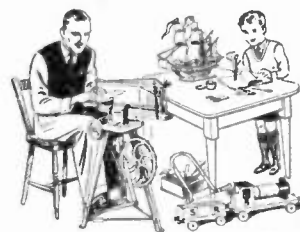


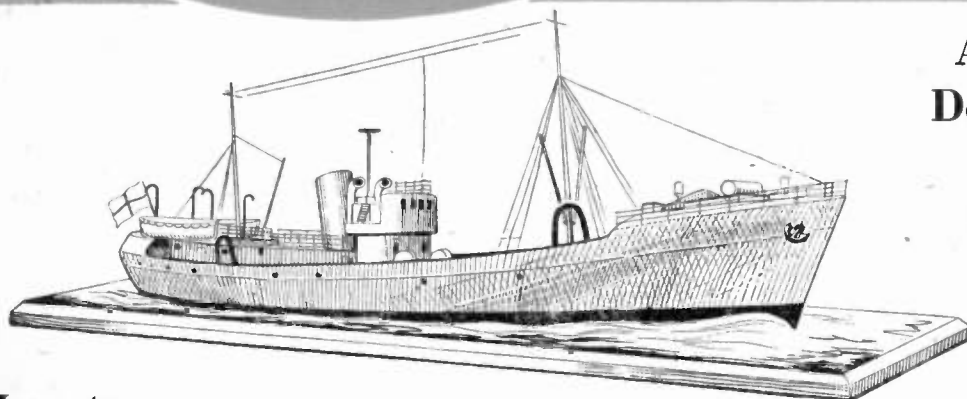
Hobbies

WEEKLY



VOL. 114

NUMBER 2966



**A FREE
Design Sheet
for this
model is
inside**

**How to
make a grand**

WATERLINE MODEL TRAWLER

THIS model of an up-to-date steam trawler should appeal to ship modellers. It is representative of a number of vessels completed by Cochrane & Sons Ltd., of Selby, for use under the Icelandic government. The actual trawlers are 175ft. long with a moulded breadth of 30ft. The model is 14ins. long, excluding the base, and has a beam of 2ins. Thus the scale is 2mm. to the foot, or the scale which is becoming known among railway modellers as OO gauge.

In preparing the model, we should like to acknowledge the assistance of the builders, and of 'The Ship Building and Ship Record' for the plans and details from which we were able to work.

The model is built of solid wood and all parts are shown on the design sheet. They are numbered consecutively in the order of construction. Do not paste the

patterns down to the wood, but trace them through carbon or tracing paper. Cut them out as indicated, and construct the ship from piece 1 upwards.

The side view (Fig. 1) will be found useful for judging the positions and shapes of the parts concerned.

The hull itself is built up of parts 1 to 8 inclusive. In gluing them together, notice from the side view where pieces overlap at each end as shown by the dotted lines. This overlap allows for the shaping down at the bow and stern when the whole lot are in place. Part 3 must be carefully chamfered to get the correct slope aft, but 4, 5 and 6 are glued on straight away. When in place, the front end of 4 and 5 must be filed upright,

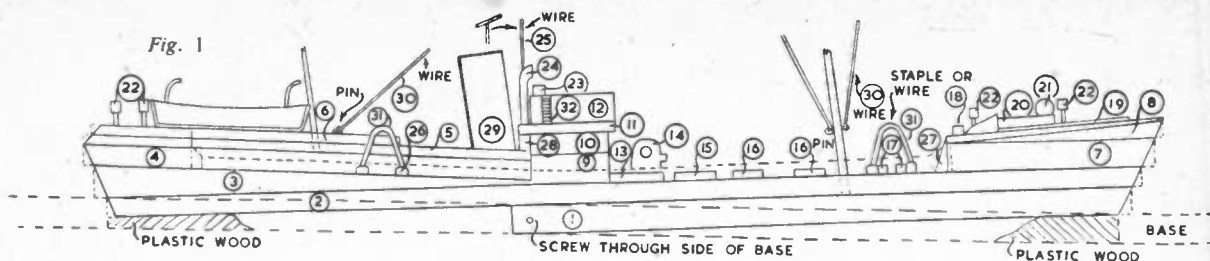
IN THIS ISSUE

	Page
Waterline Model Trawler - - -	353
Casting with Flexible Moulds - - -	355
Canning Fruits and Vegetables - - -	356
Making a 'Magic Mangle' - - -	357
Newspaper and Magazine Stand - - -	358
A Folding Back-Rest - - -	359
Simple Mains One-Valver - - -	360
A Simple Lathe - - -	362
Shipmodeller's Corner - - -	363
Books to Read - - -	364

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

**THE MAGAZINE FOR MODELLERS,
HANDYMEN AND HOME CRAFTSMEN**

4^D



whilst the back slopes in two directions to get the flare of the stern.

At the bow, piece 8 is glued to overlap slightly, and is also tapered towards the farther end. Notice in pieces 4 and 7 that a slight gap is made in the corner of each side. This indentation is to take the thickness of the card which forms the bulwarks. These will be added later and must, of course, slope inwards. The detail at Fig. 2 shows how the gap is made so that the bulwarks can bed down. In piece 4 there is the small projecting portion (A) and this has to be cut sloping inwards and downwards (B)

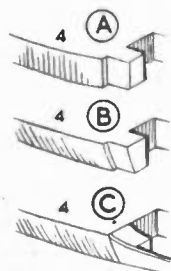


Fig. 2

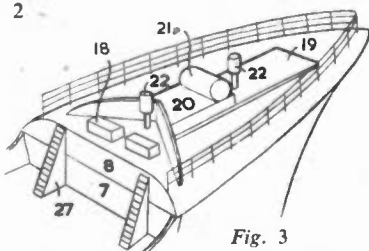


Fig. 3

so that the card bulwarks can follow the shape of the hull.

When the bulwarks are added you will find that a piece of (A) projects above them and this has to be slightly scooped away with a knife (C).

The deck at the bow is shaped as shown in Fig. 3, so that when the hand rail is added it is slightly inset from the outer edge. The complete hull is thoroughly cleaned before the various deck pieces are added.

At Fig. 4 is shown the superstructure amidships (pieces 9 to 12 inclusive). Part of the drawing shows the construction, and the remainder shows the finished model with its painted windows, steps, vents, etc. Notice from Fig. 3 how the various additions are made on the fore-castle. Pieces 19 and 20 are glued with the V-shape inwards so that the card breakwater can be bent and stood upright inside it.

The ventilators are made from $\frac{1}{16}$ in. rod shaped with a razor blade. Notice also the construction of the funnel. This should be cut from $\frac{1}{16}$ in. wood but as there is none of this thickness in the kit supplied, the pattern shows it made up of two pieces glued together. The

pieces are $\frac{1}{16}$ in. and $\frac{1}{8}$ in. respectively and after gluing they are cut to the shape shown. Make the funnel slightly elliptical and saw the base at the angle shown. When the funnel is glued in place it will then have the necessary rake.

At Fig. 5 is given a detail of the steam trawl winch, the trawl hoists—which have to be fitted on each side of the deck—and the boats. It is best to fit all these pieces in place before you cut the two long bulwarks from card and glue them into the recesses previously mentioned.

The various hatches and cover pieces

holes through the masts, passing a $\frac{1}{16}$ in. fretpin half way through each and turning the ends of the pins back on themselves to form small loops. An upright wire with a cross T is fitted behind the chart room.

Next fit the model into the base as shown at Fig. 1. Screw through from the sides of the base into the hull of the craft in the positions indicated, then tilt the ship backwards and tighten the screws, afterwards covering the holes with plastic wood. The craft will now be in its correct waterline position and the whole model can be turned over and the cavities in the base filled with plastic wood.

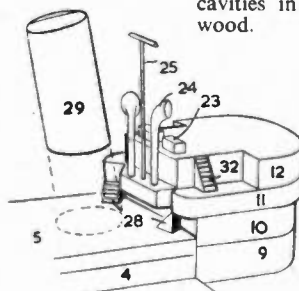
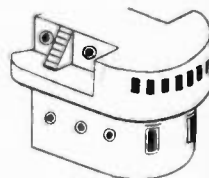


Fig. 4



are added, their positions being given by the plan of the deck and the side view of the whole thing. Masts are cut from $\frac{1}{16}$ in. rod tapered to the top. They are shown full size on the design sheet with the portion to be sunk into the deck marked with a dotted line.

The derricks on the masts are short pieces of wire, the lengths of which are indicated on the design sheet, and one end of each is turned round staples of wire fitted into the masts themselves. The staples are made by drilling small

The ship is painted after being thoroughly cleaned and smoothed. The hull is grey with a white line round it, and a black waterline. Windows, portholes, etc., should be painted black. A flag can be flown astern and aerials and rigging lines fitted as seen in the picture of the model. The base should be painted to represent a sea, and the bow wave and stern wash can be added with plastic material, sawdust and glue, or plasticine. Details for forming imitation seas have appeared in instructions for other waterline models.

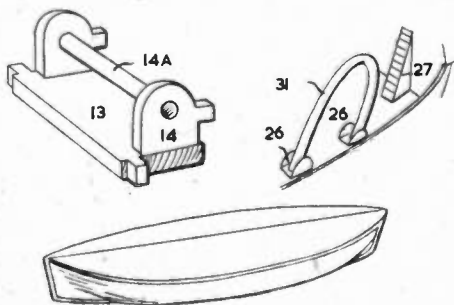


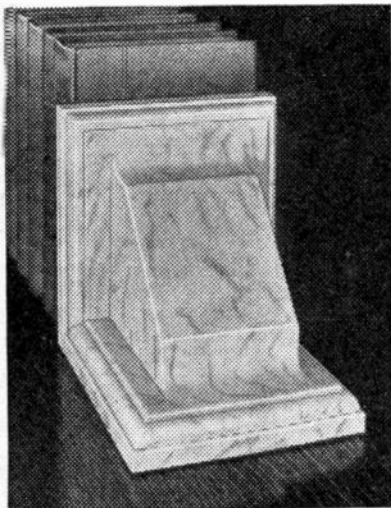
Fig. 5

SEND FOR A KIT

To make this model, a complete kit containing wood, round rod and wire can be obtained from any Hobbies Branch, or post free from Hobbies Ltd., Dereham, Norfolk, price 6/9, including tax.

Casting with Flexible Moulds

PLASTER of paris is a very convenient material for casting ornaments, book-ends, paper weights and similar objects. Using rigid moulds the designs had to be arranged so that the casting could be withdrawn after the plaster had set, but with the recent development of synthetic rubber moulds, plaster casts of a superior finish and with any number of 'undercuts' can be made quite easily.



A book-end cast in 'Karlenite' imitation marble

The synthetic rubber is a plastic substance marketed under a number of names, including 'Elastomold', 'Plastimold', 'Resilomold', 'Fleximould', and 'Vinamould'. The material is sold by weight. While it is not cheap, it has the advantage of being almost everlasting, it being possible to melt old moulds to make new ones. Most makers supply several grades to suit particular circumstances, but the medium grade serves for almost all jobs.

The Original

The original to be copied can be made of any solid material. Most existing ornaments can be copied, or an original can be made in wood, plastic, metal or clay. As plaster is rather brittle the design should not include any very thin sections. The original need not be prepared in any way, except that if it is painted, the paint should be removed.

The making of a shell paper weight serves as an example to show the process. The original is a shell collected during a seaside holiday. It is fixed,

temporarily, to a cocoa tin lid with clay. To keep the moulding compound within bounds, four pieces of wood are nailed together to make a wall around the original and about 1 in. away from it (A).

The synthetic rubber is bought as a lump. This is cut with scissors into small pieces about $\frac{1}{4}$ in. across, and melted gradually in an old saucepan over a fire, gas ring or electric hot-plate. This should be done a little at a time, with constant stirring. The smell is not dangerous, but it is hardly pleasant, so the room should be well ventilated. Continue heating and stirring until the liquid flows off the stirring stick without showing lumps. Let the compound stand for a few seconds for air bubbles to disappear, then pour it around the original.

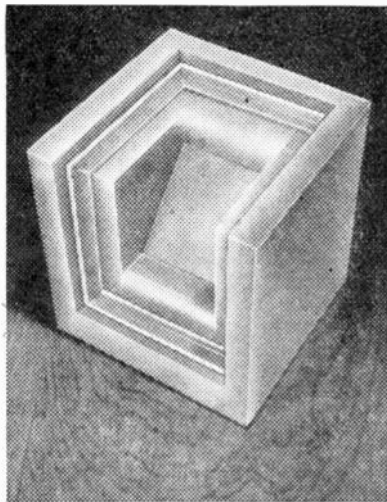
Getting a Good Mould

With our little shell paper weight this may be done with the original cold, but with a large model it is best to heat the original slightly to prevent early chilling. To get a good mould without air bubbles it is important to pour steadily at one spot and not directly on the original (B). Cooling will take several hours.

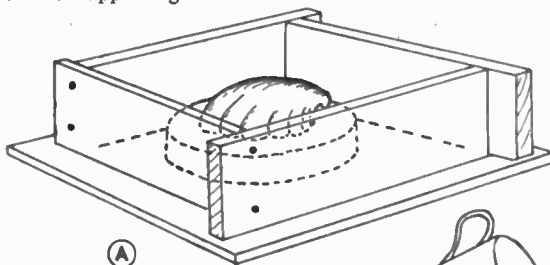
When the mould is cold, remove it from the wooden wall and remove the original by stretching the mould away from it. If the mould is fairly thick it should be stiff enough alone for casting, but if the weight of plaster being poured is likely to distort it, it should be used within its supporting wall.

Plaster of paris is a white powder sold by weight and obtainable from builders' merchants, or a better quality, called 'dental plaster', may be had from a chemist. Mix sufficient plaster and water for one cast at a time. Stir well to the consistency of thick cream, and pour into the mould without undue delay (C). Plaster sets rapidly, and the container used for mixing should be washed out immediately after pouring. The cast may

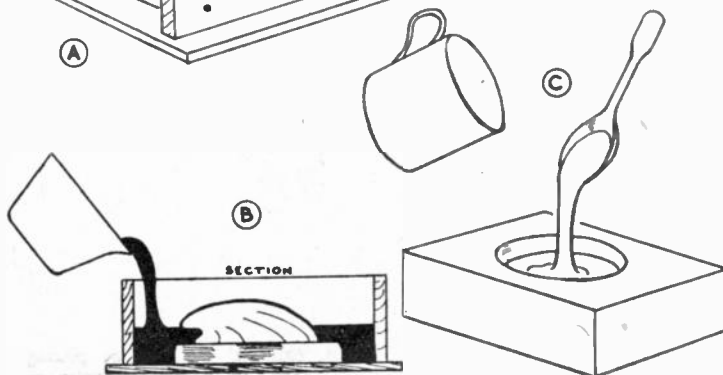
(Continued on page 361)



The mould from which the book-end was cast



The various steps in making a flexible mould and casting from it



Canning Fruits and Vegetables

WHAT is canning? It is a process whereby fruits and vegetables are packed and sealed in tins in order to ensure perfect keeping properties after sterilization. While the more popular method is to use bottles, there is, no doubt, that canning has advantages in that the product is superior to that preserved in bottles.

Canning is quick, and no thermometer is necessary; cans cannot crack or break and they are far easier to handle than bottles. Naturally, there are disadvantages—and they are three; namely a proper sealing machine has to be purchased, cans cannot be used again (other than with the 'Homcan' equipment) and vast quantities of cold water are necessary.

Easy Process

In the days when cans had to be sealed by soldering it was definitely not a popular home process, but today even a child can make 100 per cent success. The sealing machines can be purchased either from the Metal Box Company, Portland Place, London, W.1 (the 'Dixie' Can Sealing Machine), or from the Homecan Equipment Ltd., Africa House, Kingsway, London, W.C.2 (the 'Homcan' machine). One also has to buy a supply of tins (or 'cans' in professional language). With the Dixie machine there are two types of cans holding 1½ pints and 1 pint respectively, but with the 'Homcan' machine one standard size is provided. This, however, can be recut to make it available for further use.

If it is desired to preserve vegetables, then a pressure cooker *must* be purchased as well, whether for bottling or canning.

The operation of sealing is automatic. One merely has to turn the handle and automatic devices operate rolls which bend over the lid and make an airtight seal with the can. There is no greater danger from food poisoning from the use of cans than from bottles. Fruit cans have a transparent gold coloured lacquer and vegetable cans are coated with a dull matt sulphur resisting lacquer, but it is important to choose the right lacquered can. Fruit cans should not be used for vegetables and vice versa.

Now for the actual process for canning fruit, and to save space let us take it in numbered steps as follows:—

- (1) Select and prepare the fruit just as you would for bottling.
- (2) Pack as tightly as possible into

the cans to within a ¼ in. of the top.

- (3) Pour in boiling water or syrup (preferred) to fill the can to within ¼ in. of the top (not more). The lid is then placed immediately on the can which is sealed in the machine. There must be no delay here.
- (4) Place in a vessel of boiling water, bring back to boil as rapidly as possible and boil for the periods shown in the chart below.
- (5) Remove from the boiling water and cool as rapidly as possible in several changes of water (running water preferable).
- (6) Test for sealing by noting concave (drawn-in) appearance of the can ends.
- (7) Label by scratching on the lid with a nail the variety of fruit inside.

You will get about 10 ozs. of product in a 1 lb. can and 16 ozs. in a 1½ lb. can. A suitable syrup is ½ lb. sugar dissolved in 1 pint of water. The sealing operations are clearly explained in the handbook given with each machine. It is advisable to wear leather gloves when putting on the lid and sealing, because the water is hot and burning of the hands will be avoided.

Sterilization

The sterilization time for all fruits except those mentioned below is 15 minutes actual boiling, having taken 10 minutes for the water to come up to boiling. For black currants, cherries, pears and solid pack apples, the boiling should be carried on for 20 minutes; for tomatoes in brine 30 minutes.

The process for vegetables is just a little more prolonged but equally simple, although with vegetables, because of the lack of acid, it is important to carry out the processing times and temperatures exactly. Vegetables should *not* be processed in the same way as fruit. As mentioned above a pressure cooker is required.

The process, then, is as follows:—

- (1) Select and prepare the vegetables just as you would for bottling.
- (2) Blanch the vegetables by placing them in boiling water for 5 to 10 minutes.
- (3) Pack hot, firmly but not too tightly into the cans, allowing a ¼ in. space at the top.
- (4) Pour in boiling brine just to cover the vegetables.
- (5) 'Exhaust' the cans by placing them in a pan of water to

within 1 in. of the top and bring the water to simmering point (180 degrees F.) for 5 minutes.

- (6) Take out with bottle tongs and seal as explained for fruit. Sterilize in a pressure cooker to the temperature shown below.
- (7) Having allowed the temperature to fall gradually to zero, take the cans out and cool quickly as for fruits.
- (8) Test, label and store away in a dry cool place.

Making Brine

The brine is made by dissolving one level dessertspoonful of salt in 1 pint of water (3 ozs. to the gallon) and bringing to the boil. The next part is important. The sterilizing temperature is 240 degrees F., which is 10 lbs. steam pressure. For all vegetables, except those mentioned below, the length of time from the start of the correct pressure is 35 minutes, but for fresh green peas 40 minutes and for shelled broad beans 50 minutes.

All vegetables can be canned successfully and are delicious for use during the dark days. Both fruit and vegetables canned as explained above are ready to serve, i.e., may be used cold. If the product should appear suspicious, whether in colour, smell or appearance, it should definitely not be eaten, nor given to any animals, but buried or burnt.

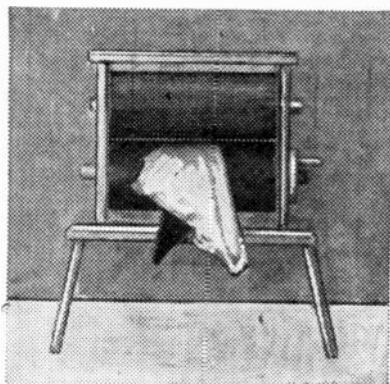
And while we are on the subject of canning, remember that any spare hens or game can be most successfully canned to provide delicious meals at any time. The cans are processed in a pressure cooker at 10 lbs. pressure for 2½ hours, but this time of cooking can be reduced at 15 lbs. pressure for 1 hour 40 minutes.

I feel sure that the time is here for us to serve every atom of garden produce, not only to save money but to build up the stocks of home grown food in this country. (C.G.)

To Clean a Sponge

Into a bowl half full of water put half a lemon, chopped up. If the sponge is put into this solution for an hour or two and then rinsed out thoroughly it will be practically as good as new.

For the Amateur Conjurer— MAKING A 'MAGIC MANGLE'



THE present trend is towards comedy conjuring and the 'Magic Mangle' is a very useful 'prop' to have in this connection. It is based on the 'Banknote Mill' but is much more impressive. In short, anything passed through the mangle changes its shape, form or colour. To take a typical piece of comedy magic, a handkerchief is borrowed but accidentally (?) soiled. The conjurer offers to wash it clean, but only succeeds in making matters worse before righting them. For example the handkerchief is (apparently) burnt, torn and—to come to the specific point—passed through the mangle, only to come out in a long ragged strip. Alternatively, the ruined handkerchief is passed through the mangle and appears clean and whole again—the same as was borrowed earlier in the trick.

It had been secretly passed off the stage to an assistant who 'loaded' it into the mangle which was afterwards brought on.

Thus, as with the Jumping Card Box published in our issue of October 3rd, 1951, and the Sand Frame (March 26th, 1952), the Magic Mangle is an incidental 'prop', rather than a trick in its own right. Readers who do not care to make up a large mangle can adapt the instructions to making a miniature mangle which will turn—apparently—blank pieces of paper into pound notes.

Simple Secret

The secret is simple. Indeed, it should be emphasised that the effect relies on comedy, not on profound mystery. The rollers are, apparently, covered with dark linen cloth, but Fig. 4 shows diagrammatically the true state of affairs. A long strip of linen is attached to one roller and wound round several times before passing, in the reverse

direction round the other roller. As the mangle is turned the strip passes from one roller to another. One roller swallows up, so to speak, one handkerchief, etc., put in, whilst the other disgorges a handkerchief previously concealed in the turns of the strip.

So far as the writer is aware, the 'Magic Mangle' as described, cannot be purchased at the conjuring depots. As described and photographed it has been used more than 500 times in professional shows.

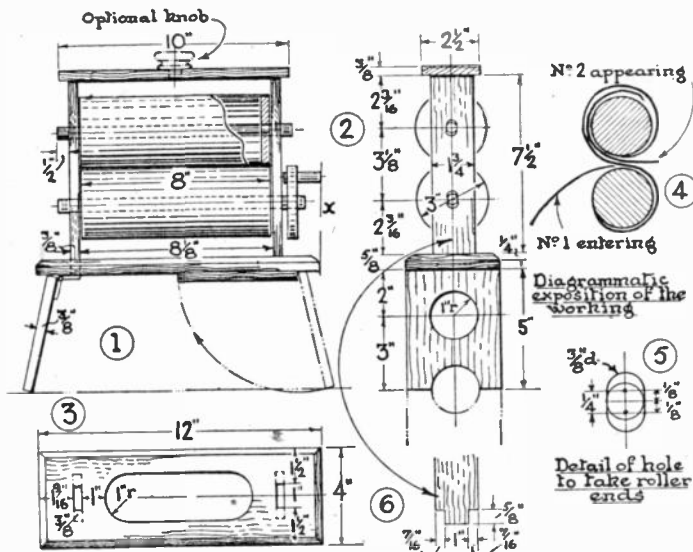
The Rollers

For the rollers, a cardboard postal tube (obtainable from a good stationer) of 3ins. outside diameter is used. If the tube is a little larger or smaller, the dimensions given must be amended. Two 8in. lengths are cut off and are

The top is a simple 10ins. by 2½ins. by ¾in. strip nailed to the sides. The knob (representing a pressure screw) is optional. It certainly looks well but for those who give conjuring shows and have to pack a bag pretty expertly, it will be found that the knob interferes with neat packing. It can, of course, be made removable.

The base is of 12ins. by 4ins. by ¾in. material, with two mortises as shown, to take the sides, and a ½in. bevel all round. The slot in the middle is quite optional (as are the holes in the legs) but (again with an eye to packing) anything that can be done to reduce weight should be considered. The holes were cut with a 2in. diameter centre bit, though a fretsaw or coping saw could be used.

The legs are simply made, as dimensioned and can be made both together



plugged each end with circular pieces of wood about ¾in. or ½in. thick, having a ¾in. diameter hole in the centre, so that a ¾in. dowel can be passed tightly through. Have the dowels about 12ins. long and trim to size afterwards. The end pieces are glued and tacked in, Fig. 1 showing a poorly cut away view.

The side pieces are of 1½ins. by ¾in. section and 8½ins. long. This length includes a ¾in. tenon at the bottom (Detail 6). Detail 5 shows the oval holes needed to give some up and down play in the rollers. It will probably be best to drill a central ¾in. diameter hole and extend it ¾in. each way with a half-round rasp.

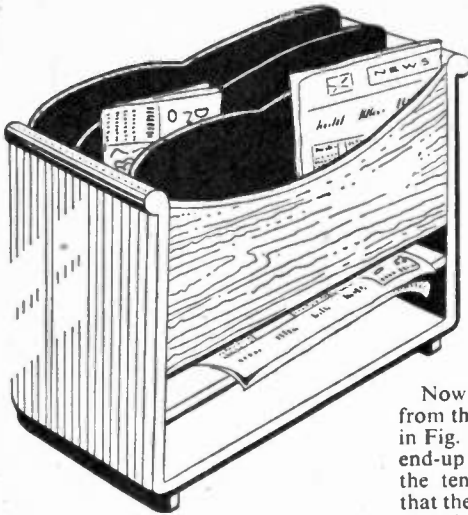
and afterwards cut, as indicated by the chain-dotted lines at the bottom of Fig. 2. The legs are hinged on as shown, so as to fold inwards for convenience in packing. They will extend slightly outwards. The rollers are inserted, of course, before the sides are finally fixed.

The Handle

The handle is simply a 3in. diameter disc of ¾in. or ¾in. plywood, with a central hole bored to take the dowel of the roller in a tight fit, and another, ¾in. or so from the edge, to take a ¾in.

(Continued on page 358)

Newspaper and Magazine Stand



IN these times of high prices and scarcity of money no hobbyist can afford to disregard his workshop oddments. This simple but attractive model, of daily household importance, is designed for the purpose of using some of the largest of these.

Your first task is to plane up the ends (A) and the base (B) shown in Fig. 1 and to leave each section of wood to a thickness of $\frac{3}{4}$ in.

Next, set out the dovetails. You need to mark out five pins in a width of 15 ins., and if you use a template for this marking, you must see that the lengths of the end shoulders are equal and substantial.

On the contrary, if you are not using a template, make these end shoulder lengths 2 ins. each, the neck of each pin 1 in., and the shoulders between the pins 1½ ins. These proportions will give you adequate slope on the pins.

Here's some more advice about common dovetailing, too. Use a bevel for marking the slope, a pair of dividers

to do your spacing, square down the sides of the pins to the gauge lines, and saw down the two end pins first. Chop out, with your chisel and mallet, half from each side of the wood, and slightly undercut on the shoulders between the pins.

Now mark the sockets in the ends (A) from the pins in the base (B) as is shown in Fig. 1. Then place each socket section end-up in the vice, and slant-cut with the tenon-saw. Be very careful to see that the saw-cut is in the waste wood and that the gauge-line and slightly more is left. Finally you can pare the sockets for perfect fitting.

Patience Required

In both the setting out and the execution of these very strong joints you will need to use plenty of patience and just as much skill with your tools.

Fig. 1 shows that each end (A) is trenched across to accommodate the shelf (Y). This trenching is stopped at $\frac{1}{4}$ in. from each edge. This shelf, and the vertical sections like (X) in Fig. 1 are cut from $\frac{1}{4}$ in. thick plywood. The vertical sections are fitted into grooves made in each of the ends (A). If you should wish to make your Stand somewhat narrower, you could reduce the number of these sections to three or four, as your fancy pleases.

Then again, whereas the shelf (Y) is glued in permanently, the vertical sections like (X) are left dry in the grooves, so that they can be removed at any time. This feature facilitates the

final polishing, and later makes dusting and spring-cleaning very short work.

Now, each of the end-scrolls, marked (P) in Fig. 1 are glued, panel-pinned, and rounded over. The base-feet as shown at (S) are rounded at the ends, and screwed up from underneath.

Finally, glasspaper down with No. 1 and No. 00 glasspaper, dust-off thoroughly, and stain to your choice, to complete the model as seen in Fig. 2 ready for use in the house. (H.N.)

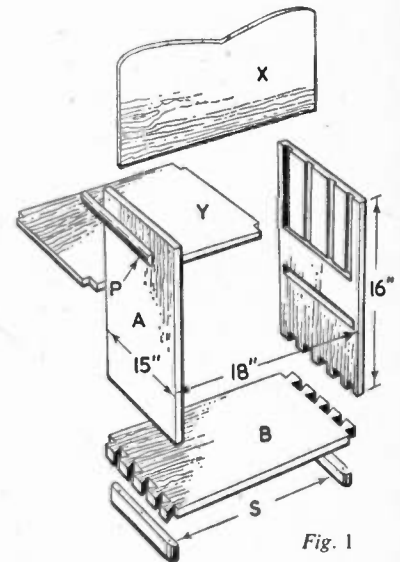


Fig. 1

THE 'MAGIC MANGLE'

(Continued from page 357)

diameter dowel for a handle, the end of the handle being in line (X, Fig. 1) with the end of the base.

The whole job, at this stage, can be given a coat or two of bright enamel. Remember always to have conjuring apparatus bright and cheerful—no dull browns, for example.

A strip of linen about 4 ft. long and 4 ins. wide is required. The writer cut his from an old roller blind. The material should be black or dark blue. With half a dozen or so drawing pins, fasten one end of the material to the lower roller (the material hanging down), and about 2 ins. down, in the centre of the linen,

paint a fairly bold white arrow, pointing upwards. Now wind on all the material. When you come to the end, pass the free end through the rollers and then fasten this free end to the upper roller. 2 ins. or 3 ins. down from the upper end, write, in white DUPLICATE IN and have an arrow pointing downward.

Experiment with the actual model will show that the rollers can be turned only one way by means of the handle. When setting, it is necessary to turn the upper roller by hand (by means of the dowels at each end). The rollers are turned so that *Duplicate In* appears. They are then turned about one com-

plete revolution, and the duplicate is fed in. The turning is continued after the duplicate is well in, until the lower white arrow appears. This is kept to the rear, away from the audience. The other handkerchief, etc., is then openly fed in, the handle turned, and the duplicate appears. By means of these arrows, no difficulty will be encountered in setting and working the apparatus.

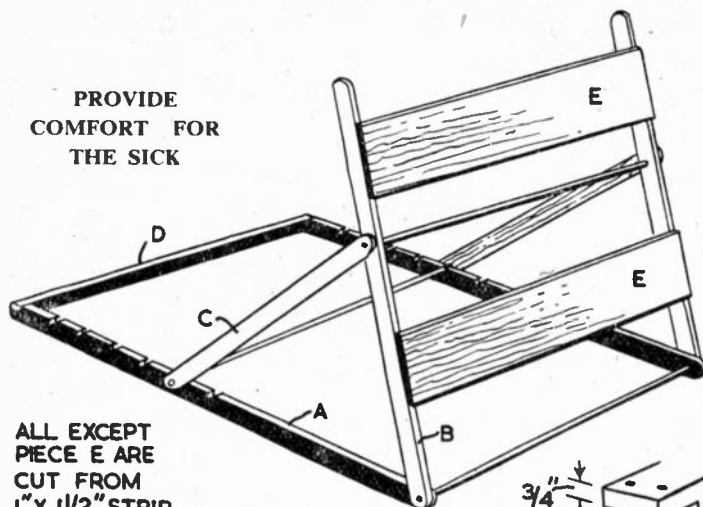
Experiment will show how long a handkerchief, glove, stocking, etc., can be accommodated, and, if necessary to fold, how to do this neatly without causing bulges on the rollers. Care should be taken not to overwind and reveal the bare rollers or the arrows.

(W.A.B.)

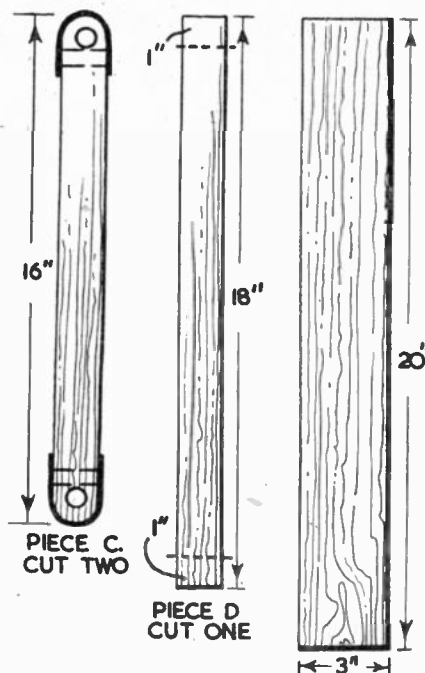
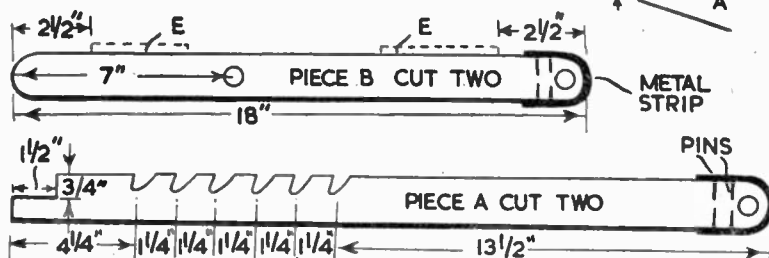
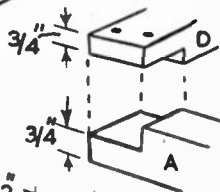
Straightforward Woodwork

A FOLDING BACK-REST

PROVIDE
COMFORT FOR
THE SICK



ALL EXCEPT
PIECE E ARE
CUT FROM
1" X 1 1/2" STRIP



ALSO REQUIRED ARE
TWO 22" LENGTHS
OF 3/8" DOWELLING
AND ONE 20"
LENGTH

PIECE E
CUT TWO
1/2" WOOD

UNFORTUNATELY, none of us is immune to illness and every year finds at least one member of the family in bed with a bad cold or some other common complaint. This is where a back-rest comes in handy. Adjusted to the correct angle it is far more comfortable than pillows which are always getting disarranged.

Simple Construction

The construction is such that even a beginner at woodwork can tackle it without any qualms. Just study the diagrams and read through these instructions carefully, and you will have a good idea of how to set about the job.

The main pieces (A), (B) and (C) are cut from 1 1/2 ins. by 1 in. wood to the following lengths—(A)—24 ins.; (B)—18 ins.; (C)—16 ins. Commence by cutting the halving joints in the ends of

pieces (A). The measurements are shown in the diagrams.

The slots are cut with a heavy grade fretsaw. Before boring the holes to take the dowel rods, the ends should be strengthened with pieces of thin metal tacked or screwed in position.

Piece (D) measures 18 ins. long and is also cut from 1 1/2 ins. by 1 in. material. It is halved to the two pieces (A) and secured by glue and screws. The holes are bored in the pieces (A) and the dowel rod slipped in place.

The Actual Back-Rest

The actual back-rest is formed by securing two pieces (E) across the uprights (B). Two or three screws at each end should be sufficient and these should be countersunk and afterwards filled with plastic wood. Note that the two dowel pieces in the back-rest

extend to 20 ins. and 22 ins., the upper one being the longer. Both dowels should be a loose fit in pieces (B) and are glued into pieces (A) and (C).

Another dowel rod measuring 22 ins. long is glued into the ends of (C). This latter dowel is the one that drops into the slots in pieces (A).

Finishing

After the back-rest has been assembled and cleaned up, it should be given two coats of clear varnish. A darker finish may be obtained by first applying a little stain. Do not apply too much stain at a time, especially on the ends of the dowels and rails, or you will have dark patches that are difficult to match. (M)

**HOBBIES HANDBOOK
IS NOW ON SALE!**
See details page 367

How to build a SIMPLE MAINS ONE-VALVER



It appears that quite a number of readers wish to make a straightforward set of simple type which can be operated from the mains. This receiver is of this kind, and intended for headphone reception. It lends itself well to modification, at some later date, to make a larger receiver suitable for working a loud speaker.

The greatest difficulty, with mains receivers of simple type, is that a fairly complicated rectifier arrangement is essential in order to obtain high tension current. This has been overcome, in this circuit, by using a battery for high

tension from the mains, and the only battery used is very inexpensive. The circuit is shown in Fig. 1. The only part of the set where mains voltages are present is the on/off switch, and the primary of the filament transformer.

Components Used

A tuning condenser with knob or dial, and a reaction condenser with knob, both of .0005 mfd. capacity, are used. Also a .0002 mfd. fixed condenser, and a 1 megohm grid leak. These parts can be of ordinary type, such as are used in a battery set. The tuning coil, too, is of ordinary type. It may be wound as shown in Fig. 2, if a

while, the fact that it is capable of delivering up to 1 amp (or more) does not render it unsuitable, since this only means that the transformer will not be working at full capacity.

The valve for which wiring is shown is a 6K7, as mentioned. (The actual valve may also be marked G/GT to denote the type of envelope or bulb, but this can be disregarded). Many other types of mains valves exist, and any detector type can be used provided the valveholder is suitably wired up, and of suitable type, and that the transformer employed delivers a suitable voltage. Various 4 volt valves exist; these require a 4 volt transformer. 12.6 volt valves also exist, and these would require a 12 or 12.6 V. transformer. This may be worth remembering if it is desired to use a transformer or valve already in hand. But if these are to

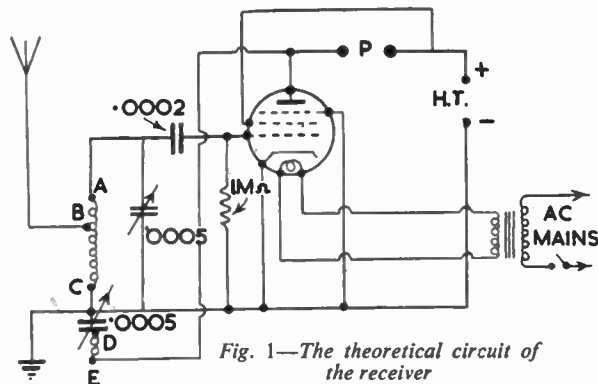


Fig. 1—The theoretical circuit of the receiver

Note: The tuning coil shown in this article is also suitable for the two-circuit published recently.

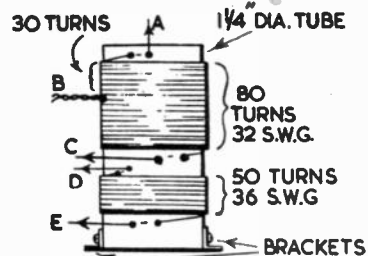


Fig. 2—The tuning coil

tension, and deriving heater current from the mains. This has several advantages. First of all, only a small battery is needed, and a 9 volt grid bias battery is recommended. Such a battery only costs a few pence, as compared with the several shillings for a 90 to 120 V. high tension battery, so that replacements are cheap. The current drain is very small, so that the battery will last a long time. In addition, the mains type valve is more efficient than the battery type, so that the performance, with the 9 V. H.T. battery, is similar to that of a conventional battery set using a 60 V. battery. Finally, any chance of receiving shocks, when handling the phones, is avoided, in this way.

At a later date the builder can add a rectifier, to derive high tension current from the mains, if desired. Meanwhile, the valve heater current is being ob-

ready-made coil is not to hand.

Of the other parts, the on/off switch must be of the toggle type intended for mains use. Some switches used in battery sets have bare metal parts in electrical contact with the switch contacts themselves. Such switches are not suitable.

The transformer is of the type known as a filament or heater transformer. Its primary will be for 200 to 250 V. mains. The secondary should be rated at 6.3 volts, if the 6K7 type of valve which is suggested is to be used. This voltage (6.3) is a usual one for this type of component. The valve consumes only .3 amp, so that the very smallest type of transformer is satisfactory. But if it is intended to add a further valve, later, then a transformer delivering 1 amp or so can be used. It will then be able to supply the extra current, when eventually called upon to do so. Mean-

be purchased, then the 6.3 V. type is recommended because it is largely used.

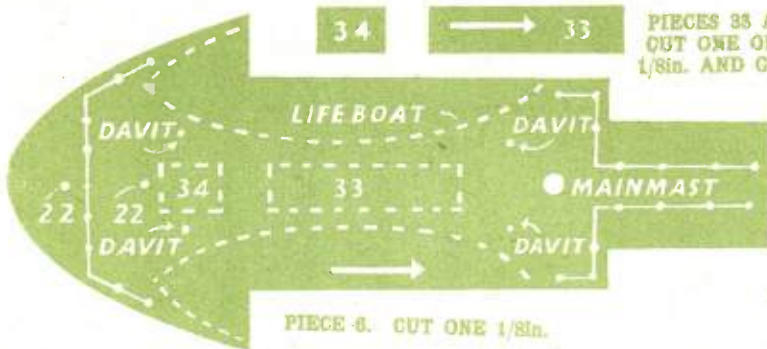
Details for winding the coil will be seen in Fig. 2. The gauges of wire are not critical, but if much departure from them is made it may be necessary to modify the number of turns. This also applies if a former of rather different diameter is employed. As full details for coils have been given from time to time, it is not proposed to repeat these. It should be noted, however, that all turns are in the same direction, as illustrated, and that about 1/2 in. space is left between the two windings.

Chassis and Panel

For the 1-valver, a chassis 5ins. by 7ins. is amply large, with a panel of similar dimensions. These can be made from wood. If it is intended to make up a larger set, eventually, a chassis about



STEPS 32. CUT TWO 1/8in.



PIECE 6. CUT ONE 1/8in.

PIECES 35 AND 34. CUT ONE OF EACH 1/8in. AND GLUE TO 6.

STEPS 27. CUT TWO 1/8in.

STEPS 28. CUT TWO 1/8in.

FUNNEL 29. CUT ONE 3/8in. AND ONE 1/8in. GLUE TOGETHER AND SHAPE.

PIECE 5. CUT ONE 1/8in.

PIECE 13. CUT ONE 1/8in.

PIECE 23. CUT TWO 1/8in.

PIECE 12. CUT ONE 3/8in.

PIECE 4. CUT ONE 1/4in.

PIECE 14. 14A. CUT TWO 1/8in.

PIECE 14A. CUT FROM 1/8in. ROUND ROD.

PIECE 15. CUT ONE 1/8in.

PIECE 2. CUT ONE 1/4in.

PIECES 9. CUT ONE 3/8in. AND PIECE 10. CUT ONE 1/4in.

PIECE 16. CUT TWO 1/8in.

PIECE 7. CUT ONE 3/8in.

PIECE 1. CUT ONE 3/8in.

PIECE 30. CUT THREE FROM THIN WIRE

NOTE

FROM FINE THREAD, RAILINGS RETPINS, WITH THE HEADS CUT OF SAME THICKNESS AS THE

THE ARROWS INDICATE THE DIRECTION OF GRAIN OF WOOD.

MAKE 8 FROM STIFF PAPER.

PIECES 25. CUT FROM THIN WIRE

BULWARKS. CUT TWO FROM THIN CARD.

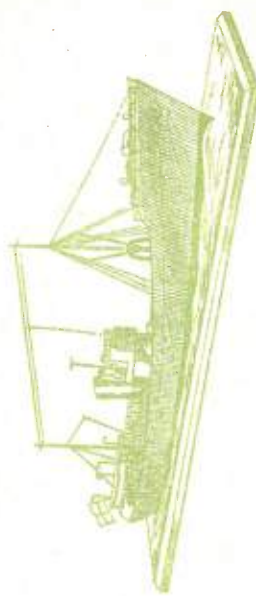
BASE. CUT ONE 3/8in.

EXTEND TO 2 1/4 INS.

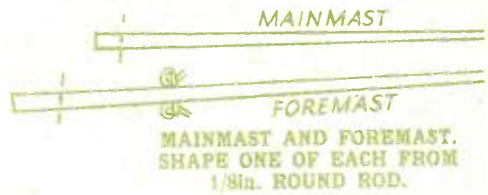
SUPPLEMENT TO HOBBIES No. 2906.

MODEL STEAM TRAWLER

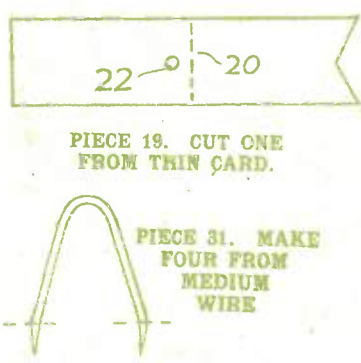
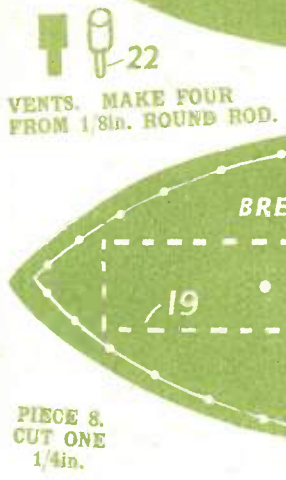
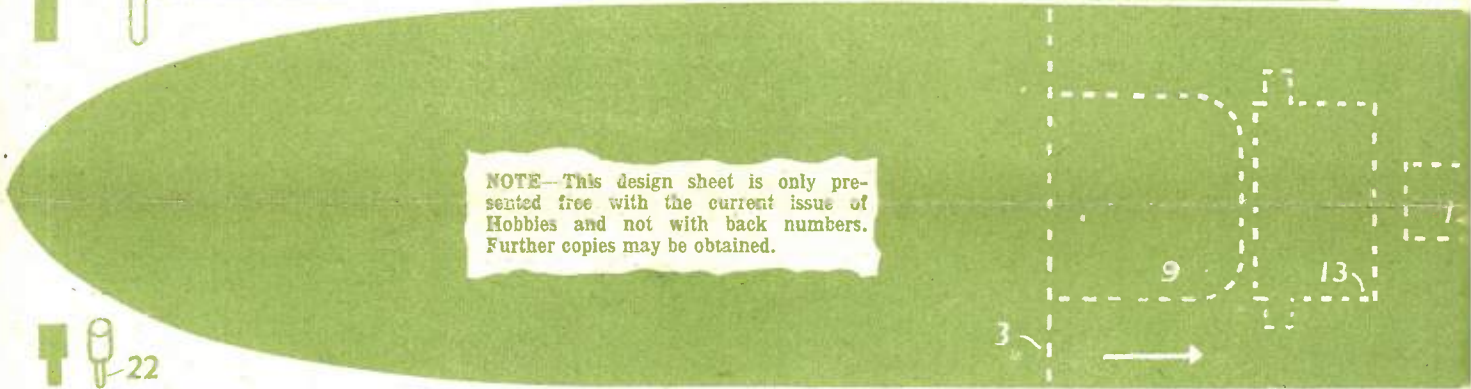
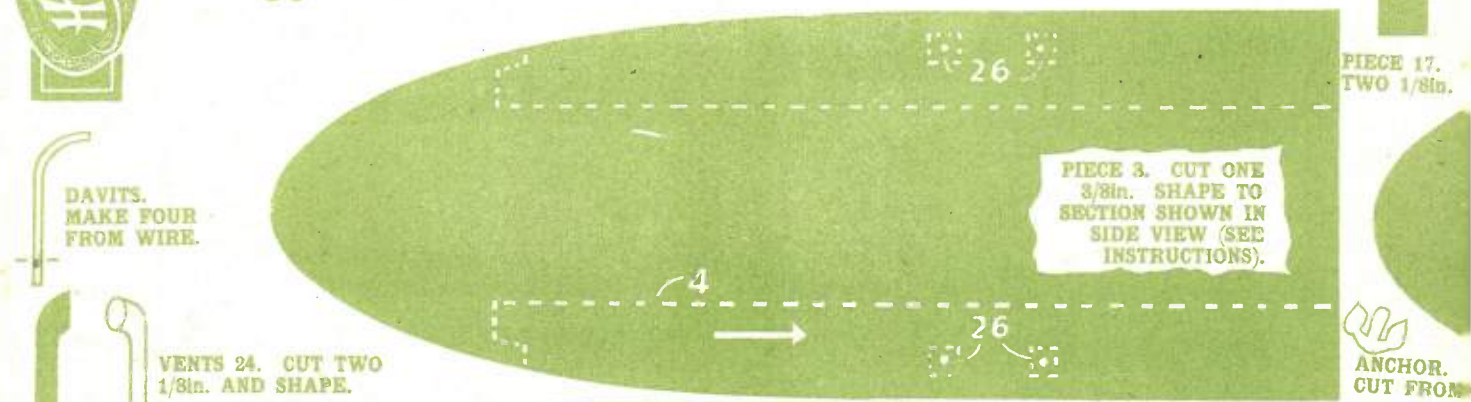
SIZE: LENGTH 14ins. (EXCLUDING BASE).
BEAM 2ins.



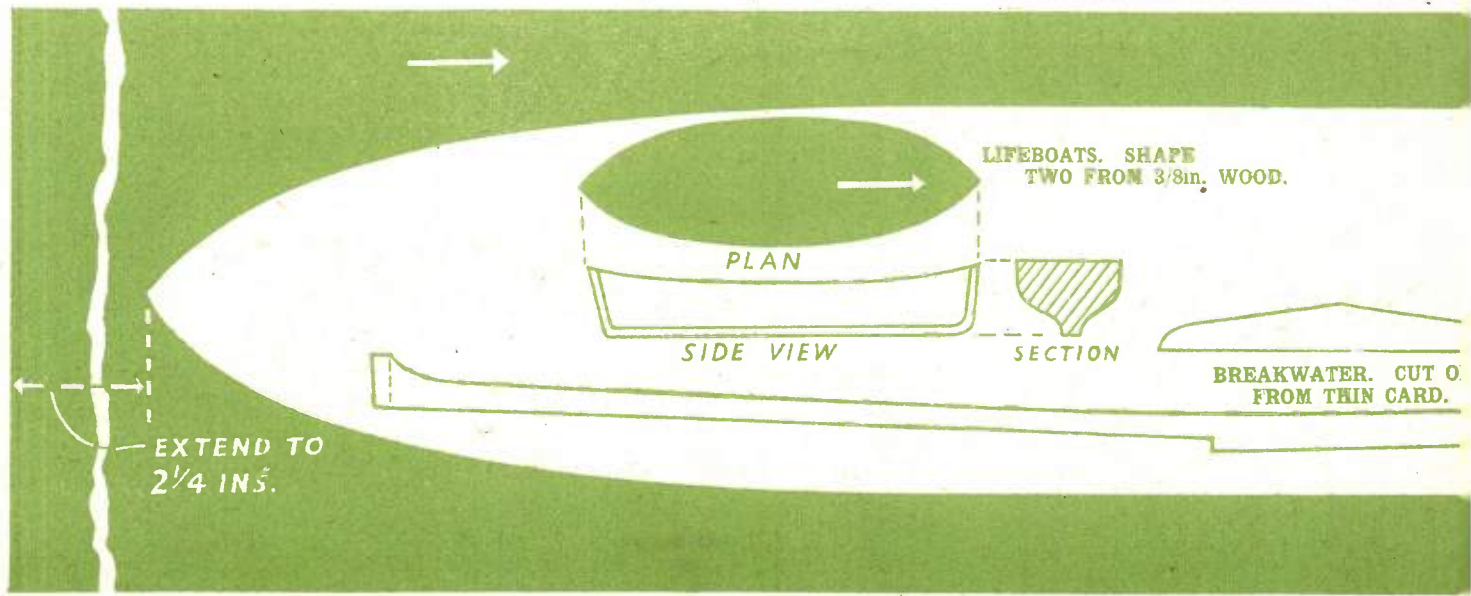
PANELS OF WOOD REQUIRED FOR THIS DESIGN
TWO LD6 ONE H4 ONE G2
Materials for making this design are supplied by
HOBBIES LIMITED, Dereham, Norfolk.
Price on application.
PRINTED IN ENGLAND.



- PIECE 18. CUT TWO 1/8in.
- PIECE 20. CUT ONE 1/8in.
- PIECE 31. SHAPE ONE FROM WASTE WOOD.



RIGGING IS MADE ARE MADE FROM OFF, AND THREAD RIGGING.



8ins. by 12ins. could be used at this stage, to leave room for the extra parts. The chassis is about 2ins. deep.

The layout of the components above the chassis will be seen from Fig. 3. It will be necessary to saw or drill a hole about 1in. in diameter, for the valveholder.

Wiring Points

All the connections can be found from the diagrams. As the valveholder

returned to earth. Pin 6 is not used. Pin 7 provides the second heater connection, and pin 8 is the Cathode, also earthed.

The bolt in Fig. 4, connected to the earth terminal, is that holding the tuning condenser to the chassis. If the condenser is fitted to the panel itself, by means of a bush, then a lead should be brought from this point up to the moving plates terminal of the condenser.

short time after switching off, as the cathode only cools slowly.

Headphones

Any ordinary headphones are suitable, with the usual aerial and earth. Quite good results should be obtained with an indoor aerial, and the earth is not really essential. However, a good aerial and earth will, naturally, improve signal strength.

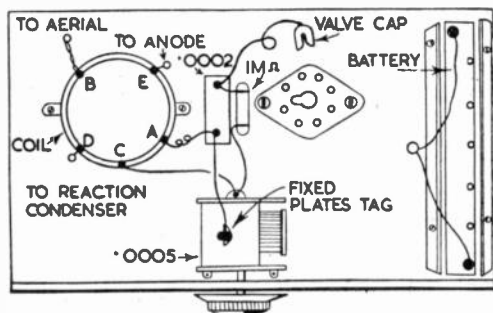


Fig. 3—Components and wiring above the chassis

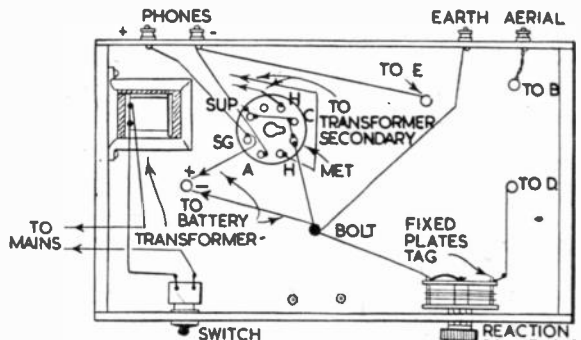


Fig. 4—Wiring and parts below the chassis

has eight tags, compared with the four found on the holders in small battery sets, it is felt best that these should be briefly explained. Viewing the holder from the bottom, as in Fig. 4, and counting clockwise from the key-way, pin 1 is for the Metallising (or screening) of the valve, and is earthed. Pin 2 is one end of the heater, and goes to the secondary of the transformer. Pin 3 is the Anode, going to the headphone negative terminal. Pin 4 is the Screen Grid, connected to positive on the battery. Pin 5 is the Suppressor Grid, also

Mains Leads

The two mains leads should be of good quality flex, fitted with a plug which can be inserted into the mains power socket. In wiring up the transformer, take care that the primary is taken to switch and mains, and the secondary to the valve heater.

Notes on Operation

After switching on, the receiver will take about 30 seconds to begin working. Signals will continue to be heard for a

Small Consumption

The mains consumption is very small, being about 2 watts. (A normal room lamp consumes 60 to 100 watts or so). The set is not suitable for Direct Current mains. If the transformer is not being fully loaded a dial light could be added. This should be wired in parallel with the valve heater, and a 6.3 V. .3 amp type of bulb is that normally employed. This bulb could be mounted above the tuning dial, or behind a small cut-out in the panel. (FGR)

Casting with Flexible Moulds

(Continued from page 355)

be removed from the mould after about 15 minutes and put aside to fully harden. Any number of casts may be made in this way. One mould of a shell paper weight showed no signs of wear after about 500 casts in a school workshop.

Plaster of paris will take water colours well. They should be used drier than for painting on paper. The shell could be painted in its natural colours, and the base a contrasting colour. A coat of clear varnish will seal the colours and provide a gloss finish.

The base of an ornament can be rubbed smooth on coarse glasspaper, then a piece of baize glued on, if it has to stand on furniture.

Besides plaster, these moulds can be used with several other materials. Concrete mixtures may be used. Some

makers of the synthetic rubber also supply a variety of artificial stones, which are used in the same way as plaster, but the casts are much harder and can be made to look like genuine stone. Karlenite, manufactured by the

Karlena Art Stone Company, is an example. It sets rock hard, and closely resembles marble.

Plastics can also be used. Syrups, which have to be mixed with a hardener just before pouring, can be obtained in all colours, transparent, translucent or opaque, to produce attractive plastic objects. (463)

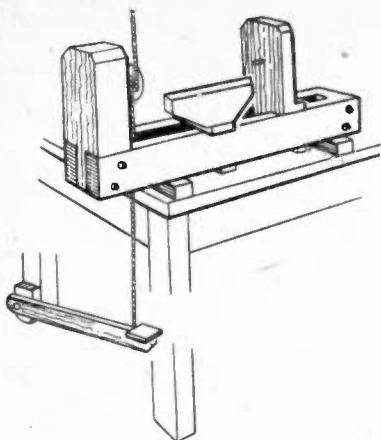


An attractive wall ornament



The mould for the duck

Do your own turning with A Simple Lathe



MOST woodworkers feel the need at times for a lathe when turned work is required, and the necessary turnings not available. Where expense is a consideration, the purchase of a commercial pattern lathe may well not be convenient, and here the simple form of lathe illustrated may prove a blessing. It is of the dead-centre variety, and requires neither stand nor flywheel to operate. The motive power is a cord, operated by a pedal, and works satisfactorily; in fact, a lathe of this simple pattern, used at one time by chair makers, was almost the only tool employed, with sufficiently good results to last many years.

As it is proposed to fix the lathe, temporarily, to the bench, no stand will be needed. Fig. 1 shows the bed and headstock (A). The bed consists of two parallel bars of 1in. by 2ins. wood, joined together at one end with a piece of 1in. wood, to keep the bars 1in. apart. The headstock is fitted between them at the opposite end for the same purpose.

Headstock

Cut the headstock to dimensions given from 2ins. thick wood, or two thicknesses of 1in. wood glued together, should the thicker wood not be available. The lug at the bottom of the headstock is 1in. thick, and care must be taken to get the lug and block at the far end exactly the same thickness, as the bars must be truly parallel the whole of their length. The length of the bars, by the way, can be, within limits, whatever the reader may wish, but a length of 18ins. is suggested, which permits work up to 10ins. in length to be turned. Fix both headstock and block to the bars with stout screws, well countersunk, and space the screws so that they will not foul each other when driven in. On a centre line down the inside face of the headstock, and about 2ins. down from the top, drill a hole partly through the

headstock for the dead centre. This is a piece of $\frac{1}{4}$ in. or $\frac{3}{8}$ in. silver steel, with one end filed to a point. It should project from the face $1\frac{1}{2}$ ins. and be a tight fit in the hole.

Two pieces of wood are screwed beneath the bed to raise it a little above the bench. Shown separately at (B), they are 4ins. long, 1in. wide and 1in. thick. The far end one is fixed across just clear of the block, that at the headstock end should be about 1in. clear of the headstock. Drill each with a $\frac{1}{4}$ in. hole through its centre. Corresponding holes will be drilled through the bench top, and then the lathe can be bolted to the bench, and removed when not wanted.

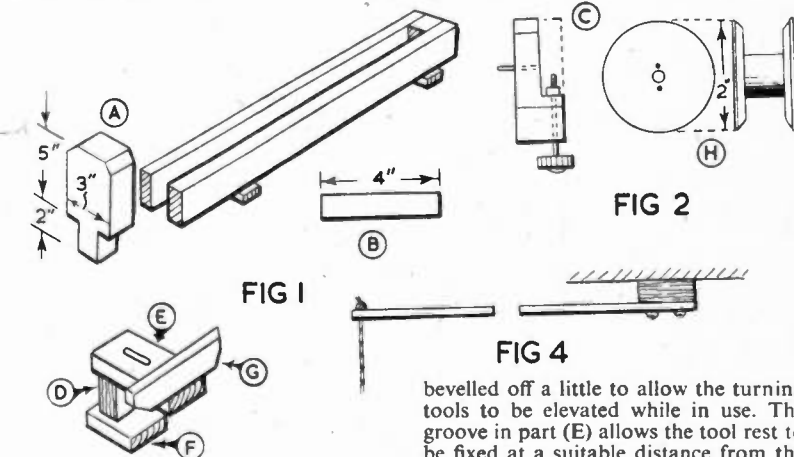
The sliding tailstock (C) in Fig. 2 is a replica at first of the headstock, then the lug at the bottom is shortened by $\frac{1}{4}$ in., so that it is that much short of the depth of the bars. At the rear of the tailstock,

penetrate the wood, and the steel centre be a tight fit.

Tool Rest

The tool rest, Fig. 3, is constructed as follows. Cut a block of wood (D) to the same dimensions as the lug on the tailstock, and drill it $\frac{1}{4}$ in. through its centre. Cut (F) 2ins. wide, $\frac{1}{4}$ in. thick and 2ins. long, and drill similarly; (E) is a piece of $\frac{1}{4}$ in. thick wood, 3ins. wide and about 7ins. long. At 1in. from its rear end cut a groove $\frac{1}{4}$ in. wide and 4ins. long. Now fix all three parts together with a bolt, so that the whole can be slid along the bed, and fixed by tightening the bolt at any point.

The actual tool rest (G) is a piece of wood about 9ins. long and 1in. thick, and high enough to reach to the centres of the lathe when fixed with screws to part (E). The top edge of the tool rest is



a piece 1in. thick and 4ins. long is cut away, as shown by dotted outline. This removed, a $\frac{1}{4}$ in. hole is drilled through the rest. Cut a strip of $\frac{1}{4}$ in. thick wood, 1in. wide and 2ins. long, drill this through its centre $\frac{1}{4}$ in. also, and connect it to the tailstock, underneath with an iron bolt of sufficient length. When fitted in the bed of the lathe, it will be seen that the tailstock now can be slid along at will, and fixed at any point by merely tightening the bolt.

Run the tailstock along the bed and press its face against the point of the dead centre in the headstock to make a mark. On this drill a hole for the second dead centre of the lathe. As for the headstock, the hole should not quite

bevelled off a little to allow the turning tools to be elevated while in use. The groove in part (E) allows the tool rest to be fixed at a suitable distance from the work in the lathe. Some strain comes on this part, and this can be relieved by gluing to the rest, on its inside face, a short piece of wood, triangular section, which can rest (but not be glued) on the face of (E).

A pulley is now to be made. This is shown at (H) in Fig. 2. It consists of a centre, 1in. diameter, with outer flanges of $\frac{1}{4}$ in. fretwood glued to it. The centre can be $\frac{1}{4}$ in. long, the full length of the pulley will then measure $1\frac{1}{2}$ ins. Through the exact centre drill a hole to suit the dead-centre of the headstock, slip on this a thin washer. Either side of the hole in the pulley, as near as possible to it, drill small holes, and in these drive in steel nails, partly. Cut these off short, leaving pins about $\frac{1}{4}$ in. long; file these

(Continued on page 366)



The SHIPMODELLER'S Corner



IN making our ship models we are always striving to improve them by the addition of authentic detail. In this respect, one of the features that make for real accuracy is the making and setting of the sails.

A knowledge of sails, their component parts and fittings, is extremely useful; in fact, for a model to have any real historic value it is essential where sails are to be fitted. The exceptions are museum models and other models built to demonstrate the rigging of a particular period. In such cases it is usual to omit sails altogether, and so enable a better examination of the beautiful and delicate tracery of the rigging.

In this article we are going to discuss in detail the sails themselves; the fittings, blocks, etc., will be fully dealt with in later articles.

Two Considerations

I would like to remind readers that the amount of detail we can put into the making of the sails depends on two things; first, the scale of our model, secondly, the material used. In all cases where it is possible to do so I would advise the use of fine fabric in place of the usual parchment sails. Not only are fabric sails more authentic in appearance, but they enable us to add details which have to be omitted when the sails are of parchment.

By all means use parchment if preferred on small models intended for decorative purposes, but for exhibition and models for competition use fabric. Experienced modellers avoid parchment in all their scale model work.

Let us now consider the parts that go to make the sail.

The Cloth is the whole strip of canvas 18ins. to 24ins. in breadth, the sail being made of strips of cloth sewn together.

The Head of the sail is the top of the sail. See sketches to follow the parts outlined (A to A).

The Leech is the side of the sail (A to B).

The Foot is the bottom of the sail (B to B).

The Luff is the leech first touched by the wind. It will be useful to know this when we come to set our sails on the model.

The Clews are the lower corners of a square sail and the aftermost lower corner of a fore and aft sail (B).

The Tack is the foremost corner of a fore and aft sail, also the rope attached

FACTS ABOUT SAILS

By "Whipstaff"

to the lower corner of a lower course; i.e. the foresail or mainsail end taken to belay to a point forward of the sail, is termed the **Tack**.

The Peak is the upper and aftermost corner of a spanker or trysail (J).

The Throat is the upper and foremost corner of a spanker or trysail. This is also sometimes termed the **Nock** (I).

The Bunt. This term applies to all the middle cloths of a square sail.

The Tableing. The double part of the sail close to the bolt rope (C).

The Buntline Cloth is the double part of the sail to take the chafe of the buntlines (D).

The Reef-tackle Patch is a double part to take the strain of the reef-tackle (E).

Reef-Bands. The double part of the sail designed to take the eyelet holes for the reef lines (F).

Belly Band. The double part across topsails below the fourth reef, for strength (G).

Top Linings. The double part on the after side of the **Head** of the topsail to take the chafe of the top (H).

Goring Cloth. Any cloth cut obliquely as in jib sails, etc.

The Roach is the curve in the foot of the sail.

This analysis of the sails applies to the form and making of the sails in the latter half of the 19th century and the early part of the

present century, and now, for comparison, we will consider some details of the 18th to middle 19th century. All changes were gradual, and for the super detailed model, research of the particular period is always advisable. However, the two broad sections covered here will cater for most model makers' requirements.

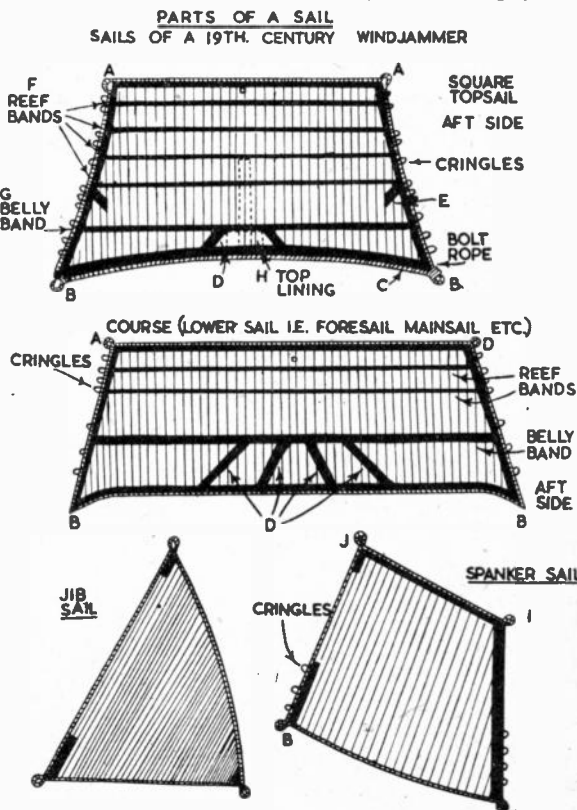
Guide to Accuracy

At the period covered, up to the middle of the 19th century, the following guide will enable us to turn out accurate and authentic sails. During this period canvas for the Royal Navy was in what are termed bolts of cloth, a bolt being 38yds. long and 24ins. wide. Quality was determined by weight, and each quality was numbered.

Mainsail, spritsail, foresail and mizzen were known as **Courses**.

Gores were angles cut at a slope at

(Continued on page 364)



Books to Read!

A review of interesting books for craftsmen which have been recently published. Obtainable through newsagents or book-sellers or direct from the publishers mentioned.

Lettering for Amateurs

by Cecil Wade

ONE of the latest in the series of Foyle's handbooks, this is an exceedingly well written book which will teach the beginner all he needs to know about lettering. There is, of course, quite a lot to learn if an amateur would try to approach the standard of a professional lettering artist, but it is an exceedingly pleasant hobby and, if studied on commercial lines, it is a lucrative one.

Published by W. & G. Foyle Ltd., 119-125 Charing Cross Road, London, W.C.2.—Price 2/6.

Teach Yourself Modelcraft

by H. S. Colman

THIS volume, written by a well-known personality in the modelling field, will appeal to all who want to know more about this fascinating hobby. It is written in a style that anyone can fully understand, and covers almost the whole of the field of model making. It can be thoroughly recommended.

Published by The English University Press Ltd., St. Paul's House, Warwick Square, London, E.C.4—Price 6/.

their usual high standards. The author is a Fellow of the College of Handicraft, and a Judd gold Medallist for research work in the problems of practical education. Attractive toys can be made cheaply by following the plans set out in the book, and many of the articles described can be made from waste materials.

Published by Sir Isaac Pitman & Sons, Ltd., 39/41 Parker Street, Kingsway, London, W.C.2.—Price 10/6.

Goldsmith's and Silversmith's Handbook

by Staton Abbey

THIS volume provides an up-to-date guide to traditional craftsmanship and modern developments in alloys, methods and materials, and will be of value to the apprentice and student goldsmith or silversmith as well as to the experienced worker. It is based on the well-known handbooks by the late George E. Gee, which, over a period of nearly 70 years, became established as standard works on their subjects.

Published by The Technical Press Ltd., Gloucester Road, Kingston Hill, Surrey—Price 16/.

Woodworker's Pocket Book

edited by Charles H. Hayward

MANY woodworkers, young and mold alike, would benefit from having one of these books in the workshop. It contains valuable workshop data, recipes for stains, polishes, etc., and includes a wealth of detail on such subjects as timbers, tools, joints, mouldings, scales, furniture sizes, etc.

Published by Evans Bros., Montague House, Russell Square, W.C.1—Price 6/.

Model Sailing Craft

by W. J. Daniels and H. B. Tucker

WE have been privileged to see a copy of the third edition of this now famous work. When the first edition appeared in 1932 it was described as a standard text book that would stand for all time. The second edition was published in 1939 and the third in 1952. This latest edition has been carefully revised and brought up to date in every respect. Large sections have been re-written and much new matter added. The authors are recognised authorities in the model yachting world, and both are vice presidents of the Model Yachting Association.

Published by Chapman & Hall, 37 Essex Street, London, W.C.2—Price 63/.

Toy Making

by Lynn Miller

A VOLUME from the house of Pitman, this is a book prepared to

Shipmodeller's Corner

(Continued from page 363)

one or both ends of cloths to widen or increase the depth of a sail.

Linings were pieces of canvas sewn on the *Leeches* and centre of a sail, to strengthen it.

Mast Cloth. The lining in the middle on the aft side of topsails to prevent the chafe of the mast.

Nock. The foremost upper corner of boomsails, staysails, etc., cut with a square tack.

Roach Leech. The curve in the mast leech of some fore and aft sails.

Shoulder of Mutton Sail. This is triangular, similar to the lateen but attached to the mast instead of a yard.

Top Brim. A space in the middle of the foot of a topsail. It contains one fifth of the number of cloths in the sail and is so called from its situation, near the

forepart of the top or platform on the mast, when the sail is extended.

Top Lining. Lining sewn to the aftside of topsails to preserve from chafe.

By comparing these two sets of facts we realise that many of the details differ only in the terms applied to them, also that, in making a sail of the later periods, clipper and windjammer days, we have more detail to contend with.

Here is where we have to consider the scale of our model. A scale of $\frac{1}{4}$ in. to 1 ft. in the case of the larger vessels of the later 19th century onwards would, in some cases, produce a larger model than would be the case in using the scale of $\frac{1}{4}$ in. to 1 ft. for a galleon model.

By determining our scale to allow a finished model of some 30 ins. to 40 ins. overall length we have a size that

enables great detail to be accomplished in our modelling of the hull and deck fittings, and at the same time allowing ample scope for detail in our sail making and rigging.

For a first detailed model, do not attempt a large three-decker warship or large square rigged vessel of the later period. Choose a smaller prototype. There are many to choose from; fishing vessels, trading schooners, brigs, sloops, etc. These all form excellent subjects for the model maker, and if built to the usual $\frac{1}{4}$ in. scale, do not make too large a model while allowing ready detailed work.

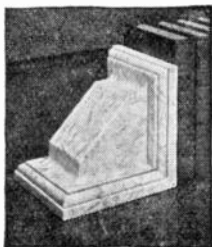
Perhaps there is some local type with which you are familiar, or for which you have access to sources of information. If so you can make a model that will have real historical value and interest outside your own immediate circle.

In later articles I will deal with some of the smaller types that make interesting subjects for the model maker's art. (A)

Typical Casts from Karlena Moulding
and Casting Compounds



DEVOTIONAL DESIGN—Hardened plaster
cast finished with Stonax.



TASTEFUL BOOK END—Cast in Karlene
simulating Carrara marble.



WALL PLAQUE—Casting from ELASTO-
MOLD rubber mould showing absolute
fidelity of detail.



3" COLOUR MEDALLION—In six colours.
This is a variation of tier casting technique.

"Karlana" offers a pattern making
service by highly talented sculptors.
Moulds prepared to customers' own
specifications.

THE NEW MOULDING AND CASTING TECHNIQUE

Karlenite Plastic Marble

KARLENITE is an entirely new artificial stone plastic which sets rock hard with a scintillating crystalline structure like marble or Alabaster for colour, veining, texture, density and hardness. It is enormously strong, highly resistant to heat and impervious to water. Literally any type of veining can be simulated to any combination of colours, and a wide range of "Veining Pigments" is available for this purpose. Most attractive for marble effects, and for designs in colour as in coronation and heraldic devices.

Elastomold Rubber Moulds

ELASTOMOLD is high quality synthetic rubber material for making permanent flexible moulds. Ideal for repetition casting in quantities of dozens, hundreds or thousands as required and always faithfully reproduces the most minute details of ornamentation and surface texture. ELASTOMOLD is suitable for casting articles in Cement, Plaster or Karlene. Moulds can be taken from models made of Wood, Metal, Plaster, Stone, Glass, Earthenware, Ivory, etc. ELASTOMOLD has great dimensional stability, but flexes easily for the release of cast without damage to fine detail or undercuts. On completion of the run the Elastomold material can be remelted for new moulds.

Karlana casting accessories

"MENISCOLOID" completely eliminates air pockets and blow-holes in plaster. Powerful "wetting agent" essential for accurate fine detail plaster casting.

"STONAX" a stone-hard synthetic wax for impregnating plaster casts. Gives a non-smear, non-scratch, high-gloss finish.

"GLASIC" Glazing and water-proofing agent for cement and natural stone. Renders surfaces impervious to oil and water, and resistant to heat abrasion and chemical attack.

"AMAX 109" The super plaster hardener—Renders ordinary plaster harder and stronger than 14 day concrete.

This Hobby makes money!

Cast and mould in your own home, school, club, studio or workshop. The method is efficient for producing quality Book Ends — Statuettes — Ash Trays — Plaques — Models — Garden Ornaments — Wall Vases — Lamp Stands — Flower Vases — Fruit Dishes — Brooches — Toys — Cameos — Miniatures — Cup Plinths — Buttons — Pen Holders — Pin Trays — Pipe Racks — Ink Stands — Rose Bowls — Photo Frames — and coronation emblems, medallions, souvenirs, plaques, and designs, all with colour as desired.

Send for full details of this new
and highly profitable handicraft

KARLENA ART STONE COMPANY LTD.

PLASTICS 2.A. DIVISION

55 DEANS GATE ARCADE, DEANS GATE, MANCHESTER 3



Micromodels

Railway, Engineering, Architectural, Maritime, etc., subjects. Cost pence. Often sell for pounds. Send stamped addressed envelope for 100 model catalogue. **Micromodels Ltd., 3 (H) Racquet Court, London, E.C.4.**

BUILD YOUR OWN MICRO MUSEUM

Amazingly realistic three dimensional volumetric models.



OLD LONDON BRIDGE

PITMAN

Model Furniture

By Hope Galloway. This book describes in detail how to make durable and attractive dolls' furniture from laminated cardboard, which is cheap and readily obtainable. Special tools are not needed. Illustrated. 8/6 net.

Toymaking

By Lynn Miller. Attractive, well-constructed toys can be made cheaply by following the plans set out in this book. No special tools are needed, and many of the toys can be made from waste materials. Detailed working drawings of many toys are given in this book. 10/6 net.

Sir Isaac Pitman & Sons Ltd.

PARKER STREET . KINGSWAY . LONDON, W.C.2



BRANCHES

LONDON

78a New Oxford St., W.C.1
(Phone MUSEum 2975)

87 Old Broad Street, E.C.2
(LONDON Wall 4375)

117 Walworth Road, S.E.17
(RODney 5509)

GLASGOW

326 Argyle Street
(Phone CENTral 5042)

Head Office & Factories—**HOBBIES LTD., DEREHAM, NORFOLK**

MANCHESTER
10 Piccadilly
(Phone CENTral 1787)

BIRMINGHAM
14 Bull Ring

SHEFFIELD
4 St. Paul's Parade
(Phone 26071)

LEEDS
10 Queen Victoria Street
(Phone 28639)

HULL
10 Paragon Square

SOUTHAMPTON
25 Bernard Street

BRISTOL
30 Narrow Wine Street
(Phone 23744)

Is This Saw in Your Kit?

You can cut almost anything in wood with this Coping Saw. The blade is 6½ ins. long and can be turned to cut at any angle. No tool-kit is complete without one. Get yours NOW.

6/-
Post Free

Buy from any Hobbies Branch or post free from Hobbies Ltd., Dept 99, Dereham, Norfolk

A SIMPLE LATHE

(Continued from page 362)

to points. Their purpose, of course, is to grip the work in the lathe, and carry it round with it.

A simple treadle arrangement is fitted to the rear leg of the bench, as shown in the drawing of the finished article. This does not need much explaining, beyond the need of screwing or bolting a block of wood to the leg, to which the pedal can be pivoted, and avoid any scraping against the front leg of the bench while at work. For a pivot a medium sized coach screw will

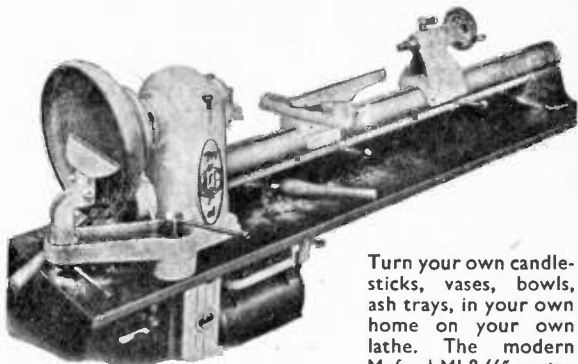
suffice. The pedal can, most likely, be a permanent fixture, as it is unlikely to be much in the way at other times when the lathe is not in use.

To draw the operating cord up, when depressed, a springy piece of wood, ash for example, is screwed firmly to one of the roof rafters, as at Fig. 4, or to a block of wood screwed to the roof, as most convenient. This should be about 6ft. or more long, and its free end should come directly above the pulley of the lathe. To this a strong cord is

366

The Woodworking Lathe for the Home Workshop

MYFORD



Turn your own candlesticks, vases, bowls, ash trays, in your own home on your own lathe. The modern Myford ML8 (4" centre

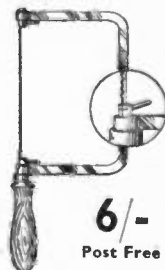
height) will give you good work right from the start. Modern but inexpensive, strongly-made but easy to operate, the high-speed ML8 is Britain's finest lathe value.

Meet us at the Model Engineer Exhibition, Royal Horticultural Hall, Westminster, London, S.W.1.—Oct. 20 to 29. Stand Nos. 23-24-25-26.

MYFORD
ENGINEERING CO. LTD.
BEESTON NOTTINGHAM

Is This Saw in Your Kit?

You can cut almost anything in wood with this Coping Saw. The blade is 6½ ins. long and can be turned to cut at any angle. No tool-kit is complete without one. Get yours NOW.

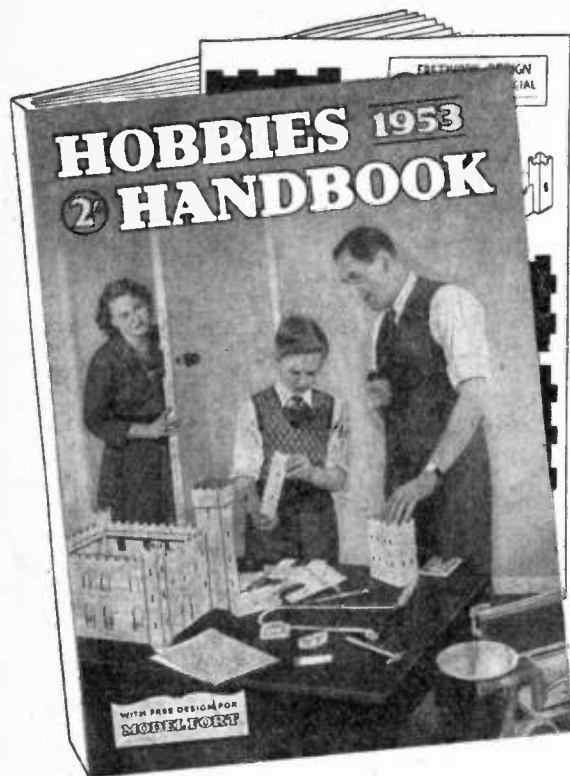


Buy from any Hobbies Branch or post free from Hobbies Ltd., Dept 99, Dereham, Norfolk

tied, then the cord is twisted once round the pulley and then tied to a screw eye on the treadle. The lathe is then ready.

To use, the wood to be turned is shaped roughly round, as in the usual practice, and carefully centred at both ends. One end of it is then tapped on the centre—make sure the pins on the pulley enter the wood, then the tailstock is brought up to the opposite end, and all is ready for the work to commence. It is, perhaps, unnecessary to mention that with a lathe of this description the actual work of the chisel can only take place on the downward motion of the treadle, but a little practise will soon habituate the reader to that. (W.J.E.)

THE BOOK OF THE YEAR!



For the Modelmaker, Fretworker, Craftsman and Handyman the publication of a new Hobbies Handbook is an event of some importance. No other book of its kind gives such value for money. The design alone—for a grand Toy Fort—is worth the cost of the book. And this latest Handbook is packed with things to make and do. There is also a catalogue of tools, outfits, machines and accessories the craftsman is likely to require.

- ★ *Free Design Sheet*
- ★ *120 Packed Pages*
- ★ *Colour Supplement for a Circus Cut-out*
- ★ *Details of Hobbies famous Kits for models, etc.*

Get Your Copy To-day

Price 2/- from Newsagents, Hobbies Stockists and Hobbies Branches, or 2 3 post free from Hobbies Ltd., Dept. 99, Dereham, Norfolk. Order quickly to avoid disappointment.

FREE GIFT OF SAN MARINO PICTORIALS to new applicants

½d. to 6d. Approvals.

Send 2½d. postage

E. MATTHEWS

114 ST. STEPHENS ROAD, EAST HAM, LONDON, E.6

PUPPETS

Kits of parts to make two Fully Jointed 12 Inch puppets with controls.

15/6 post free

Send stamped addressed envelope for illustrated list of complete puppets and books



ZIMPLAN



PEDAL MOTOR CAR

Any amateur can make this strong smart modern pedal car for children 2 to 5. Plan and Instructions with list of available metal parts

2/6 post free

88 WARE ROAD
HODDESDON, HERTS

KITS for OLD TIME SHIPS

Hobbies range of Ship Models includes Elizabeth Jonas, Cutty Sark, Victory, Mayflower, etc. Complete kits of wood, sail material, guns, pulleys, cord, etc., with full size patterns of parts and planed wood ready to cut out, shape and construct. A fascinating pastime.

Kits for models 7ins. long and upwards.

Ask for free illustrated lists at Hobbies Branches or from Hobbies Limited, Dept. 99, Dereham, Norfolk.

YOU CAN BECOME A HANDICRAFTS INSTRUCTOR

EXPERIENCE NOT ESSENTIAL

Men who enjoy making things in wood or metal can turn their hobby into a permanent and interesting Career. Short hours, long holidays, and security in a job you would really enjoy, can be yours if you become a Handicrafts instructor. Let us send details of the easiest and quickest way to get the necessary qualification.

We guarantee "NO PASS—NO FEE"

If you would like to know about our unique method of preparing you for one of these appointments, write today, and we will send you our informative 144 page Handbook—free and without obligation. Mark your letters "Handicrafts Instructor".

**BRITISH INSTITUTE OF
ENGINEERING TECHNOLOGY**

595 Shakespeare House
Stratford Place, London, W.1

BIET

What's My Job? - I Manufacture Weaklings into MEN!

Charles Atlas

Actual photograph of the man who won the title "The World's Most Perfectly Developed Man."

GIVE ME a skinny, pepples, second-rate body—and I'll cram it so full of handsome, bulging new muscle that your friends will grow bug-eyed! . . . I'll wake up that sleeping energy of yours and make it hum like a high-powered motor! Man, you'll feel and look different! You'll begin to LIVE!

Let me make YOU a New Man - in just 15 MINUTES A DAY!

You wouldn't believe it, but I myself used to be a 7-stone weakling. Fellows called me 'Skinny'. Girls sniggered and made fun of me behind my back. I was a flop. THEN I discovered my marvellous new muscle building system—'Dynamic-Tension'. And it turned me into such a complete specimen of MANHOOD that today I have twice won the title 'THE WORLD'S MOST PERFECTLY DEVELOPED MAN'. I felt so much better, on top of the world in my big, new, husky body, that I decided to devote my whole life to helping other fellows change themselves into 'perfectly developed men'.

What is 'Dynamic-Tension'? How Does it Work?

When you look in the mirror and see a healthy, husky strapping fellow smiling back at you—then you'll be astounded at how short a time it takes 'Dynamic-Tension' to GET RESULTS! 'Dynamic-Tension' is the easy, NATURAL method you can practise in the privacy of your own room—JUST 15 MINUTES

My Illustrated Book is Yours FREE

Send NOW for my famous book, 'Everlasting Health and Strength'.

It has 48 pages, and is packed from cover to cover with actual photographs and valuable advice. It shows what 'Dynamic-Tension' can do, answers many questions that may be puzzling you. Page by page it shows what I can do for YOU.

Don't put it off another minute. Send the coupon to me personally: Charles Atlas (Dept. 102-J), 2 Dean Street, London, W.1.



FREE Post the coupon right now for my **FREE** book, 'Everlasting Health and Strength'. Tells all about **'DYNAMIC-TENSION'** methods. Crammed with pictures, facts!

CHARLES ATLAS (Dept. 102-J), 2 Dean St., London, W.1

I want the proof that your system of 'Dynamic-Tension' will make a New Man of me. Send me your book, 'Everlasting Health and Strength', FREE and full details of your amazing 7-DAY TRIAL OFFER.

Name (Please print or write plainly)

Address

F. W. NUTHALL

Toymakers' Casting Moulds

Moulds: deep-cut and ordinary type Aeroplanes, Soldiers, Farm and Wild Animals, Cars, etc. Stamped envelope for full list Illustrated Catalogue 9d.

Sample mould 3/6d.

PLASTERCRAFT

ALUMINIUM MOULDS
BROOCH MASKS
GARDEN ORNAMENTS
WALL PLAQUES
BOOK ENDS AND ORNAMENTS
CAKE DECORATIONS

BEAUTIFULLY DRESSED DOLLS
WALK, TALK, SIT AND GO TO SLEEP

NON-WALKERS	
21 ins. Tall	35/-
22 ins. Tall	30/-
23 ins. Tall	42 2 0
25 ins. Tall	42 15 0
27 ins. Tall	64 0 0
30 ins. Tall	64 10 0

BEAUTIFUL BABY DOLLS
CRY AND GO TO SLEEP

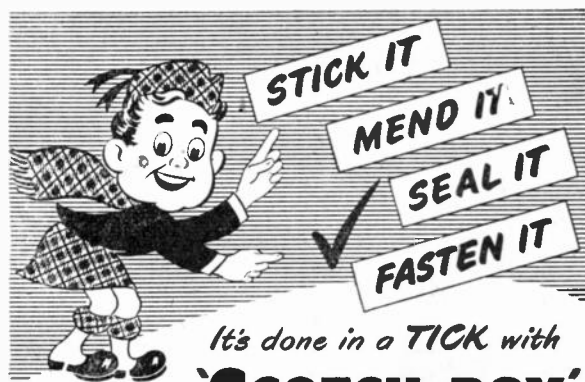
21 ins. Tall	32/-
18 ins. Tall	25/-
14 ins. Tall	16/-

DOLL MOULDS SUPPLIED



69 ST. MARKS ROAD, HANWELL, LONDON, W.7

Printed by BALDING & MANSSELL, LTD., London and Wisbech, and Published for the Proprietors, HOBBIES LTD., by HORACE MARSHALL & SON, LTD., Temple House, Tallis Street, E.C.4. Sole Agents for Australia and New Zealand: Gordon & Gotch (A'sia) Ltd. For South Africa: Central News Agency Ltd. Registered for transmission by Canadian Magazine Post.



When buying, look for the Scotch Boy Trade Mark and the handy red plastic Dispenser.

