portion in the centre of the article where it has been cut through. A section is always cut through the centre so that in certain cases overlays or parts which are not in the middle of the article are not shown. A perspective drawing of the actual thing is shown at B which illustrates the principle quite clearly.

This sectional view is also often given in a drawing of a part to show its edge must be rounded, as illustrated at Fig. 3. Here you see the pattern as it is pasted on the wood, with the sectional drawing incorporated. In the same illustration is a picture of the part cut out showing the edge properly rounded off to the shape provided by the section.

To " Read " Drawings

A plan is a straightforward drawing looking down on the article and usually drawn to show positions of various parts. An excellent illustration is given at Fig. 4 which shows the plan of a base composed of four parts. In the second detail of the drawing these same parts are shown in perspective as they would appear when completed.

An elevation, on the other hand, is a flat front view of any piece of work, usually in plain outline. It is generally given to provide an illustration of where the various parts have to be put.

The detail at Fig. 5 is an elevation of a small hut. Such an elevation cannot, of course, show the thick-

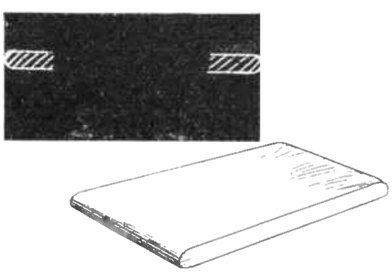


Fig. 3—Shaded section shows rounded portion as in lower drawing

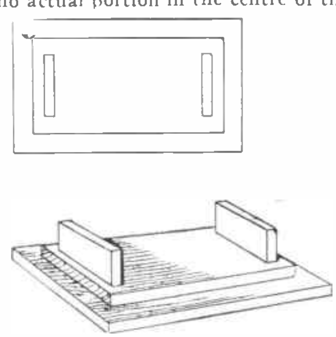


Fig. 4—Top detail is a plan of the article shown below

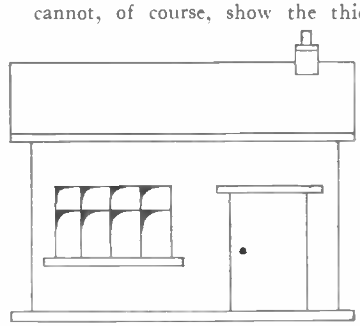


Fig. 5—Illustration to show an elevation drawing

nesses of the various parts, nor the shape of the protruding or recessed portions.

It is very often the case that a design sheet is not large enough to show a part full size. The part may, however, contain certain portions which are difficult to draw, but which in the main, are only the ends of an otherwise plain shape.

Extended Parts

This is often the case in tenons on the ends of shelves, or shaped portions of the front of a base. The parts which are shaped are usually printed full size, but the complete length is not given.

The plain portion between is, therefore, broken in two—the break being indicated by a wavy or jagged edge. To show the complete length, however, a line is drawn from end to end, and the dimension given to which the actual part must be extended. The two parts of the pattern are thus cut as separate pieces, and one pasted down to the wood.

Rule pencil lines as a continuation of the sides as far as necessary to complete the length. Then take the second part of the pattern and paste it at the other ends, taking care to measure up the required length when it is down.

Be careful to get the pencil lines

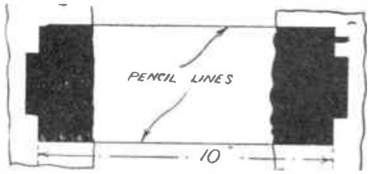


Fig. 6—How to draw parts extended

straight and the correct distance apart. Test them out before pasting the second portion of the design down, or the part, when cut, will not be accurate. An illustration of this method is given at Fig. 6.

Squared Work

Another method of transferring work which cannot be printed full size is by means of squares. This is often given in the articles in these pages, and is quite simple to follow. The outline required is shown (as at Fig. 7) drawn through a number of squares. These squares are always stated to be a certain size. To transfer them to the wood is thus a simple matter. Measure off marks on the material on two sides, the distance apart stipulated — usually ½in. or 1in. and with a square and rule draw pencil lines through to make a chequer-board effect of a number of squares.

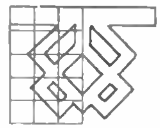


Fig. 7—How to enlarge

Then with the small drawings in front of you, sketch in the outline of the design, taking particular care that your pencil marks pass through the various lines of the squares at the same point as in the original drawing.

If, of course, a portion of the pattern is more intricate or elaborate, these inch squares can be sub-divide again into half or a third. This will make the drawing of the design much more easy and accurate.

The pencil lines should not be too thick, but the pattern itself should be quite distinct.

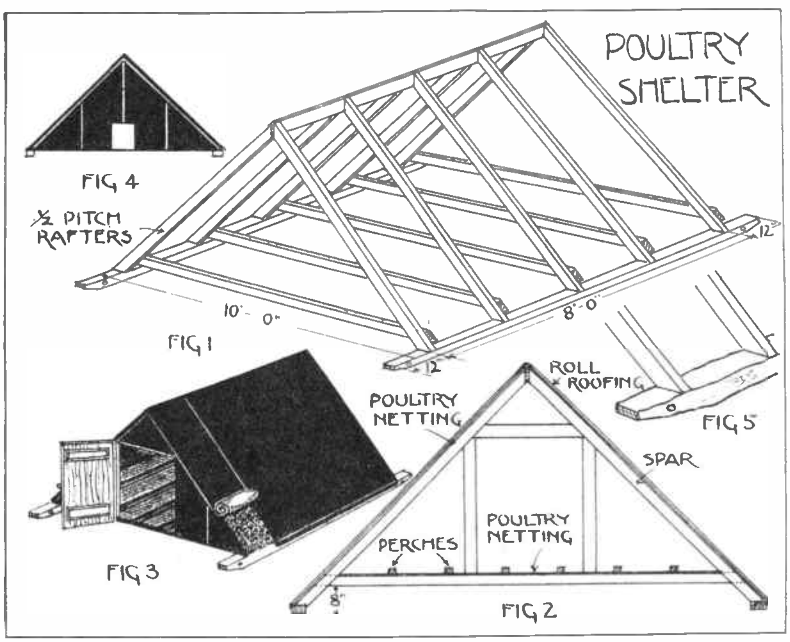
Economical and straightforward way of making

POULTRY SHELTERS

THE great difficulty in making up poultry houses or shelters is the limited supply of wood and for that reason the writer has had to adopt the idea shown. It will probably be equally acceptable to others in the same position.

The A shaped poultry shelter shown at Fig. 1 and Fig. 3 is simple in construction and satisfactory in service. If straight poles are available they may be used for the framing and skids (Fig. 5).

Placing the joists 5ins. above the skids keeps them clear of uneven ground (Fig. 2) when the shelter is dragged to new positions in the field. Anything equal to 3ins. by 2ins. is suggested for rafters and joists if the shelter is built to the dimensions of the drawing. Allowing 6ins. perch space per bird this size would shelter close on a 100 birds.



If it is made smaller, lighter poles or timber would do. The poultry netting is placed on the joists with a strip of wood at each side and the netting turned up to meet the roof covering.

The upright netting encloses the shelter at the sides. Then 2in. by 2in. poles are placed on the wire floor for roosting as shown at Fig. 2.

Roof Covering

The rafters are covered with poultry netting and roll roofing. In addition to the door at the front a small door for the poultry to run out is built at the rear, as shown ar Fig. 4.

The front and rear of the shelter is covered with poultry netting and roll roofing. Should poultry netting be limited, wooden strips may be used for the front and rear to form a support for the roll roofing. Wood strips may be used with satisfaction on the joists if wire is not to be had.

Inexpensive Shelter

These poultry shelters can be built of old timber, too poor to use for other structures. Sizes called for in the plan may be changed to suit wood at hand. This construction is especially suitable for a small flock of birds. The shelter is light, inexpensive and easy to build.

Whatever your interests here are some everyday THINGS *you* SHOULD KNOW

WHAT'S in a gas-lighter flint ? For a change, that is what the writer would like to know ! You see, here's a very queer thing about flints. If you attach one to a piece of thin wire and hold it in a fire for a few minutes and then withdraw it and look at it, it will probably be a dull-reddish colour.

Keep looking at it and, strange to say, the flint starts to glow to a bright red and keeps glowing, mysteriously, for a long time.

It reminds one of an element charged with electricity. Suddenly, however, the bright glow dies away and all you have left on the wire is a few ashes ! Bit costly, this flint experiment, so you will have to take somebody's word for it ! Incidentally, the " ashes " will glow again for a short period if heated. The ashes are twice the size of the flint.

* * *

ONE of the things you should *not* know is that old ruinous tip of sharpening scissors by trying to cut a sewing needle with the blades. The action does not sharpen the cutting edges—it merely *turns over* the edges, producing a "burr" on the flat sides of the blades. Consequently, as both blades rub against each other, they each cut away the burr, leaving the edges worse than ever.

Try it—and you will feel the burr being cut away. A much better plan is to file the edges or rub them on a small oilstone slip, or failing that, use a piece of roof slate, dipping it in water. Fine machine oil could be used as a lubricant, but water does the trick just as well. The sharpening is of course, slow, so take your time.

An alternative idea, is to use a steel knitting needle. The blades are sharpened by drawing the needle down the cutting edges at the angle ground on them.

This tends to turn over the edges in the same way as the sewing needle tip, but rather than leave the burr projecting, this is straightened by rubbing the needle on the flat side of the blades.

Thus, the blades are sharpened much in the same way as a cabinet-maker's wood scraper is sharpened.

* * *

A DICTIONARY is a household book that is always used. When in a hurry to find a certain word, pages are flicked over recklessly, some becoming turned over and almost turn out. Why not be wise and " thumb-slot " the book ?

This is easy to do, using a $\frac{3}{4}$in. wide inside cutting wood gouge. To begin, get all the "A" pages together and put a piece of plywood beneath. Then, with the aid of the gouge, cut a thumb slot in all the pages, starting off near the top of the page, at the right-hand side.

Now get all the " B " pages together, put the wood underneath, make another thumb slot that will be directly below the first thumb slot. Do the same thing with all " C " pages, " D " pages, " E " pages and so on until you reach the " Z " pages. These pages, please note, do not require to be slotted.

DO you know, or rather, realize that ordinary hair-oil is ideal for oiling your fret-machine, including your oilstone ? It is just as cheap, too, and not quite so nifty as the usual fish oil most woodworkers use now when sharpening tools.

The hair-oil is almost as thin as knife oil. It is, of course, faintly perfumed. You will prefer that to the awful, sickening odour of the fish oil; the smell of this seems to cling lovingly to the hands, apron and woodwork implements for days on end. Sweet lavender or attar of roses is to be preferred by all, no doubt !

* * *

DO you know, by the way, that you can find the weight of hay by measuring it ? Well, it can be done, and if ever you find yourself working on the land for some farmer, here is the way to go about things—

First of all, multiply the length by the breadth of the stack of hay in feet; then take the height to the eaves; and add to it half the height from the eaves to the top for the taper. Multiply the other product by this, and divide by 27, the number of cubic feet in a yard.

The number of stones supposed to be in every cubic yard of new hay is 6 stones of 22lbs. avoirdupois each ; if the hay has stood for some time 8 stones, and if old hay, 9 stones to the cubic yard. So, now you know—or *do* you ?

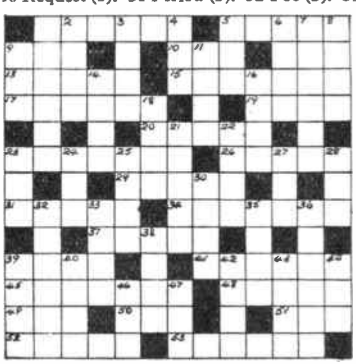
* * *

NOW, how would you like to be able to tell a farmer the weight of cattle, etc. using nothing more than a rule ? Wouldn't old Giles be surprised ! Right, then, take the measurement of the girth of the animal where smallest (around the body, close behind the shoulder); take the length from the front of the shoulder to the insertion of the tail. Multiply the square of the girth in feet and inches, with the length in feet and inches, and the product by ·24, ·26, ·28 or ·30, according to the fatness of the animal; the result will be the weight of the carcase in imperial stones. The weight of the carcase is to the live weight of an animal as 1 to 2, or a little more in cattle ; as roughly 4 to 7 in fat sheep ; as about 2 to 3 in fat pigs. These proportions will vary according to the condition and breed of the animal.

A Simple Cross Word Puzzle

CLUES ACROSS

1 Corrupt (6). 5 Smallest (5). 9 Describe clearly (3). 10 Dread (3). 13 Battlefield (5) 15 Model (7). 17 Renominate (6). 19 Attack (4). 20 Match (5). 23 Artist's studio (7). 26 Fruit (5). 29 Railway-wagon (5). 31 Cover (5). 34 Promiser (7). 37 Accompany (5). 39 Verily (4). 41 Keeper (6). 45 Tone (7). 48 Convey over water (5). 49 Clothe (3) 50 Request (3). 51 Period (3). 52 Foe (5). 53 Make angry (6).



CLUES DOWN

1 Father (6). 2 Frank (4). 3 Bang (4). 4 Short sleep (3). 5 Permit (3). 6 Extent (4). 7 Periodically (6). 8 Contribute (4).. 11 Wits (4). 14 Claw (4). 16 Ambush (4).. 18 Always (4). 21 Burst (5). 22 Capture (4). 23 Help (3). 24 Memorable date (3). 25 Detail (4). 27 Pin (3). 28 Sin (3). 30 Indication (4). 32 Stay (6). 33 Plate of glass (4). 35 Venture (4). 36 Come forth (6). 38 Curves (4). 39 Measure of land (4). 40 Brink (4). 42 Far away (4). 43 Draw (4). 44 Kind of grain (3). 46 No. (3). 47 Lengthen (3).

Solution Next Week

INTERESTING LOW VALUE EDWARD VII

THE three lowest G. B. Edward VII values, the ½d., 1d., and 1½d., which at first look so ordinary, are really full of interesting shades and varieties. They were printed by three establishments: De La Rue and Co. Ltd., Harrison and Sons, and at Somerset House. The ½d. and 1d. were printed only by the first and second, and the 1½d. by the first and the third.

The stamps printed by Harrisons were issued with two perforations, 14, and 15×14. The other two sets were both Perf. 14. The watermark, which was Imperial Crown, remained the same throughout.

The Early Edwards

The first Edward VII stamp that was ever issued was the De La Rue ½d. blue-green, on January 1st., 1902. There are only two shades of this stamp, one dark (the commoner) the other paler, but the variation is so slight that it is not of much importance.

This shade was superseded on November 26th, 1904, by the ½d. yellow-green, because the blue-green ½d. was difficult to distinguish from the 2½d. blue in artificial light.

It remained current until 1911. The only shade variation is pale yellow-green, but again is of little importance.

Inverted watermarks are quite common in all the ½d.'s, but it is scarcer in a stamp with cross attached. This cross took the place of a printed stamp in booklets, probably to make the price of the booklet a round sum.

Colour Distinction

In 1911 the printing plates were handed over to Messrs. Harrison and Sons. There was no ½d. blue-green but the ½d. yellow-green was changed to green. The colour therefore is quite a good method of distinguishing between the two sets, but another and more reliable way is to look at the horizontal shading below the chin. In the De La Rues the lines are even and complete, while in the Harrisons they are broken. Also the Harrison impressions are rougher looking than the De La Rues.

The shades of green vary from deep dull green to pale green. The pale green can be found with cross attached as before, and is worth much more than the De La Rue. This shade can also be found with sideways watermark, but is very scarce.

In June, 1911 a ½d. bright green, very clear printing, was issued. This is scarce, and is hard to distinguish from the deeper shades of the De La Rue ½d. yellow-green, unless it has the control A 11 attached.

The Perf. 15 × 14 ½d. is much the same as the Perf. 14, though there is much greater variety of shade in it than the catalogue suggests. This is the scarcest of all the Edward VII ½d.'s. It is interesting to note that it is worth more used (3/-) than mint (2/-).

Range on Post Cards

If your father or someone has saved old post cards, there will probably be a wide range of postmarks on ½d. stamps. If they are good, do not soak them off, but cut neatly round the whole postmark, and mount a page of them. You will find that if you arrange them by different types of postmarks, you will have a very attractive display.

The first Edward VII 1d. stamp issued was the De La Rue 1d. scarlet, on the same date as the ½d. blue-green. There is considerable variety of shade in this stamp, the colour varying from carmine to deep pillar-box red. Inverted watermarks are quite common but there is no "Cross Attached" variety.

The Harrison Perf. 14 1d.'s have several distinctive shades. There is not a scarlet among them—they are all shades of rose-red or carmine-red. The carmine-red shades are each worth £1 mint and 3/6 used, so it will be well worth while to look out for one, as often they are mis-identified even by dealers.

A Scarce Variety

There is a third shade, very scarce, the aniline pink. This is almost unmistakable, apart from the fact that it is pink and not rose-red. On aniline copies the white parts of the stamp are tinted with red, and bits of the design show through in red on the back. It was not issued until August, 1911.

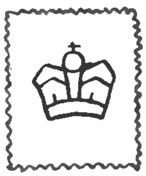
In the Perf. 15 × 14 set, the two shades of rose-red and carmine-red still appear, but in this issue the rose-red is scarcer.

An invariable test for all Harrison printings is the control, A 11, usually found beneath the second stamp horizontally from the bottom left hand corner of the sheet.

A Test

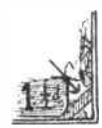
The De La Rue 1½d. stamps were printed in two different shades on two different papers. The shades were dull purple and slate purple with yellow-green. The papers were "ordinary" surfaced and "chalk" surfaced.

The easiest way to distinguish "chalk" surfaced from "ordinary" surfaced papers is to hold the stamp so that the light falls horizontally along it. The "chalk" surface will reflect the light, while the "ordinary" surface appears dull.



Imperial Crown W.M.K.

With Cross Printing Attached



De La Rue

Somerset House

Another way to distinguish the two is to lightly run your finger tip over the face, when the "chalk" surface feels smooth. A third way is to use a silver pointed detector pencil which leaves a mark on a "chalk" surface but makes no impression on the "ordinary."

There are three shades of purple in the 1½d. in the Somerset House printings. All are on "ordinary" surfaced paper. (1) pale reddish purple (13th July, 1911), (2) purple, and (3) Slate purple. The first type is the scarcest, and is unmistakable, being the only 1½d. Edward VII stamp ever issued to have a reddish tint.

The Somerset House 1½d.'s can only be distinguished satisfactorily from the De La Rues by the rougher appearance of the printing, and by looking at the double line in the drapery running off to the right from the "1½d." label. In the De La Rues the inner of these two lines is very feint, but in the Somerset House copies both lines are of equal thickness.

So in these three ordinary looking stamps there is enough to keep you busy for some time if you can get hold of a few of each. This should not be difficult, as they are quite cheap, and there is a chance that you may find a rarity among them.

A novelty to make for Christmas is this combined

CARD AND CIGARETTE BOX

THOSE cigarette boxes which deliver a single cigarette every time you pull the drawer open are deservedly popular, and always find favour with the fretworker. These novelties appear in different styles and various designs for their making have been printed in these pages from time to time.

We add to the novelty of the box we describe here by including a compartment for playing cards. The wood for making up the box is all 3/16in. thick with the exception of two small parts which are 3/8in. thick.

Parts Needed

A complete list of parts with measurements is given here for marking out on the wood and cutting with the fretsaw. Ample diagrams make the construction very clear once the parts are cut, and it only needs careful and accurate gluing up and assembly to make a first class job.

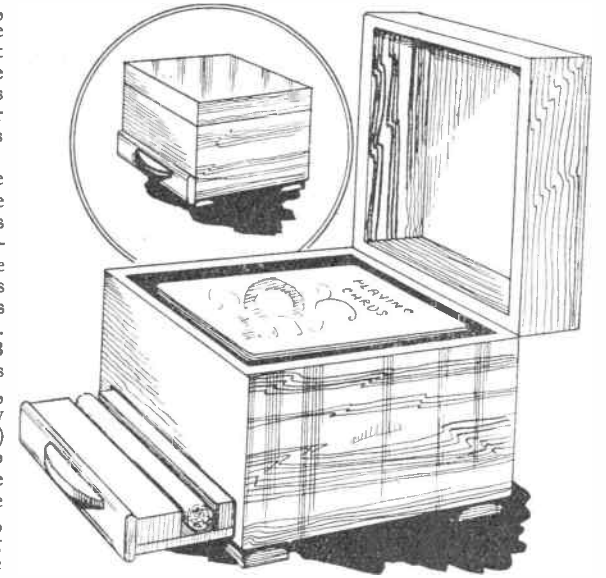
CUTTING LIST

A—1 piece 4 1/8 ins. by 3 1/2 ins.
B—2 pieces 4 1/8 ins. by 3 1/4 ins.
C—1 piece 3 1/8 ins. by 3 1/4 ins.
D—1 piece 3 1/8 ins. by 2 3/4 ins.
E—1 piece 3 1/8 ins. by 3 1/4 ins.
F—1 piece 3 3/4 ins. by 3 1/8 ins.
G—1 piece 4 1/8 ins. by 3 1/2 ins.
H—1 piece 3 1/8 ins. by 3ins.
I—1 piece 3 1/8 ins. by 2ins. 3/8 in. rubbed down.
J—1 piece 3 1/8 ins. by 1/2 in. 3/8 in. rubbed down.
K—1 piece 3 1/2 ins. by 3/4 in.
L—1 piece 1 1/2 ins. by 3/8 in.
M—4 pieces 1/2 in. by 1/2 in.

The two useful sectional diagrams, Figs. 1 and 2 make the working and delivery parts quite clear. In Fig. 1 we see the box closed with one cigarette lying in the groove of the drawer ready for delivery as soon as this is withdrawn as is illustrated in Fig. 2.

The size of an ordinary pack of cards in their case is 3 5/8 ins. by 2 3/4 ins. by 7/8 in. thick, and our box is therefore made to a convenient size to contain this pack as is clearly shown by the dotted lines in Fig. 1.

Work may be commenced by making up the box as shown in Fig. 3, and all the parts, with the single exception of part A, which is the floor, and this has two interior slots cut in it as outlined in Fig. 4.



Take care in the marking out to see that all the angles are exact right-angles so that the completed box is square and all parts fit easily together. Note from Fig. 3 how the various parts butt together, and note too how part D, (the front) lies with its top edge flush with the other edges of the sides, and back, and that an opening is left above the floor for the drawer to slide in.

The floor F, for the pack of cards, is accurately cut and glued in the box; small fillets of wood being glued round inside, if necessary, for the floor to rest upon.

Before the floor A of the box is finally glued on, the sloping partition E must be put in and the triangular shaped fillet opposite. When the glue has hardened, a line must be drawn 7/8in. down from the top of the box, and this part cut round with a small tenon or hand saw.

The Lid

This top portion then forms the lid, and it is attached to the bottom part by a pair of hinges at the back, just as seen in the upper circled diagram in Fig. 3.

At this stage of the work the sides of the box should be thoroughly cleaned up with glasspaper, and all sharp edges and corners removed.

Some little care must be taken in making the drawer, as a good fit and smooth running is essential. The floor H must be so marked out and cut that it fits the box accurately when slid in from the front in the opening allowed for it.

Cigarette Partition

The pieces I and J (which are of 3/8in. stuff) must be so cut and glued to the floor that an ordinary cigarette will lie easily between them as seen in the section Fig. 2.

As a height of 3/8in. is rather too great allowing for the diameter of a cigarette the two pieces I and J must be glasspapered down a bit, or of course if 3/8in. stuff is not procurable, then two pieces of 3/16in. wood could be glued together and the top layer papered down as necessary to get the required thickness.

The front piece J must be glued on flush with the front edge of the floor H, and then an edging piece, K, rounded along the top and bottom edges and

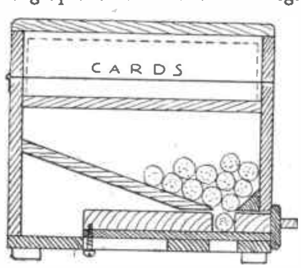


Fig. 1—End section with drawer and lid closed

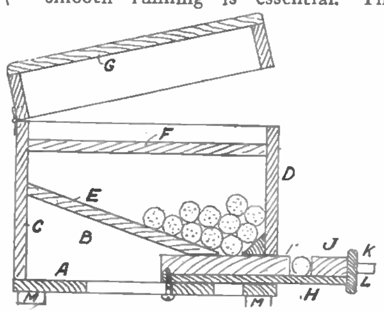


Fig. 2—Showing drawer extended and lid raised

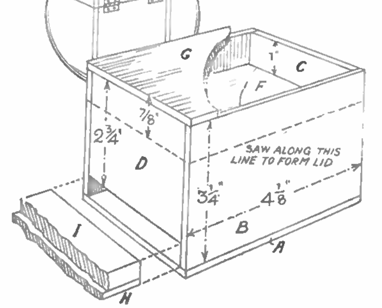


Fig. 3—Construction of the box

glued to the front as in the section Fig. 2.

To the front of K a shaped handle piece L is glued for pulling the drawer forward.

The completed drawer should slide smoothly into its place in the box, then, turning the whole thing upside-down a large diameter round-headed screw should be put through the slot in the floor of the drawer, quite near to the back edge as in the section Fig. 2. This prevents the drawer lifting and from pulling out altogether.

Two strips of wood glued underneath the floor, one at the rear and one at the front of the box form feet for the box, and make for clearance for the head of the screw in the slot of the floor.

Thirty or more cigarettes may be put into the box by first inserting it and removing the round-headed screw from the drawer. By removing or drawing out the latter it is a simple matter to drop the cigarettes through the front slot in the floor down into the box and past the inner partition and the front triangular fillet. Finally reinsert the drawer and replace the screw.

The box, after a general clean up, should be stained and polished or varnished. The cross-sectional view, Fig. 5, shows all the parts in place and the slots in the floor.

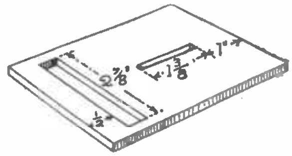


Fig. 4—The slotted floor

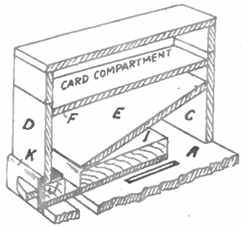


Fig. 6—Cut away view

Hobbies prepared standard panels of wood will be found economical for such articles as this, and all parts for this box can be got from two H3 panels.

The price of these panels is given in Hobbies Handbook or can be supplied.

MISCELLANEOUS ADVERTISEMENTS, etc.

The advertisements are inserted at the rate of 3d. per word or group of letters prepaid. Postal Order and Stamps must accompany the order, and the advertisements will be inserted in the earliest issue. Fretwork goods or those shown in Hobbies Handbook not accepted. Orders can be sent to Hobbies Weekly, Advertisement Dept., as below.

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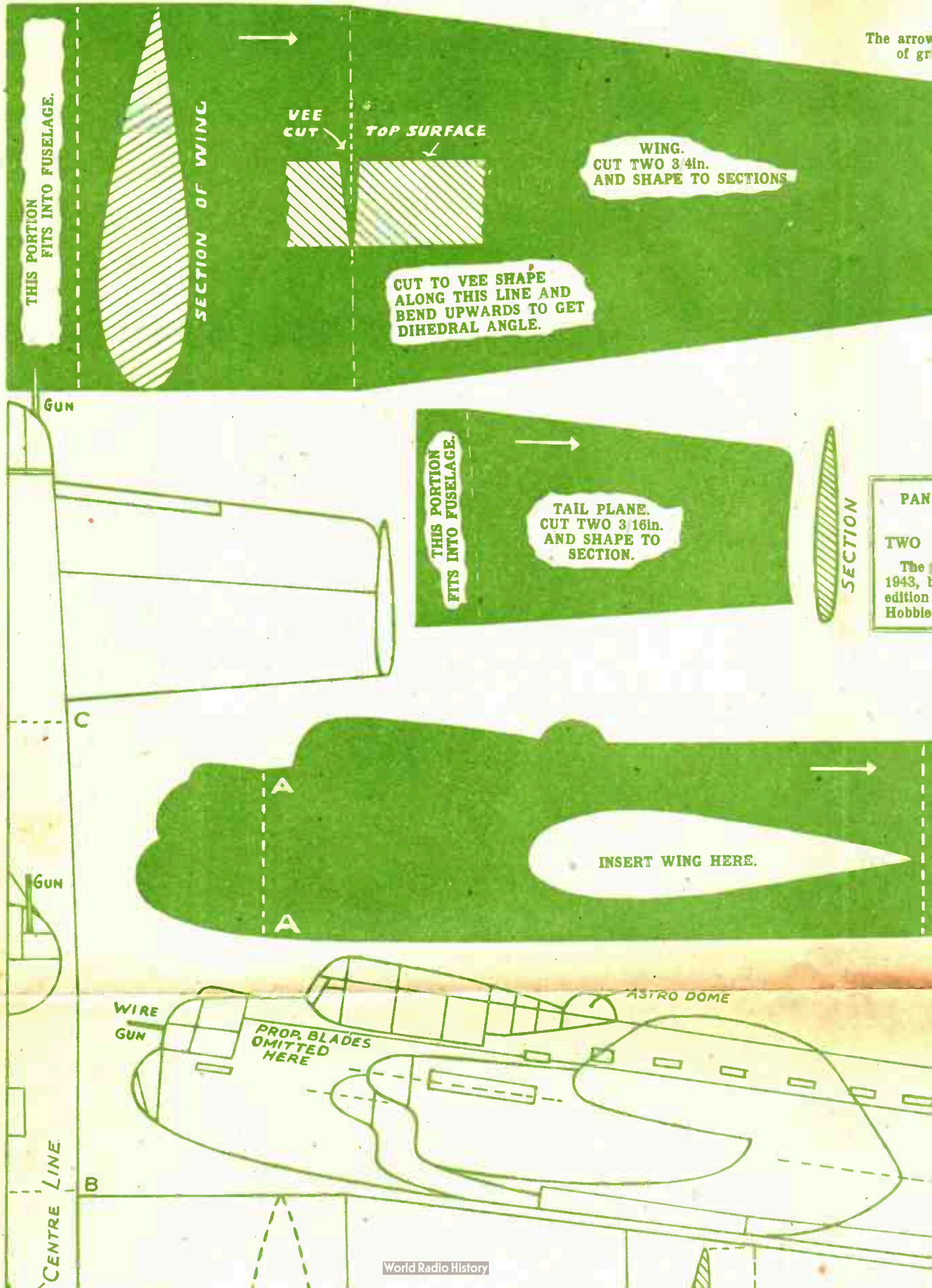

THIS PORTION FITS INTO FUSELAGE.
SECTION OF WING
VEE CUT
TOP SURFACE
WING. CUT TWO 3/4in. AND SHAPE TO SECTIONS
CUT TO VEE SHAPE ALONG THIS LINE AND BEND UPWARDS TO GET DIHEDRAL ANGLE.
GUN
THIS PORTION FITS INTO FUSELAGE.
TAIL PLANE. CUT TWO 3/16in. AND SHAPE TO SECTION.
SECTION
C
A
A
INSERT WING HERE.
GUN
WIRE
GUN
ASTRO DOME
PROP. BLADES OMITTED HERE
B
CENTRE LINE

The arrows indicate direction of grain of wood.

Hobbies DESIGN

No. 2504
13.10.43

SUPPLEMENT TO HOBBIES No. 2504.

MODEL OF THE AVRO "LANCASTER" HEAVY BOMBER

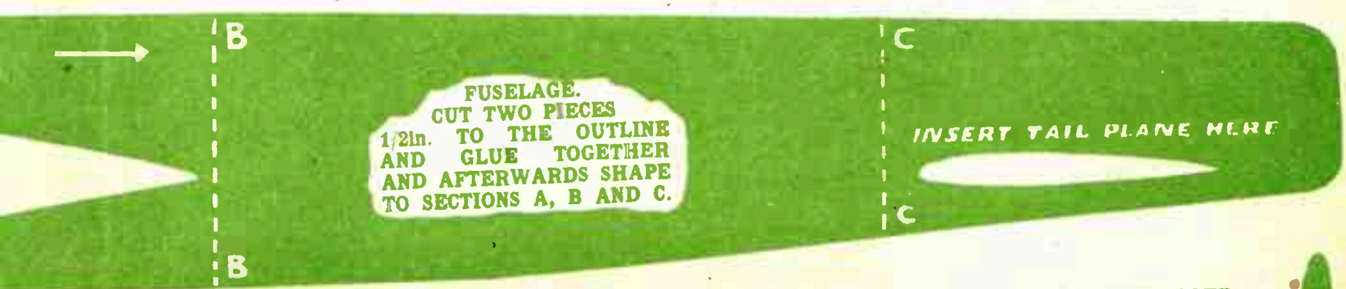
SPAN 102 FT. LENGTH 69 FT. 6 INS.

PANELS OF WOOD REQUIRED FOR THIS DESIGN

TWO ND12 ONE MD8 ONE G3

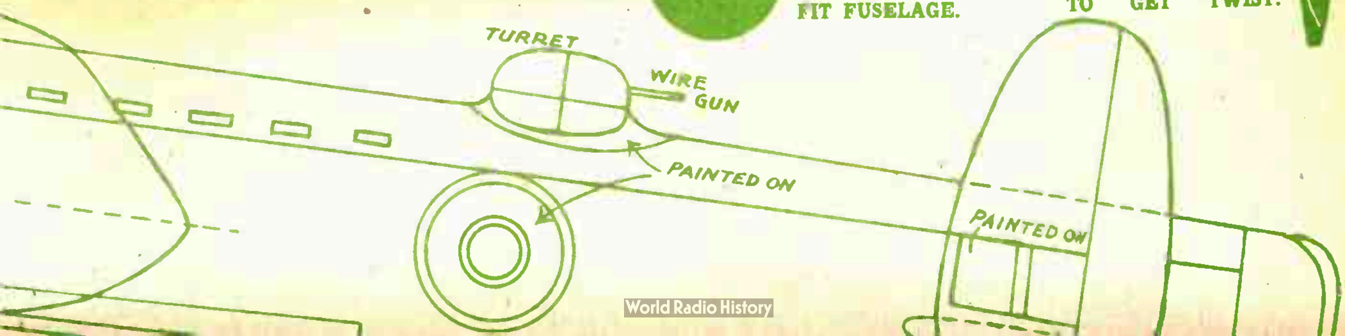
The price is shown in Hobbies Weekly, Oct. 13th, 1943, but is subject to revision. See the current edition of Hobbies Handbook, or write for price to Hobbies Limited, Dereham, Norfolk.

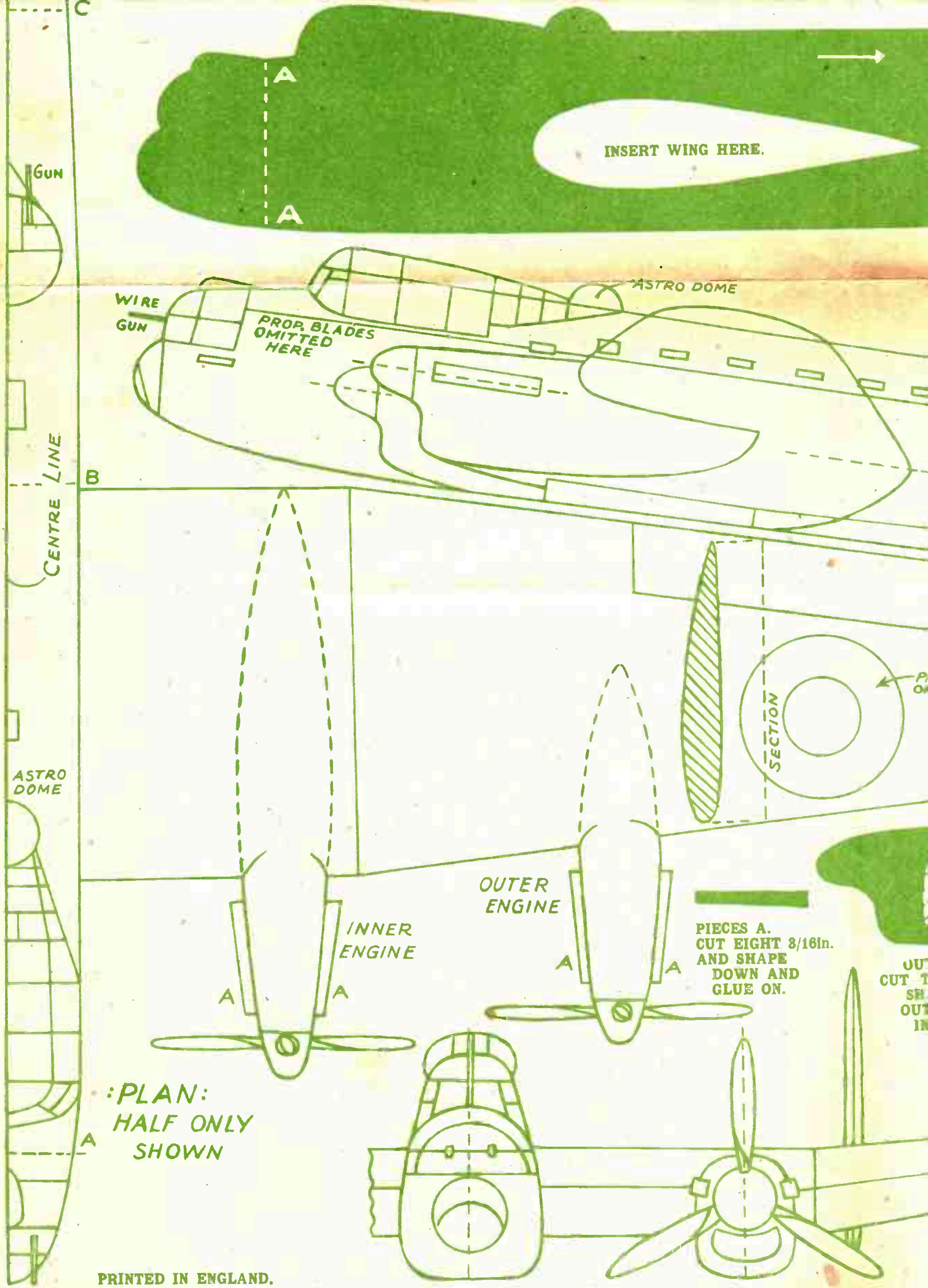
SIZE OF MODEL.
SPAN 17ins.
LENGTH 11¾ins.



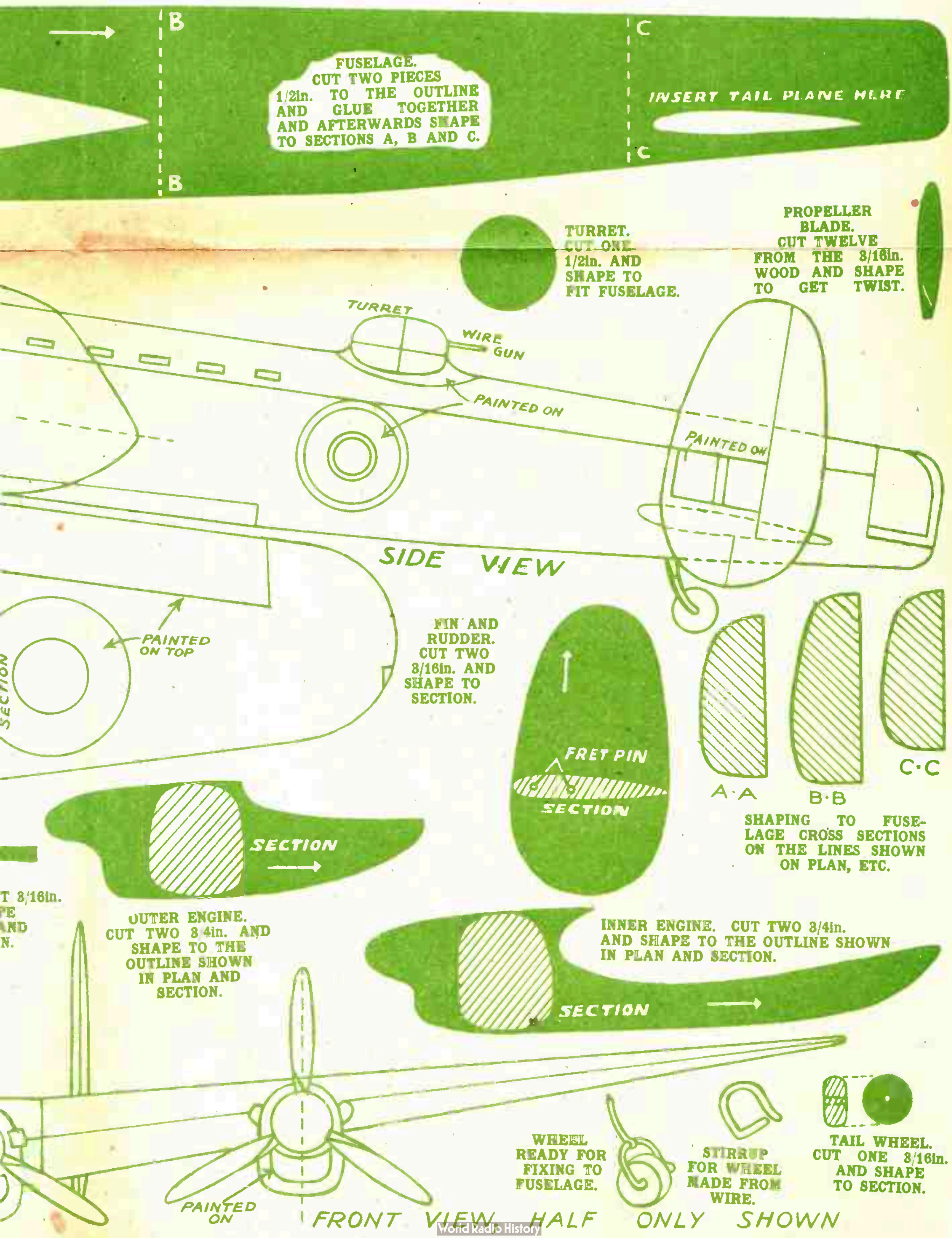
TURRET.
CUT ONE 1/2in. AND SHAPE TO FIT FUSELAGE.

PROPELLER BLADE.
CUT TWELVE FROM THE 8/16in. WOOD AND SHAPE TO GET TWIST.





PRINTED IN ENGLAND.



B
C
FUSELAGE.
CUT TWO PIECES
1/2in. TO THE OUTLINE
AND GLUE TOGETHER
AND AFTERWARDS SHAPE
TO SECTIONS A, B AND C.
INSERT TAIL PLANE HERE
TURRET.
CUT ONE
1/2in. AND
SHAPE TO
FIT FUSELAGE.
PROPELLER
BLADE.
CUT TWELVE
FROM THE 3/16in.
WOOD AND SHAPE
TO GET TWIST.
TURRET
WIRE
GUN
PAINTED ON
PAINTED ON
SIDE VIEW
PAINTED
ON TOP
SECTION
FIN AND
RUDDER.
CUT TWO
3/16in. AND
SHAPE TO
SECTION.
FRET PIN
SECTION
A·A
B·B
C·C
SHAPING TO FUSE-
LAGE CROSS SECTIONS
ON THE LINES SHOWN
ON PLAN, ETC.
SECTION
T 3/16in.
PE
AND
N.
OUTER ENGINE.
CUT TWO 3/4in. AND
SHAPE TO THE
OUTLINE SHOWN
IN PLAN AND
SECTION.
INNER ENGINE. CUT TWO 3/4in.
AND SHAPE TO THE OUTLINE SHOWN
IN PLAN AND SECTION.
SECTION
WHEEL
READY FOR
FIXING TO
FUSELAGE.
STIRRUP
FOR WHEEL
MADE FROM
WIRE.
TAIL WHEEL.
CUT ONE 3/16in.
AND SHAPE
TO SECTION.
PAINTED
ON
FRONT VIEW HALF ONLY SHOWN

Details for construction of a model non-flying LANCASTER

THE patterns on the other side of the sheet provide all the necessary details for building a non-flying model of the famous heavy bomber. The necessary wood is provided in the Hobbies standard panels, the price of which is given in Hobbies Weekly or obtainable on request.

The completed model has a 17in. span and an overall length of just 12ins. The patterns are shown full size, and there is a side, top and front view which can be studied during the operation of construction. Although half the plan only is shown, it can be easily traced to the opposite outline if needed.

The shape should be transferred to the wood in the thickness required, by means of tracing paper or carbon paper. It is not advisable to paste the patterns down, but to retain them for reference.

The Fuselage

Cut the fuselage first in two pieces each ½in. thick, and notice the apertures for the wing and the tail. Glue the two parts together, and then shape to a gradual taper towards the tail. Notice the dotted lines at AA., BB. and CC. The shape at these points is given at the cross shaded sections shown lower down on the sheet.

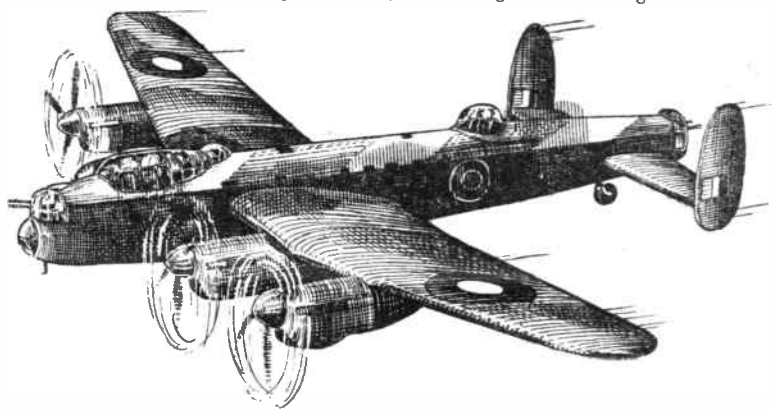
This shaping is done with a rasp, file, and finished off with glasspaper. The astro-dome will be made half round, and the pilot's cockpit and bomb-aimer's place at the front must be carefully rounded according to the shapes shown in the side view, front view, etc.

Wings

The wings are cut from ⅜in. wood shaped to the shaded section on the pattern, with the taper towards the trailing end. To get the dihedral or lifting angle towards the outer end a sawcut must be made almost through the wood at the line shown, then the part is carefully pressed upwards until you get the angle shown in the front view. Be sure to get both wings to the same angle.

When completed, the wings are glued in place to meet in the centre of the fuselage. The tailplane consists of the cross plane and the two end rudder fins. All the parts are shaped carefully and then the tailplane inserted through the fuselage. The end upright fin is then glued on and should be strengthened with two or three fretnails or fine pins driven through the ends as shown on the pattern.

The gun turret on the top of the fuselage is a separate piece cut to a circle and shaped round at the top. The under edge, of course, will have to be shaped slightly concave, and this can be done by laying a piece of



glasspaper on the fuselage itself and rubbing the turret part along it to get the correct curve.

The tailwheel is the only one shown in the model, and the construction of this is as given on the details at the bottom of the sheet. A little circular wooden wheel of 3/16in. wood is put on a stirrup shaped piece of wire, and then a bracket soldered from it to lead upwards to the underside of the fuselage near the tail.

Propellers

Twelve propeller blades will be required. They are cut from 3/16in. wood shaped correctly, and then glued into the front of the engine at the points shown by the front view.

The engines themselves are made as four separate units shaped on the underside to fit the wing, and rounded according to the section. It is best to glue them in place before fitting on the propellers, although the actual holes for their insertion should be made first.

Engine Details

The engine exhausts are shown as pieces A, and eight will be required. Their inner edge must be curved so they bed snugly to the engine nacelle, and they are later painted or just cut round to indicate the various pipes of which the whole thing is composed.

Notice that the outer engines are shorter than the inner engines, and mark off carefully their position along the length of the wing.

The completed model must be carefully cleaned up and painted. A first coat of dull paint is given, and allowed to harden, then the final coat added. These night bombers are usually black all over, with red and blue roundels above the wings, and red, white, blue and yellow on the underside as well as on the side of the fuselage. They do not have a large individual letter, but numerals in the usual positions.

The **Perspex** of the cabins can be painted on with light blue or grey, the framing of the metal work being brown or black. The flaps, windows, etc. can also be painted on, care being taken to get the lines even, steady and straight.

The excellence of the model is, indeed, made by the manner in which it is finished. In this respect the drawing of the finished model is helpful.