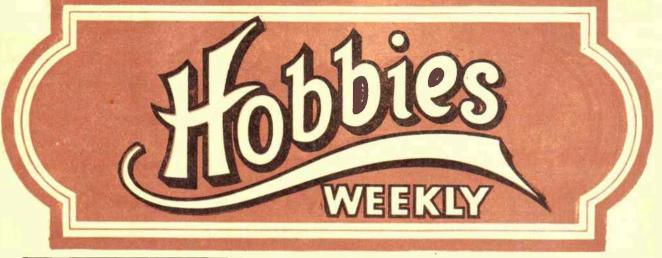
TANK TRINKET BOX DESIGN FREE INSIDE



April 26th, 1944

**Price Twopence** 

Vol. 98. No. 2532



HE construction of such a large, elaborate piece of work (or so it seems) as this Hall Stand would appear to be out of the question altogether in these times. Actually, of course, the construction of the stand is possible owing to the manner in which it has been designed.

Only scraps of wood, such as crate laths, box sides, etc., are wanted. Failing crate laths, old floor boards of suitable lengths could be employed, splitting them up the centre with a rip saw and finishing them to width with a plane. Lengths of §in. dowels would serve as upright, decorative rails, or one could round over lengths of wood lin. square, and if desired, such rails could be omitted.

The first part to construct is the back framing. It consists of two uprights 5ft. 6ins. long and four cross rails 26ins. long, one of which is 4ins. wide. The width and

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the thickness of all the framing laths used is 2ins. by §in. or §in.

To build the back frame, dowel two upright mirror pieces (12ins. long) between the two topmost cross pieces. All the other cross pieces are then dowelled between the leg uprights. It will be seen that the wider cross rail is immediately below the mirror rails, i.e., 14ins. down (see front elevation at Fig. 2).

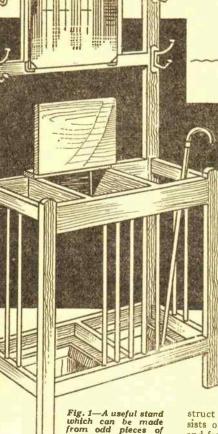
If gin. thick wood is used, use gin. dowels, because 1 in. dowels are just too thin. Alternatively, the parts could be fitted together by means of tenons and mortises.

#### The Front Framing

Regarding the front framing, you ad two uprights 3ft. long. The need two uprights 3ft. long. The upper cross rail is 4ins. wide, the bottom one being 2ins. wide. Keep the bottom one 6 ins. up from the foot of the uprights. The upper, wider rail is kept 22 ins. above the bottom rail, as you can see.

Note how the top ends of the upright pieces are rounded. If the five front dowel rails are wanted in the work, find the centre of the cross Mark the dowel hole positions at each side of the central point, two at each side about lin. apart.

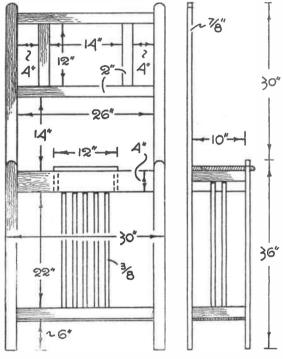
Bore the holes to a depth of lin



wood

To allow for this depth in both rails, the dowel rails should be 2ft. long. When cut to length, glue the dowels between the rails, then attach the rails between the uprights. Joints are best squeezed home with a sash cramp, but failing its use, a mallet (hammered on a protective, scrap piece of wood) will serve the purpose.

See that the frames are quite square before allowing the glue to harden. When set, both side surfaces of the



#### Fig. 2-Front and side elevations with dimensions

frames will probably need trimming up with a smoothing plane, more particularly at the joints, following which the wood can be smoothly glasspapered.

#### The Side Rails

The side rail framing (which holds the back and front frames together) can be seen in the side elevation. Each consists of a top and bottom cross piece 10ins. long by 2ins. wide, with two dowel rails affixed (much in the same way as those in the front framing) between them.

The bottom cross piece is 6ins. high, the same as that in the back and

Traction Engine—(Continued from opposite page)

Fasten the axle about in. from the front of the boiler, and if you have a small button mould, place this on the axle before fitting to the base of the boiler. This will enable the front axle to move freely and keep it balanced.

The rear wheels should be cut from larger reels, such as the full-sized spool-shaped which have large disc ends. No axle will be needed here as front frames. The topmost cross piece being 2ins. narrower than that in the front framing, is kept on a level with the latter. This means that the dowel rails are 2ins. longer than the front framing dowel rails.

The side rails are dowelled between the front and back frame uprights, keeping them centrally on the latter. The receiving dowel holes in these uprights are bored right through. When the work is finally assembled,

slight projections of the joining dowel stubs can be planed flush.

Now, in order to form the glove box, two side pieces are required, these measuring 10ins. long by 4ins. wide. These side pieces are dowelled between the back and front 4in. wide cross rail to be 1ft. apart (see dotted lines at Fig. 2, front view).

To assemble the lot together, glue the glove box sides, plus the right and left twinrailed sides, to the prepared front framing, then glue the opposite ends to the back framing. If you wish, the glove box rails could be omitted, adding them later, when the stand parts are all joined together. This, however, means that the glove box rails can only be nailed (or screwed) between the wider cross rails.

A lid for the glove box measures 12ins.

by 10ins. The hinging piece is 12ins. by 3ins. Having levelled the top edges of the rails forming the glove box, the hinge piece is nailed down at the back, flush with the back rail. The lid itself, when hinged in place, should project at the edge of the front cross rail. Note that the front edge of the lid is rounded.

A bottom can be merely cut to a suitable size and be nailed beneath. A better idea is to line the inside with §in. wide by §in. strips of wood and fit a thin piece of wood inside. Stiff cardboard could be used, if fretwood is not available. A drip pan board is cut to fit beneath the lower cross rails in the work. It could be formed with two pieces of thin wood about 6ins. wide and 30ins. long. If a dividing rail is affixed between the lower back and front cross rails (see Fig. 1), shorter lengths of wood could be employed, the join being central over the dividing rail.

#### Suitable Drip Pans

This rail is wanted if very thin wood is used, as it will help to give support in the centre. Regarding drip pans, one could buy small, suitable-sized baking tins, or dishes, and use them as drip pans. Naturally such pans will need to be given a couple of coats of enamel paint.

As the pans are sure to have a wire "lip" all round, the lip must be able to grip upon the bottom board when you have cut the apertures for the pans. All this should be done befor ethe bottom is fitted permanently.

To finish off the work, it can be stained and polished, using a softhaired brush only. No need to rub the polish on. Two, or three, applications of polish should suffice. The interior of the glove box should be stained with a coat of polish only, or could be merely stained and not coated with polish.

#### The Mirror

The mirror is a piece of plain stuff measuring 15 ins. long by 13 ins. wide. It is fixed on by means of corner fittings. It would be easy to make such holders from fretwood. Before fixing the mirror in place, it is advisable to rub away sharpness from the face edges with an oil-stone. Hat and coat brackets should be attached in the position indicated.

One may, if desired, omit a mirror and fix two extra hat and coat brackets on the short uprights. If you use baking dishes for drip pans it is usual to have the inside (or face side) done a green colour. The reverse side is enamelled black.

By the way, if a back rack is not wanted, a neat little stand can be made from two front frames, made as described. The glove box should be included. The decorative dowel rails could be omitted from the front frame only.

Such a stand would serve for umbrellas, sticks and gloves, and would be improved when in position by a plain mirror hung above it.

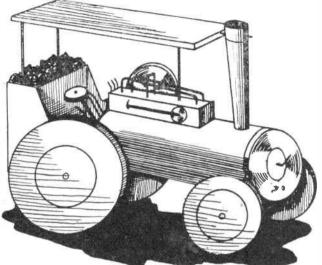
the wheels can fit straight on to the cabin at the rear (see Fig. 4). Fix a wire hook behind the cabin

#### MATERIALS REQUIRED

Cotton reels, short lengths of wire and a short length of broom-handle. Bits of lath or thin wood at least fin. wide, eddments of cardboard. Odd wheels and some liquid glue. and paint in bright green with red or silver bands round the boiler and a black chimney. Some small broken coal could be added to the bunker and fixed with glue and a bent over pin fixed into the reel on the front to represent handle for opening boiler.

Details for making a travelling van such as is usually seen behind these road tractors, will be given in a further article shortly.

### A realistic and easy-to-make miniature model ENGINI TRACTION



HIS pleasing miniature can be made quite realistically, but needs careful fingers and attention to construction. When complete, with trailer van, which will follow, you will have an intriguing little model.

It can be made as you see by details in the panel, from scrap odds and ends and when complete the model Tractor is about 44ins. long.

#### **Broom-handle Boiler**

To commence this miniature model start off by cutting a length of broom handle 21 ins. long to form the main boiler. Glasspaper this well, especially at the ends, to avoid splinters. Now cut the end off a small cotton reel and plug up the hole with wood and fix to the front end of the boiler to give a rounded effect.

For the engine box perched on top of the boiler, cut a block of wood . measuring 1½ins. by §in. wide and §in. high. Clean this off well with glasspaper/2 and shape off along the top of boiler 11 ins. long so the flat base of the box will fit -firmly on to the top of the boiler.

Next, make the chimney from a piece of dowel rod not more than tin. in diameter. This should be 21 ins. long, shaped off to the base and fitted on at about zin. from the front of boiler. This can be made firm by first inserting a thin nail into the base of chimney and then cutting off, with pliers, the head of

the nail. This can then be inserted into the top of the boiler with a little glue added to save it twisting about.

The driver's cabin and coal bunker are made in one piece from a block of wood measuring llins. by 1 lins. (Fig. 1). Round off the two outer edges also as To shown. make the part in which the driver stands

cut down to a depth of lin. at a distance of §in. from each edge to allow the well to be lin. wide. This is all the cutting needed for this part.

To avoid much difficult wood cutting and intricate work, the rest of the shape is made by a strip of stiff cardboard as shown in Fig. 2. This is made up into three panels 11 ins. square and lightly cut down to fold round the wooden base. The two sides are cut away to a depth of 1in. with sloping sides.

Care should be taken to follow the illustration so the cardboard is formed in the proper shape and mounted hin. from the base of the block as shown in Fig. 3. This will create the sides and the coal bunker.

A piece of wood lin. wide and lzins. long can then be fitted into the inside of the well and tacked against the upright

15

of the back of the well. This, and the position of the wood block is shown in Fig. 3 in the outline form.

#### Realistic Additions

Before this part is fitted to the boiler, put in one or two levers made from wire and turned over into handles, as well as a steering wheel from a round of dowel rod. Brasstopped paper fasteners inserted in the wood will look quite realistic as gauges and other small parts of the machinerv.

Similar additions on the engine box will also help to make the various bits and pieces one sees on the engine. A couple of wheels about  $\frac{1}{2}$  in. in diameter on each side of the box can represent the fly-wheels. Also fix in several levers as shown in Fig. 3 and in the picture of the finished model.

The boiler can now be fitted to the cabin and a shade should be made from lath Iin. wide and 34ins. long. It should be fixed up on wire supports 13ins. long and fitted firmly, two into the coal bunker and one into the front of the engine box. A piece of wire through the top of chimney and into the front of the shade will help to keep both parts in position.

All the main parts are now ready for the mounting on the wheels. For the front make an axle 1/2 in. wide and 11ins. long to take the wheels which should be cut from the ends of a small cotton reel. Before cutting the reel, plug the central hole with wood fixed in with some glue. Glasspaper well and make a hole to take the spindle which can be made from a thick pin.

(Continued foot of opposite page)

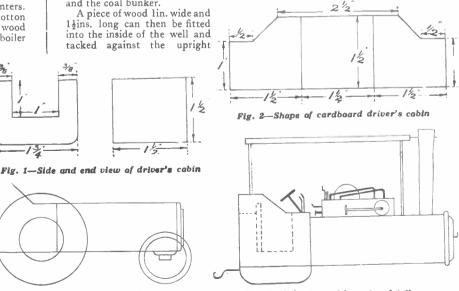


Fig. 3-Side view with engine details

Fig. 4-How wheels are placed

### You should keep your cuttings of hints, jobs or notes in **A BLANK ALBUM**

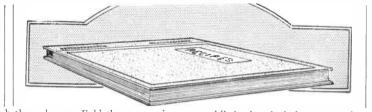
THIS useful and really necessary article for pasting in recipes and hints, such as many papers are now publishing, is worth making. The work is quite easy, and will profitably employ an hour or two of spare time. The same method of binding can be adopted for single or double sheets, taken from a favourite periodical.

For a blank album almost any plain paper can be employed. A roll of lining, or shelf paper would serve. The size of the pages should bear some proportion to that of the paper so that waste can be avoided.

#### Sheets in a Pile

The paper should be cut into sheets large enough to make two pages when folded, plus lin. for an extra fold at the back. For instance, if crown quarto (8ins. by 10ins.) is chosen, cut the sheets 10ins. by 17ins. and fold double. About  $\frac{1}{2}$  in. of the back edge should then be folded over once again.

Prepare as many sheets as pages



rub them down. Fold the corners in neatly. A glance at any book cover will show how these corners are folded.

Cut a second sheet of the brown, or fancy paper, this time  $\frac{1}{8}$  in. smaller than the length of the cover and as wide as the width between the cut and edge., the fore edge is meant, less 1/16 in.

Paste this and rub down on the inside of the cover, as in Fig. 3. Only part of this inside sheet is shown for explanatory purposes. Lay the covers on one side to dry.

Take the pile of pages and knock the backs up flat and level. Place them carefully between the covers and press down firmly. Provide a fine bradawl and a generous length of

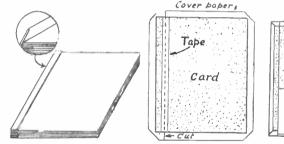


Fig. 1—The first job

are required and make a neat pile, as in Fig. I. The double thickness at the back, caused by the extra folds, is to make up for the recipes, etc. to be pasted in, so the book, when filed, will be level and not bulging.

Cardboard is used for the covers. Cut two, a  $\frac{1}{2}$  in. longer and  $\frac{1}{8}$  in. wider than the pages. At  $\frac{3}{8}$  in. from the back edge make a cut with a sharp penknife, almost through the cardboard. Turn the cardboard over and glue a strip of tape down over the cut.

The cut will be underneath (as shown by the dotted line in Fig. 2) but its position will be seen if the cardboard is bent at the cut to crease it on the opposite, or tape side.

#### **Cover Sheet**

Now cut a sheet of brown, or coloured fancy paper,  $\frac{1}{2}$  in. larger all round than the covers, and snip the corners off, as in Fig. 2. Paste this, lay the cardboard over, tape side down, and rub well down. Then fold the laps over to the inside and





twine, or macrame cord. On a line down the centre of that part of the cover from the cut to the back edge, and at lin. from the bottom, press the bradawl through both cover and pages.

#### Boring the Holes

Be careful to hold the bradawl upright, as in Fig. 4, A., and see that the hole thus made goes through the centre of the folded back edges of the pages. Still holding the lot firmly, push the twine through and turn the book over.

Four holes in all will be bored for the twine, and these should be equally spaced. Bore the second hole and push the twine through again. Repeat this to the last hole.

Then draw the ends of the twine tight, pass one under the middle loop and tie the ends tightly together over the last hole, as at Fig. 4, B. This should make all secure. It is wise to lay either a piece of box wood or stout cardboard under the book while boring the holes, to save damage to the table or bench. The result now is a blank album.

#### Knife and Rule

The fore edge of the pages look much neater if trimmed; it does not matter so much about the top and bottom edges. Trimming must be done with a sharp knife and straightedge. Lay a piece of cardboard between the bottom cover and pages to protect the former against the cuts of the knife.

Place the straightedge about lin. from the fore edge and with the knife trim the edge level. Do not attempt to cut too many pages at one stroke, or the result may be ragged. Just cut a page or two at each stroke of the knife, and see that the knife is really sharp.

#### Name Labels

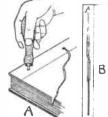
The covers can, of course, be decorated according to taste. Artistic readers can look after that part. Others can render the covers quite pleasing enough by ruling lines in black or coloured ink near the edges. Gum an economy label on for printing thereon the title, such as "Recipes" "Hints," etc., according to the proposed contents of the book.

The insides of the covers could be used to write an index. This is a great time-saver and certainly should be added.

In bending single sheets of newsprint, the above methods can be adopted in their entirety, except the doubling over of the back edges. This business, called "guarding" is only necessary when making a blank album.

Neatness is, of course, a great virtue in an article of this kind, and care and patience should be used throughout. For instance,

have a very sharp knife for cutting. Take care too, with the ruling of lines, and printing titles etc. Use indian ink to get a solid, waterproof jet black and a



black and a Fig. 4 Binding process ruling pen to

ensure equal thickness of lines.

#### We give the lettering as well as details for these MOTTO PIPE RACKS

UR workers are always on the look-out for novelties, whether it be for working models or for household articles. The friendly pipe rack may always find a place in the home, and be made an attraction as well as an article of utility.

We show two designs here which will attract the fretworker and the home craftsman. Both are simple to make and take but very little wood.

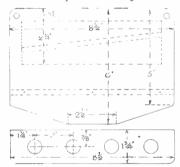
The wording introduced into the racks is particularly apt and is printed full size on Cover iii. It should be cut from a light wood which, when glued down to a darker backing, will stand up clearly to advantage.

#### A Simple Type

The upper rack in the illustration of the finished articles will be described first. It consists merely of the usual type of back and shelf cut from 1in. wood. The back in shape is not much more than a simple oblong (see Fig. 1).

The four measurements given will be found sufficient guide for marking out the shape to be cut with a fretsaw. Smooth off the edges with glasspaper, and also clean off the face of the wood with a fine grade paper ready for mounting up the lettering. Drill two clean holes as shown for hanging the rack.

From the top edge of the piece mark off 41 ins. down and another in. below this. This is the position of the shelf, the measurements for which are given. Set out the position of the hole-centres and describe circles with the compasses set to gin.



#### Fig. 1-Outline of back and shelf

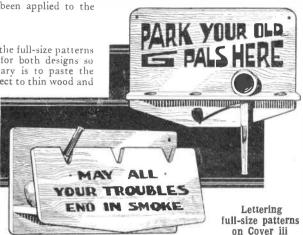
Cut out the four holes, and then round the shelf to outline. Next bore three holes centrally between the dotted lines drawn across the back, and then, holding the shelf against the lower line, mark off in pencil exactly where the holes are to be made in the back edge of the shelf.

By doing this, work is simplified when it comes to screwing on the shelf, this operation being done after the staining has been applied to the two parts.

#### The Lettering

We have given the full-size patterns for the lettering for both designs so all that is necessary is to paste the patterns down direct to thin wood and cut them out.

Although each letter will be somewhat delicate to handle when it cut out. is cleaning up nevertheless can be done by having a sheet of fine glasspaper glued down to a perfectly flat board



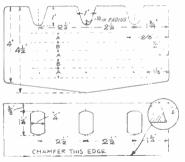
and using this for rubbing down the rough back of the letters.

#### **·Fitting the Lettering**

When cleaned these may be arranged to fit between light lines ruled on the main back to the measurements given. Coat each letter thinly with glue and press it down in place. When all the letters have been done thus and properly spaced, apply a weight on the top and let this remain until the glue has thoroughly hardened.

The overlay of the pipe, to go underneath the shelf will be cut similarly from thin wood and glued on.

The second rack method of supporting the pipes is bowl down-wards with the stems resting vee niches in the front. in



#### Fig. 2-Details of second rack parts

Many smokers prefer this method to having the stems hanging down-wards. Three sections of wood are employed. A plain oblong measuring Shins. by 4hins. for the back, a front, also 81 ins. long and 41 ins. but cut to the simple shape shown in Fig. 2, and a shelf 81 ins. by 21 ins. wide, all fin. thick excepting the latter

piece which is §in. Mark off and square up the back

piece, rounding off the four corners. Set out the front piece according to the measurements given in the diagram, making the vee notches true in shape before the actual cutting.

#### Screws Well in

Round off all sharp corners and edges, and make three holes at a distance of 31ins. down. Countersink these so the screw-heads are kept below the surface of the wood.

The shelf measurements are given in Fig. 2, the holes in which the bowls of the pipes rest being cleanly cut and made smooth. The front edge of the shelf must be chamfered to the angle given in the circle detailed in Fig.  $\hat{2}$ .

Prick the holes in the chamtered edge in a similar manner to that advised for the previous rack to match the holes in the sloping front.

Coat the chamfer with glue, run screws into the sloping front until they project a fraction of an inch, then put the front on, finding the correct position for it by feeling the screws enter the holes in the edge of the shelf.

#### Lines for Letters

Run the screws (1/2 in. long) well in and afterwards fill up the countersunk heads with glue mixed with saw-dust. Clean up the surface after the glue has hardened, and then lightly pencil in the lines shown dotted as A and B in the outline of the front in Fig. 2. The lettering again for this rack is shown full-size, and will be treated and glued on as before suggested.



### There is something for everybody to learn from these **MODELLING HINTS**

THAT constitutes a good model ? If only every prospective maker and exhibitor would ask himself that question, concentrate on it and get to understand it, the various Arts and Crafts Exhibitions organized in most districts would be a lot brighter and more interesting.

Haste and negligence is too often prevalent in the handiwork, and this proves a lack of real interest.

The writer has seen miniature scale models of warships and old-time galleons possessing "accessories" that were all out of proportion and thus spoiled the whole effect. Such details, of course, are only regarded by experts as unnecessary monstrosities.

#### Like Photography

Model-making is, in a sense, rather like photography. The nearer the subject, the greater the amount of detail that is visible. Thus, the larger the model, the greater the scope for details. On the other hand, the more distant the subject, the less details one can see, and this can apply to tiny models without hindering their realism.

A model-maker must try to be an artist. He must aim at naturalness and simplicity. He must create for himself a "style" of his own. It is often easier to be original than a mere copyist. We all of us possess ingenuity. It only needs coaxing and coaxing. Why follow? why copy? indeed, when you might lead.

Successful work, which interests one to the extent of endeavouring to copy it in exact fascimile reproduction is no easy task, unless one has the plans, instructions, and the materials to carry it out. This brings us to popular designs, such as those presented free with Hobbies Weekly.

#### **Originality Always Scores**

It must be borne in mind that many models are built exactly as instructed, for the simple reason that some readers do not care to do otherwise. The result is that identical models are submitted for show at local exhibitions at times. There is nothing special and exclusive about the models, yet there should be originality of some nature, for there is a great deal of competition at exhibitions.

Originality scores all the time. It might be seen in the finish ; it could be novel additions-something that is new and different from the original, anything that does not (this is important) spoil the realistic aspect of the work, but rather, adds to it.

A majority of model-makers have a passion for detail in their handiwork. They think nothing of spending countless evenings on building a scale model, true in every detail. Have you, the average model-maker, seen examples of their wonderful creations ?

#### Examples to Follow

Such models are, to be frank, a lesson on model-making. If you have never had the opportunity to see true-to-life models as constructed by these experts, you will get a good idea of their creative ability by studying the professional scale models in some of our museums. All local museums possess a life-like model of some kind, perhaps a tram-car, a working loom, a locomotive, ship, etc.

These models seem as though they were reduced from actual size by a magic wand. A visit is worth while, for a lot of things, seemingly unimportant, will be noticed, and one of these is size, including the finish.

#### Ships in Windows

Readers fond of ships will see detailed copies in local shipping office windows of most big cities. These are, of course, models of liners, especially made to scale, prior to laying the keel of the actual thing, so

ship-builders-or prospective the owners-can see it in actual form.

Such models as these are not within the scope of the average model-maker, but they do serve as lessons in the art of model-making. The most that can be done is to try to follow them as closely as possible, and even then, our labours would be crude in comparison.

#### The True Lesson

The "hidden" lesson to be found in the foregone matter is pretty obvious. It involves a word-PATIENCE. Without patience, realism is lost, and without realism, a model is lost. It is a souvenir, fit to remind its creator that patience is a virtue, a gift, but one that can be acquired by sheer determination.

Keep trying to be patient. Keep building new and better models. Remember the wisdom in Blake's sentence : "Without unceasing practice, nothing can be done. Practice is art. If you leave off, you are lost.'

And, what is originality? It is the adopting of novel ideas formed in one's own brain. Give imagination free rein-let it dictate ideas. One simple idea, by concentrating on it, frequently leads to another until a " brainwave " is born. Be different ; show your individualism. Take risks, and accept failures as stepping stones to eventual success.

A Simple Crossword Puzzle

Here is another easy puzzle which should entertain readers for a few minutes. The clues are quite straightforward, without any awkward alternative. The square is offered for amusement only, and there are no prizes, but for those who cannot solve it entirely a solution will be given next week.

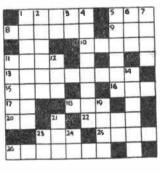
- CLUES ACROSS.
- Hard to get for your camera. Used by an angler. Photo keeps it alive.
- 5. 8.
- Much about nothing.
  Styles for madam.
- Vegetable gardens should provide a good one. A final proposal.
- 13.
- 15. 16.
- 17.
- 18.
- A nnal proposal. Greenfly is one. Slang for "hand." Irish Society (abbr.). Opposite of "he." Initials of a daily paper. 20.
- An American University.
  Mate to a woman.
- 25.
- Lazy people do this easily. Money is almost useless without these. 26.

#### CLUES DOWN.

- Without fear. 1. 2. 3.
- Without fear. Schoolboy slang for "impositions." Short for "mister." We have this for occupied countries. Discovered by Mme. Curie. A short poem. Medicine is measured as one. The friend of lovers.
- 4.
- 5.
- 5. 6. 7. 11.

- Colliers know all about it.
  Hitler's New Order has caused much.

- Slang term for food.
  Worn on the head.
  Manchester United (initials).
- 24. A refusal.



Solution next Week



World Radio History

## 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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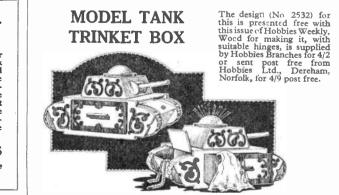
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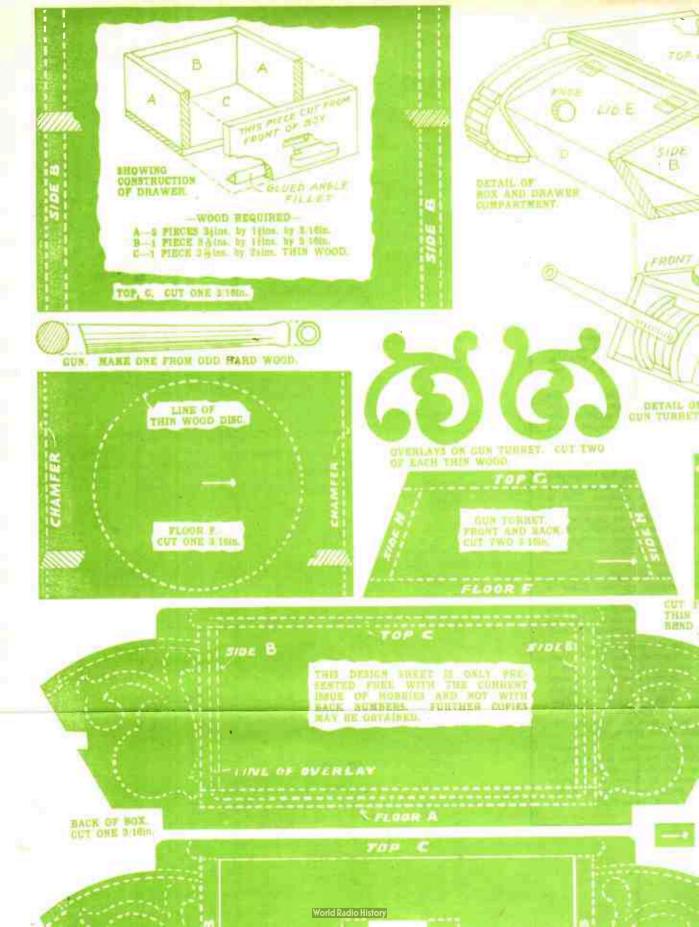
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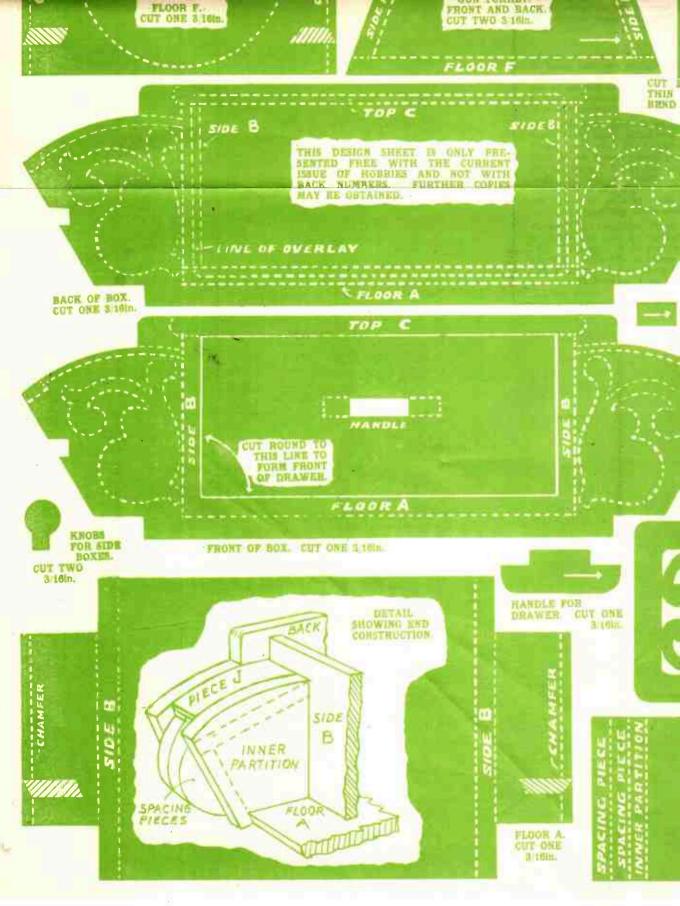
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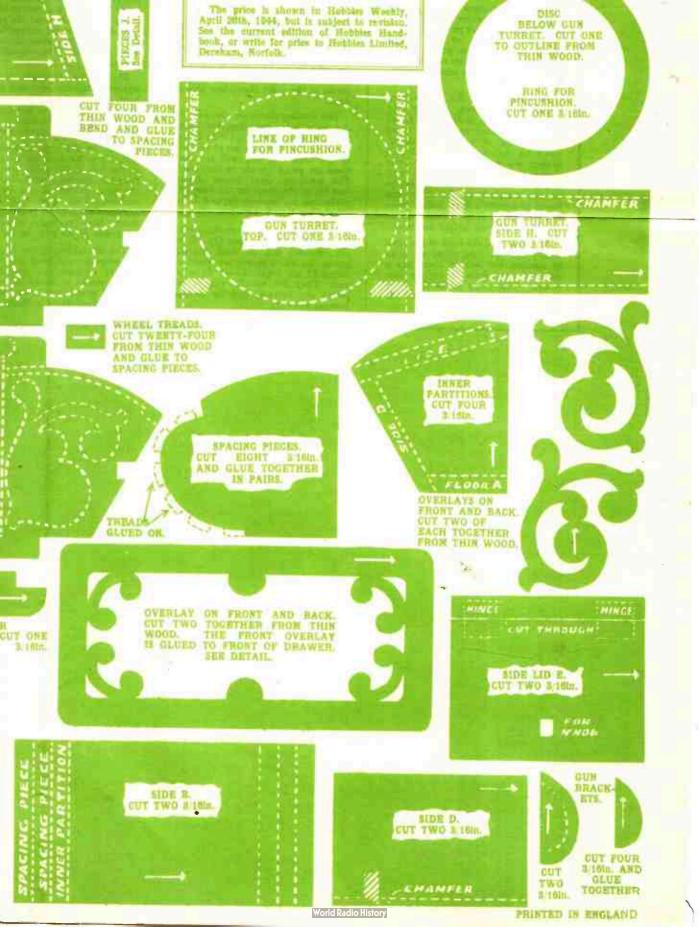
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World Radio History



# TANK TRINKET BOX

THIS model of a tank has been made something more than a model because it incorporates a drawer and two little compartments which form ideal containers for the odds and ends any lady loves to keep on her dressing table.

The parts are all clearly shown, and the main work is in the construction. Obviously with the sloping sides it means that several edges have to be chamfered, and this is one of the points to be watched throughout.

Moreover, if you prefer, of course, the actual overlays can be omitted from the model, which would probably look better that way if you are proposing to paint the article in the usual camouflage colours.

Cut out all the parts carefully first, and if possible mark the patterns on to the wood rather than use the actual paper. This will allow you to refer to the diagrams and instructions on the design sheet during the work of construction.

Notice the various lettered pieces concerned, and where they join up to each other. Mark on the necessary parts the position of the joining pieces so that when you come to glue them and fix them together you know exactly how the whole assembly works out.

In a model like this it has been impossible to follow exactly the correct lines, and much of the detail has been omitted to make a more simple piece of work. In reality, you have the centre of the tank as a drawer, whilst at each end is a little sloping compartment provided with a lid, as can be seen in the picture of the finished article. The gun turret is merely a fixed hollow piece but on top of it is a rounded pin cushion to provide further usefulness.

The front and the back of the tank (really the two long sides) are alike in outline, but one of them has a rectangle cut from it to the line shown. This piece forms the front to the drawer, and on it is glued the thin overlay. Between the two main sides fix the floor (A) and the top (C), but before doing so make up the drawer according to the constructional diagram, and see it slides nicely into the framework of the tank shell so far constructed. Notice in the diagram of the drawer a little angle fillet is shown glued round the bottom to stiffen the whole thing up. Graphite can be rubbed along the edges of the drawer to make it slide in easier.

The space outside the ends of the drawer provides the end compartments, and the detail of these is also shown on the drawing. The end of the floor (A) must be chamfered to take the sloping part (V) on top of which comes the lid (E).

This lid (E) you will note, is merely a rectangle of wood with a sawcut made 3/16in. inwards to provide a strip along that edge. This strip is later glued to the main side of the tank, and then the remaining piece hinged on it so it falls comfortably on to part V.

Before these pieces (D and E) can be added, however, you have to fill up the space between the outer sides of the tank and the compartment itself, at the same time providing the basis for the imitation wheels and track. A diagram in the left bottom corner of the sheet shows how this is done.

Two spacing pieces are glued inside the main side, and then the inner partition piece glued again to them. If you look at the diagram of the side of the tank (B) you will see how these are glued upright to that part. The resulting three pieces should just fill up the space for the floor (A) projecting far enough beyond it to allow piece V to fit between.

The top edge of the spacing pieces is covered by a thin piece (J). Over the rounded end of these spacing pieces the wheel treads are glued of which 24 are required—six for each end. They are equally spaced between the bottom, and up to the covered piece (J). The parts (D and E) can now be fitted, and to provide strength for the lid strip (E) a further fillet piece can be glued underneath. The hinges if you have not the metal ones, can be of short pieces of tape neatly glued on. A knob is also glued into each lid and a similar handle cut for the front of the drawer.

A diagram shows the construction of the gun turret. The gun muzzle itself is tapered from a piece of circular wood 5/16in. diameter and  $3\frac{1}{4}ins$ . long. It is glued at an angle to two small gun segments, which in turn are glued between the two further small ones.

Outside the solid piece come the two larger gun segments and the whole block is then glued to the sloping front of the turret. Note, by the way, that the back and front of the gun turret are upright but that the two ends (H) are sloping.

A top (G) is added, but before this is finally glued on it is as well to complete the pin cushion. This is made from a circle of velvet or similar material snipped round the edge and tacked down on the underside of the disc. Press the velvet through the disc and fill fairly solidly with sawdust.

Then have a circle of canvas stretched tightly over and glued to hold it in place. The whole disc can now be glued to the top of the gun turret, which in turn is fixed to the upstanding box previously formed.

Note, by the way, that this completed gun turret is not glued direct to the top of the main body, but is raised by having a solid disc of wood the same size as the ring for the pin cushion. This disc has a  $2\frac{1}{8}$  in. diameter circle glued to the top of the main tank portion, and to the underside of the gun turret.

The several overlays which decorate the sides are cut from thin wood, or can be omitted as suggested. The whole model is afterwards carefully painted green and brown with any details of markings in black.