

HOBBIES WEEKLY

OCTOBER 16th 1957

VOL. 125

NUMBER 3233

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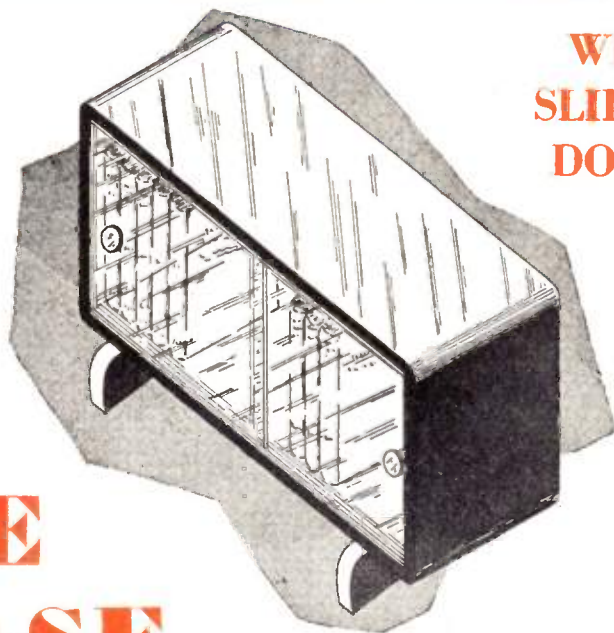


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IDEAL for the bedside cabinet, this small table bookcase incorporates glass or Perspex sliding doors and is very simple to construct. The young handyman will find that it provides a particularly interesting and rewarding exercise.

First cut the top and base which are identical, the two sides (likewise identical) and the back, from $\frac{1}{2}$ in. thick wood to the dimensions given in Fig. 1. Choose a good, straight grained wood which is not liable to warp with age. Plane the edges dead true and square.

As shown in the drawing, the two end pieces form butt-joints with the base. Glue them in place and make sure that they are kept dead square during the setting period. Then drill five $\frac{1}{2}$ in. diameter holes centrally along the joints from the underside of the base at



**WITH
SLIDING
DOORS**

BEDSIDE BOOKCASE

$1\frac{1}{2}$ in. intervals starting $\frac{1}{4}$ in. from the end, to a depth of 1in. to accommodate $\frac{1}{4}$ in. diameter birch dowel pegs. Apply glue to the holes and pegs, which should be about $1\frac{1}{2}$ in. long, drive them in place gently with a light hammer and, when set, cut flush with a chisel.

Cut the levelling base-piece which measures 17ins. by 6ins. from $\frac{1}{2}$ in. thick plywood, and glue this to the base between the side pieces and flush with the rear edge, using glue sparingly. Clamp tight until set. This will raise the base level with the top of the $\frac{1}{2}$ in. square rails

which are now fixed on the ledge formed by the levelling piece and the base. Fig. 2 indicates how the rails are positioned.

First draw three fine pencil lines $\frac{1}{2}$ in. apart parallel with the front edge of the base and running the full length of the

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

4 $\frac{1}{2}$ D

base between the side pieces. Push straight pins into the lines at about 2in. intervals. The rails are $\frac{1}{8}$ in. square hardwood strips obtainable ready-cut from any Hobbies stockist. Alternatively they can be fret-sawn from $\frac{1}{4}$ in. thick obeche. Cut two pieces exactly 17ins. long and thinly coat one edge of each with impact adhesive. Likewise coat the base of the unit between the pencil lines, where the rails are to fit, and slip the rails between the appropriate rows of pins and press them into place. Remove the pins.

The forward under edge of the top

rails. When set, drill and peg into the sides as before. To complete the main body of the case pin and glue the back in place.

Radius the four corners of the case and if desired face the front edge with wood veneer or laminated plastic such as Formica.

Cut the two feet (Fig. 3) from $\frac{1}{2}$ in. thick hardwood, trim true, and screw them to the base from the inside of the case using No. 6 countersunk wood-screws 1 $\frac{1}{2}$ ins. long. They should each be 2ins. from the ends.

A stained and polished finish is

CUTTING LIST

Wood: Two pieces 18ins. by 6 $\frac{1}{2}$ ins. by $\frac{1}{8}$ in. (top and base)
Two pieces 8ins. by 6 $\frac{1}{2}$ ins. by $\frac{1}{8}$ in. (sides)
One piece 18ins. by 9ins. (back)
One piece 9ins. by 4ins. (feet)
Five pieces $\frac{1}{8}$ in. by $\frac{1}{8}$ ins. by 18ins. (rails)

Perspex or Glass:
Two pieces 9ins. by 8ins.

Miscellaneous:
Veneer, impact adhesive, glue, pins, screws, paint, stain, polish

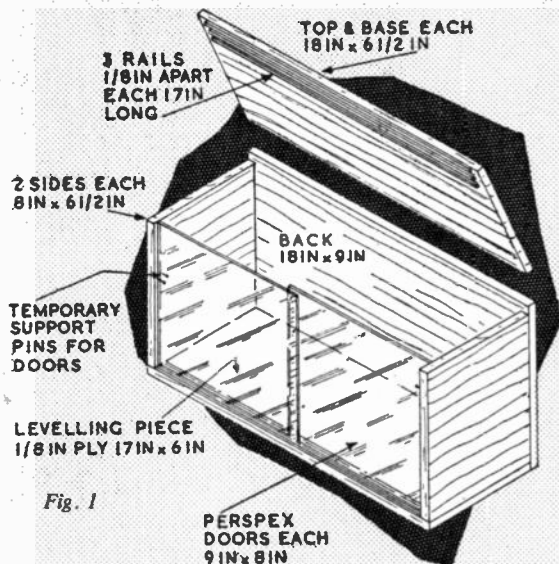


Fig. 1

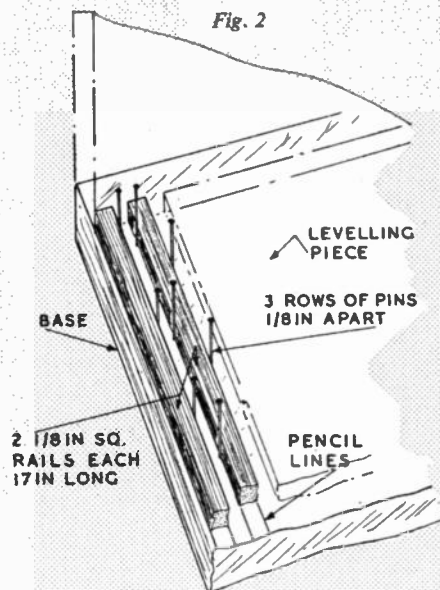


Fig. 2

piece is treated in a similar way (see Fig. 3) except that in this case no levelling piece is necessary and three rails are required. Each of them falls short of the ends by $\frac{1}{8}$ in. When they are fixed the sliding doors are introduced before the top is fitted.

Each door can be of $\frac{1}{8}$ in. thick window glass (or even plate glass if economy is not of paramount importance) and they can be obtained ready cut. Alternatively they can be cut from $\frac{1}{8}$ in. clear Perspex, trimmed true and square, and the edges should be polished. At roughly the positions indicated in the illustrations fix a circular pad of coloured opaque Perspex with impact adhesive. Then place the doors between the rails in the base in the appropriate places and prop them temporarily in a vertical position between two straight pins pushed into the sides of the case as shown (Fig. 1).

Apply glue to the top edges of the side pieces and then place the top in position, with the doors between their respective

suggested for the exterior with a flat colour for the interior. Make sure that when finishing the inside no paint is applied to the rails. Should the doors be a little stiff in their movement, candle grease rubbed along the rail recesses should free them.

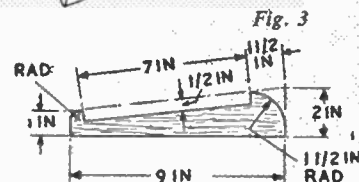


Fig. 3

THRILLS OF THE NIGHT

TACKLE for night-fishing for sea-trout must be stouter than for daytime in summer. A useful strength is 2x gut point; 3x if the river is low or below normal. Essentials to success are (a) the presence of sea-trout in the pools; (b) your ability to keep unseen and yourself unsuspected by the wary fish; (c) the instinct to *feel* the fish when it takes the fly or other lure; and (d) a warmish cloudy night.

Take a torch on a dark night; it may be useful. Do not attempt to wade, un-

less you know the bed of the stream like the back of your hand! Keep handy a few ready-made spare fly-casts, in case you get snagged up somewhere and have to break clear, thus necessitating a new cast. Do not forget your landing-net or a gaff. It is a good idea to have a companion who knows the water and how best to fish it. Night-angling for sea-trout is a chancy sport, and is always thrilling and fascinating; no fish fights better than a sea-trout of anything from 2 lb. upwards — on fly-tackle anyway. (A.S.)

CHEMISTRY IN THE HOME

IN the first article on oxide preparation we saw how certain general methods could be used. We can now go on to make wider use of these and also bring in some special methods.

Other oxides which can be made by heating the carbonates are cadmium, copper (cupric), lead, nickel and zinc oxides. You may have no cadmium, copper or nickel carbonates, but we shall see how to obtain these in a moment. Basic lead carbonate is white lead and is easily obtained from a shop. Heat this until it grows no darker in colour. Lead monoxide is left on cooling. It is used in many special cements.

Zinc carbonate is sold by dispensing chemists. Heat this until it is a full yellow. On cooling it becomes white. This is typical of zinc oxide — yellow when hot, white when cold. It has healing properties and is the active ingredient of common zinc ointment and of many proprietary brands of ointment.

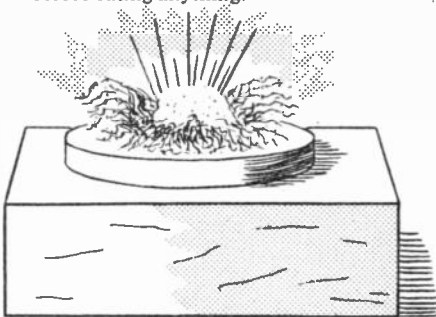
Cadmium, nickel and copper carbonates are all easily made from compounds commonly stocked in the laboratory; namely, cadmium sulphate, nickel sulphate and copper sulphate. Make solutions of each of these in separate beakers and gradually add sodium carbonate (washing soda) solution to each until the mixtures show a slight alkaline reaction (by turning red litmus paper blue).

Precipitates of the respective carbonates will have formed. Filter these off and wash with water on the filters until one wash water in each case gives no white precipitate with strontium nitrate solution. Dry the carbonates in the oven. Then heat them to a red heat in crucibles, covering that containing the nickel carbonate with a lid. Brown cadmium oxide, greenish nickel oxide and black copper (cupric) oxide are left.

The nitrate heating method is available for many metals, the most notable for our purposes being cobalt sesquioxide and mercuric oxide. Gently heat some cobalt nitrate in a crucible. The salt darkens and gives off first steam, then red fumes. The latter are harmful if breathed in any quantity and the experiment is best done out of doors. When red fumes cease to appear, let the crucible cool and you will have a residue of dark grey cobalt sesquioxide.

Heated in a similar way, mercuric nitrate gives red mercuric oxide. Another

easy way of making mercuric oxide is by adding sodium hydroxide solution to a solution of mercuric chloride until the precipitate which forms changes from brown to yellow. Filter this off and wash it on the filter until one wash water no longer gives a white precipitate with silver nitrate solution, and then dry it at room temperature by opening out the filter paper on a porous tile. Mercury compounds are, of course, poisonous, so care should be taken to wash your hands before eating anything.



A spectacular way of making chromium sesquioxide

This last method of preparing mercuric oxide brings us to other special methods. Silver oxide can, in fact, be prepared similarly by adding sodium hydroxide solution to silver nitrate solution until no more brown precipitate of silver oxide forms. All that remains to be done is to filter off, to well wash on the filter and then to let the oxide dry.

Chromium sesquioxide can be made in a spectacular way from ammonium dichromate. Powder some of the latter (about as much as would heap up on a half crown) and make a conical heap on a tin lid standing on a brick. Hold a lighted match to the tip until it ignites. It burns furiously and throws up a curious moss-like growth of dark green chromium sesquioxide. Some unchanged ammonium dichromate is usually present. This you may remove either by heating the residue in a crucible or by stirring with warm water, filtering, washing until the wash water is no longer yellow and then drying in the oven. Chromium sesquioxide is the well-known pigment chrome green. It is fadeless and extremely durable.

Ferric oxide is another easy one.

MAKING OXIDES Part 2

Simply heat ferrous sulphate strongly and the red-brown oxide is left. This too, is used as a pigment and it also constitutes jeweller's rouge, so much used for polishing gems and precious metals.

Manganese forms several oxides. One which should be prepared is manganomanganic oxide. Place a quantity of manganese dioxide in a crucible and heat it up to bright redness for at least half an hour. On cooling, the desired oxide is left as a reddish powder.

Tin dioxide is made in rather a curious way. Place a few pieces of granulated tin in an evaporating basin in the open air and pour on some strong nitric acid. Vigorous effervescence takes place and copious brown fumes of nitrogen dioxide are evolved. The fumes are harmful if breathed in any quantity and this is why we conduct the experiment in the open air, where they blow harmlessly away.

As the reaction continues the tin is converted into a white powder. When the effervescence stops, note if any metallic tin is left. If so, add more until some remains when the resumed effervescence once more ceases. Rinse out the white powder from the remaining tin on to a filter and wash it until one wash water is no longer acid, that is, it does not turn blue litmus paper red. Dry the powder in the oven. You will thus obtain metastannic acid. Keep a small specimen and heat the rest to a red heat in a crucible. It darkens through yellow to brown. Stop heating when it no longer darkens.

Now watch. The brown changes back to yellow and then to white. This does not mean that metastannic acid has been reformed. This cold white residue is tin dioxide and it merely has the property of changing colour when hot. If you heat it up again and let it cool, it will behave in the same way.

Tin dioxide occurs naturally as the important ore, tinstone or cassiterite.

Molybdenum forms several oxides. The commonest and easiest to prepare is molybdenum trioxide. Put some ammonium molybdate crystals in a crucible and weigh the whole. Make a note of the weight. Heat the crucible to just below a red heat for about an hour, then let it cool and weigh it. It will have lost weight. Heat up again for a quarter of an hour and weigh after cooling. If it has lost no more weight the experiment is finished. If it has, heat again until it loses nothing more.

The residue is a whitish powder of molybdenum trioxide. This oxide, too, occurs naturally as molybdic ochre.

Ideal for a start

MINIATURE HAND LOOM

A SIMPLE but practical hand loom is easy to construct from a few materials, for use either as a toy for children or for making ties, belts, scarves and the like. Normally, the chief difficulties appear to be in knowing how to set up the loom, keeping the threads at an even tension and varying the weaves, but these will all be described later.

Reference to Fig. 1 will show the simple basis of our loom, merely a piece of hardboard measuring 6ins. by 36ins., to which two pieces of 1in. square section have been attached by screws from the underside. This is to hold the warp, and it will be realised that this size can be altered if necessary, although

the back of the loom. These threads form the *warp*, and in our little loom the warp is made by tying a thread to a nail at one end, then threading backwards and forwards round the pins as shown in Fig. 3.

By

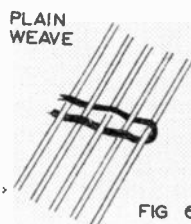
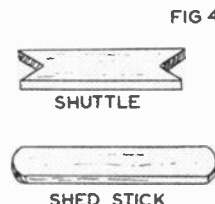
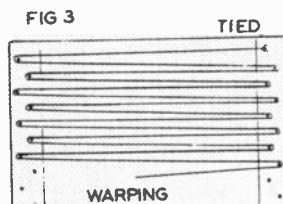
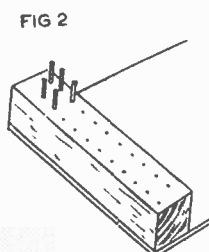
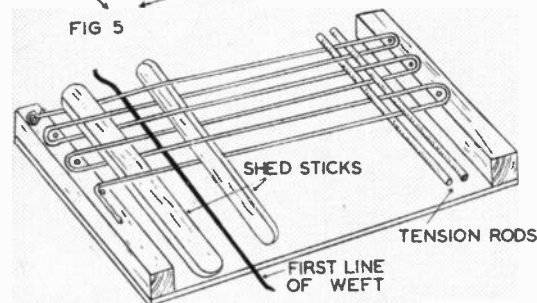
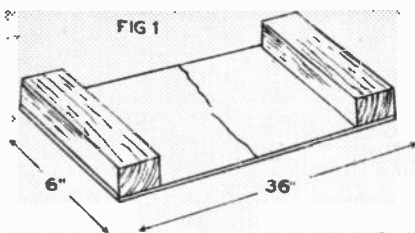
S. H. Longbottom

The process of weaving consists of other threads passing under and over the warp in regular sequence according to the planned design. The threads

ing, that is by passing the shuttle across the threads with one colour, proceeding with the next colour, but matching the number of these threads each time. Two shuttles are useful for two colour work. When only one colour of weft is used in conjunction with a striped warp, the effect is to produce a stripe.

The real loom has a complex mechanism for keeping the warp at an even tension, but you will find that two dowel rods passed over and under the threads alternately at the back of the loom as shown in Fig. 5 will answer this purpose. Tension is greatest when the rods are near together and may be reduced by moving further apart.

Weaving can start once the warp has



it is quite large enough for the small articles mentioned.

Rule two lines on both pieces of square section a 1in. from each edge, marking off equal distances lengthways a 1in. apart. Reference to Fig. 2 will show that these marks are staggered so that the threads are actually 1in. apart. Next hammer in 1in. panel pins for holding the threads in position.

Weaving terms

At this point it may be as well to mention some of the terms used in weaving, and the fact that it is the practice in industry to make cloth in long rolls, and the long threads running down the cloth are wound on to a very large bobbin, termed a beam, fixed at

going across the warp are known as the *weft* and are passed to and fro by means of a shuttle. In this instance we may use a simple form as shown in Fig. 4, prepared from a thin piece of plywood notched at both ends. The shuttle may be made to any convenient size, yet not greater than the width of the warp.

With the simple form of loom prepared, we may set up the warp, which may be of one colour of coarse wool, or string as desired. When it is desired to introduce a stripe or check into the weave, all you have to do is to wind on equal numbers of warp threads for each colour. All joinings of the wool should be made by a nail, so that the knot does not come in the woven portion of the material. A check pattern is made by following the same method when weav-

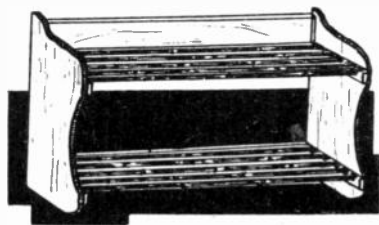
been set up merely by passing the shuttle under and over each thread in turn, starting from the right and proceeding to the left, then returning to the right but under and over alternate threads. Do not pull too hard at the edge of the warp, or you will make the material go narrow and uneven. Instead, try to keep an even tension with the weft as with the warp, remembering that any joins in the threads must be made at the edges. The second thread is pushed up to the first by means of a comb, and if you do not have one to fit, it is a simple matter to make one from a strip of wood and a few panel pins, fixed to match the threads. If you practise on a narrow strip of material you will soon learn the trick, but with wider material it is an advantage to open the warp, enabling the shuttle to pass quickly through the threads without tiresome threading. This is achieved by means of a shed stick, merely a piece of thin plywood, as wide as the warp and 1 1/2ins. wide (Fig. 4).

The shed sticks are shown in operation in Fig. 5. First thread one under and over the threads while held flat, then twist on edge when the warp will open sufficiently to pass the shuttle. Here is a complete description of the process using these sticks.

● Continued on page 53

In a popular medium

HANDY BAMBOO SHELVES



THE versatility of bamboo is making it an increasingly popular material today and after a period of comparative inactivity we now find it in great demand for a large variety of purposes. It is clean and hard wearing and will withstand a considerable amount of rough usage.

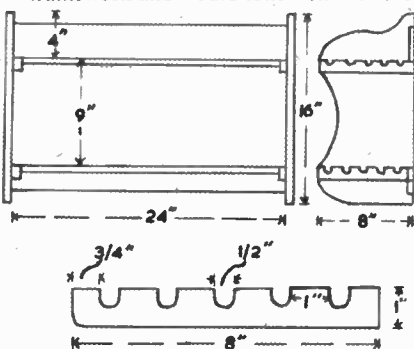
Crafts shops and horticultural stores stock it in a wide range of lengths and thicknesses at very reasonable prices. When buying ask for straight canes which are of fairly uniform thickness and, although these may cost a little more, the extra expense is well worth it.

Making the set of shelves depicted here is a simple matter. Their chief use will probably be as a bookshelf, but in the kitchen, saucepans may go on one shelf while the lids will fit through the canes of another. A smaller version in the hall is ideal for pot plants or vases of flowers.

The canes are not fixed but just drop into slots thus making it easy to keep clean. If thought necessary, however, a strip of wood can be fixed on top of the canes at each end to hold them secure.

It is not advisable to use canes more than 24ins. long if the shelves are to carry weighty books unless a centre support is fitted, and this would not be much trouble.

Oak or beech are good woods for the framework and would tone well with the



light bamboo, or if you prefer a contrast why not try walnut or some other dark hardwood. Any kind of wood may be used when the article is to be painted or enamelled.

Cut two pieces for the sides 16ins. long, 8ins. wide and 1/2 in. thick and this can be either left as a rectangle or shaped as shown. Instead of rounding the top and bottom you could, of course, just cut off the front corners. A rail top and bottom holds these sides rigid and at the correct distance apart, the top one which is also used to fix the shelves to the wall is a little wider than the other. Both are 25ins. long and 1/2 in. thick, the width of the top one is 3ins. while the lower one need not be more than 2ins.

Let these bars into the side pieces and fix by gluing and securely screwing. This needs to be done well as safety of anything placed on the shelves depends on its security. The canes fit neatly into slotted strips of wood 8ins. long, 1 in. wide and 1/2 in. thick. Make the slots in these deep enough so that the top of the canes are flush with the top of the bar. Glue and tack or screw these strips 9ins. apart.

Finish off with french polish or clear varnish if the wood is left in its natural state. When the shelves are to be painted or enamelled give one or two coats of undercoat first.

The size of the shelves can be cut down a little for use in a small room, or can be made with just a single shelf if desired.

(A.F.T.)

● Continued from page 52

Miniature Hand Loom

Reel your coarse wool on to the shuttle, leaving one end free. Insert the shed stick into the warp, darning under and over the threads alternately. Turn the shed stick on edge, then pass the shuttle through from the right, leaving a trail of wool and some 6ins. of surplus. Darn the shuttle back from the left, under and over the warp threads in opposite order to the ones just woven, pull the wool straight but not too tight, then beat up with the comb to bring the weft together. Note that the shed stick enables the threads of weft to be left in a straight line across the warp held in position by the left hand when applying the comb with the right hand. Now insert the other shed stick in opposite order, turn on edge and pass the shuttle.

The sequence of operations is now repeated. Beat up the weft with the comb, bring the shed stick forward,

turning on edge to open the warp threads, place the other shed stick in place through the warp (but in opposite order through the threads) and pass the shuttle through this space — known as the *shed*.

This will produce the pattern known as plain weave, but you may weave under two and over two, or over three and under three, but having once started a weave, the same must be continued throughout. Try not to pull too hard on the weft, as the edges are reached, adjusting the tension of the weft threads before beating up to the last thread with the comb.

When you come to the end of the warp and the weaving is completed, the question of finishing off arises. Cut the wool away from the loom by means of scissors, tying a knot with four or more of the warp threads, so that it is quite firm with the last line of weft threads.

Examination of any woollen scarf will show how to finish off this kind of work. Where you have any joinings at the side for new weft, it is better to darn in the ends in accordance with the weave, when they will not be visible.

It will be appreciated that it is impossible to attempt complex designs on such a loom, for the whole art of weaving is connected with the darning in and out of the warp, often requiring a number of 'shafts' — the equivalent to our shed sticks — to make the design. Even so, the craft is very fascinating when producing plain weave, for there are so many different combinations of colours possible both in the warp and the weft. Moreover, it is a craft still being practised, although on larger hand looms, in many parts of the country.

Next week's issue will contain a free design for a 19th Century Tea Clipper. Make sure of your copy.

COLLECTING HOTEL LABELS



HOTELS all over the world issue luggage labels for the convenience of their guests and for advertisement. Collecting these covers, which usually depict the particular hotel, has been a popular hobby for many years. In this connection hotel stationery is also useful, often being both colourful and informative.

There is plenty of interesting data connected with hotel baggage labels. The hotel may, for some reason, disappear and the labels referring become obsolete. Such specimens are valued for their rarity and the fact that they are no longer obtainable. A change in hotel management may mean a change in label design. All hotels have a

history of some sort; some may be noted for a special event; some are alleged to be haunted, others are where famous people have stayed.

A particular statesman, say, during his travels, would stay at different hotels in different countries. A collection entitled 'Mr. _____ stayed here', would invite some exciting notes.

By R. L. Cantwell

A large scrapbook (from stationers at various prices) is the best home for these labels. It should be kept in a dry place. Use only stamp hinges for mounting and tweezers for handling.

This hobby is very popular in Spain where enthusiasts are considering the formation of an international club. Some of the finest labels are produced in Spain due to tourist influence.

Someone you know may be going abroad soon; ask him or her to collect some labels for you from the hotels.

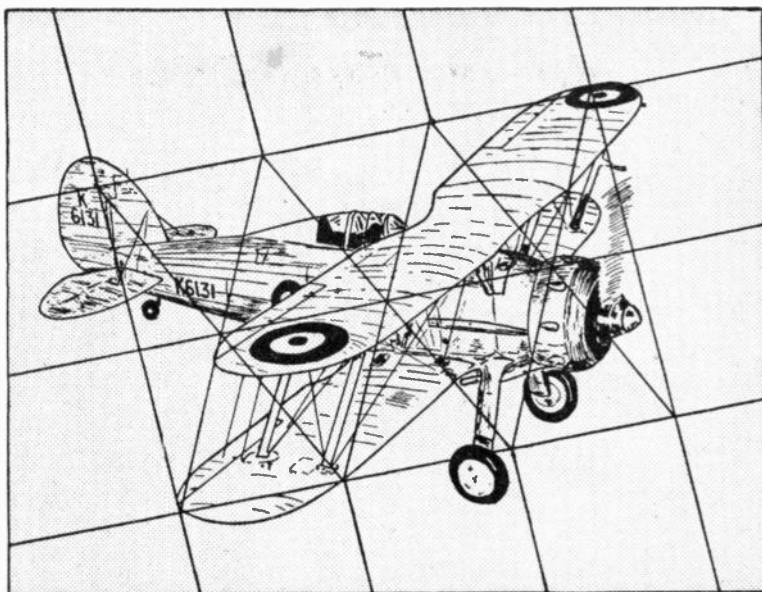
It is easy to make a start by collecting our own English labels. Hotel proprietors are ever ready to help, and your local guest house probably has 'a spook' — so what are you waiting for?

SOLUTION TO JIG-QUIZ No. 3

This drawing shows how the various pieces in last week's problem are fitted together to form a picture of the *Gloster Gladiator*. It was designed in 1932 and was the successor to the earlier *Gloster Gauntlet* fighter.

It was a single-bay biplane with a fixed cantilever undercarriage and powered by a Bristol Mercury 9 radial engine. The basic structure was of steel tubing and the contours were provided by wooden framework. The rear part of the fuselage, mainplanes and tail unit were fabric covered, while the engine cowling and front part of the fuselage were sheet metal covered.

For that period a number of advanced design features were incorporated including an enclosed cockpit with a remotely controlled canopy, hydraulically operated flaps, internally sprung mainwheels and a variable incidence tailplane.



BRIDGES AS SUBJECTS

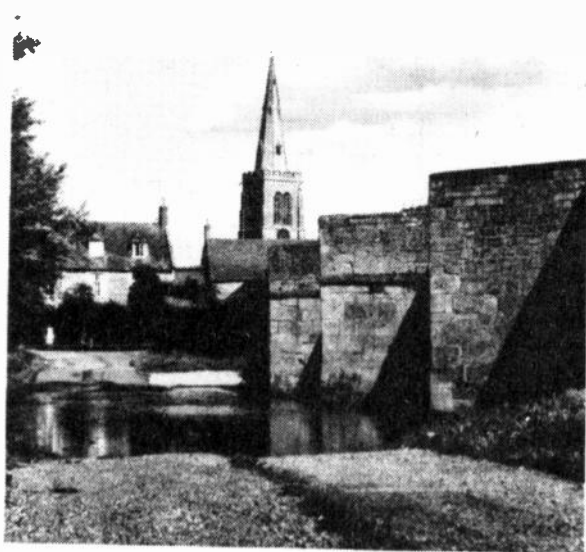
WHEN the thrill of general snapshotting wears off, there is no surer way of reviving one's interest than by specialising in some particular type of subject, and bridges merit careful consideration in this respect.

Such structures are to be found in almost every locality, and the photographer who adopts them as his special line will rarely lack opportunities for using his camera. Further, though at first glance these subjects may look much alike, in reality they differ considerably and photographing them will provide plenty of scope for ingenuity.

Each has its own problems, as far as photography is concerned, some being easily recorded and others entailing patience and deliberation if they are to be photographed successfully. The presence or absence of sunshine, its direction, the length of the bridge, shadows caused by nearby trees — these factors have to be taken into account.

Indeed, it will be found that a good deal of skill must be exercised in photographing some bridges, viewpoints being limited. A twin-lens reflex camera is the ideal instrument for such work,

The old bridge and ford, Geddington, Northants.



though satisfactory results can usually be obtained with a folding camera, provided it has a good optical viewfinder. The least suitable instrument is one with a small reflecting viewfinder, the image being too tiny.

Ultra-fast films are neither necessary nor wise for bridge photography. A medium or slow film is better, since a sunlit bridge with deepset arches will have a wide range of tone contrast, and a fast film is less able to deal with such extremes than a slower one. The latitude of a medium speed film will usually give the best results.

The hobby can be pursued solely from the pictorial angle, the most picturesque examples being sought, or it can be allied with a study of the history of bridges. Either way, there is plenty of variety.

The cyclist will find bridge photography an absorbing pursuit, supplying many objectives for runs. There are many types of bridges to photograph, and a series might be collected to show the development of these structures from the primitive 'clapper' style to the present-day ones.

Packhorse bridges alone would make an interesting series, and many still survive in out-of-the-way places. Their obscure situation has helped to preserve them, and some are in delightful surroundings which form the setting for a ready-made picture.

Another idea is to follow a river from its source, recording all the bridges which span it. This scheme will provide reasons for repeated photographic outings over several months.

A closer study of bridges will reveal other subjects for the camera, such as tablets recording dates of rebuilding or widening. There is only one bridge in Britain still with a fortified gateway at one end, but there are more still complete with a chapel where prayers were said for travellers in bygone days.

These chantries can be added to the list of subjects worth photographing. Other bridges have old toll-houses nearby — again suggesting subjects to the photographer — and a considerable number bear dated flood-marks, showing the height reached by the water at times of flood.

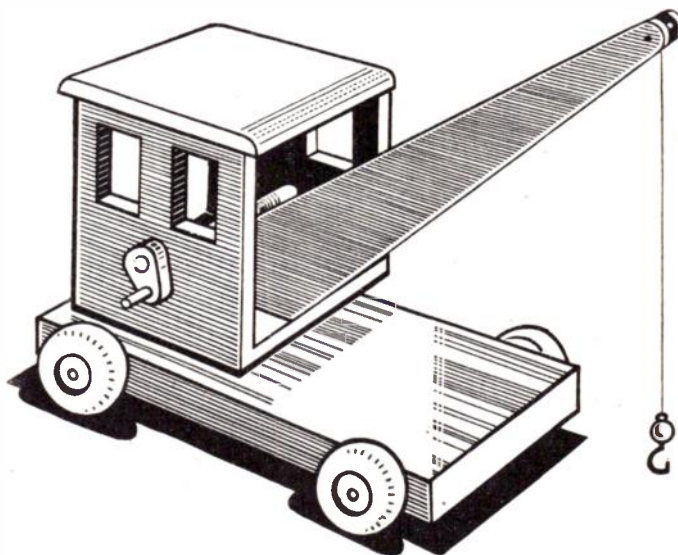
(A.N.)



Beckfoot packhorse bridge, near Bingley, Yorkshire

TOY DESIGNS

TOY CRAN



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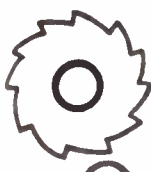
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8 $\frac{1}{8}$ " DIA. ROD.

2 $\frac{1}{4}$ IN. WOOD



PIECE 8 CUT ONE $\frac{1}{4}$ IN.



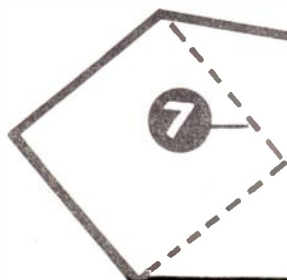
PIECE 9 CUT ONE $\frac{1}{4}$ IN.



PIECE 10 CUT ONE $\frac{1}{4}$ IN.



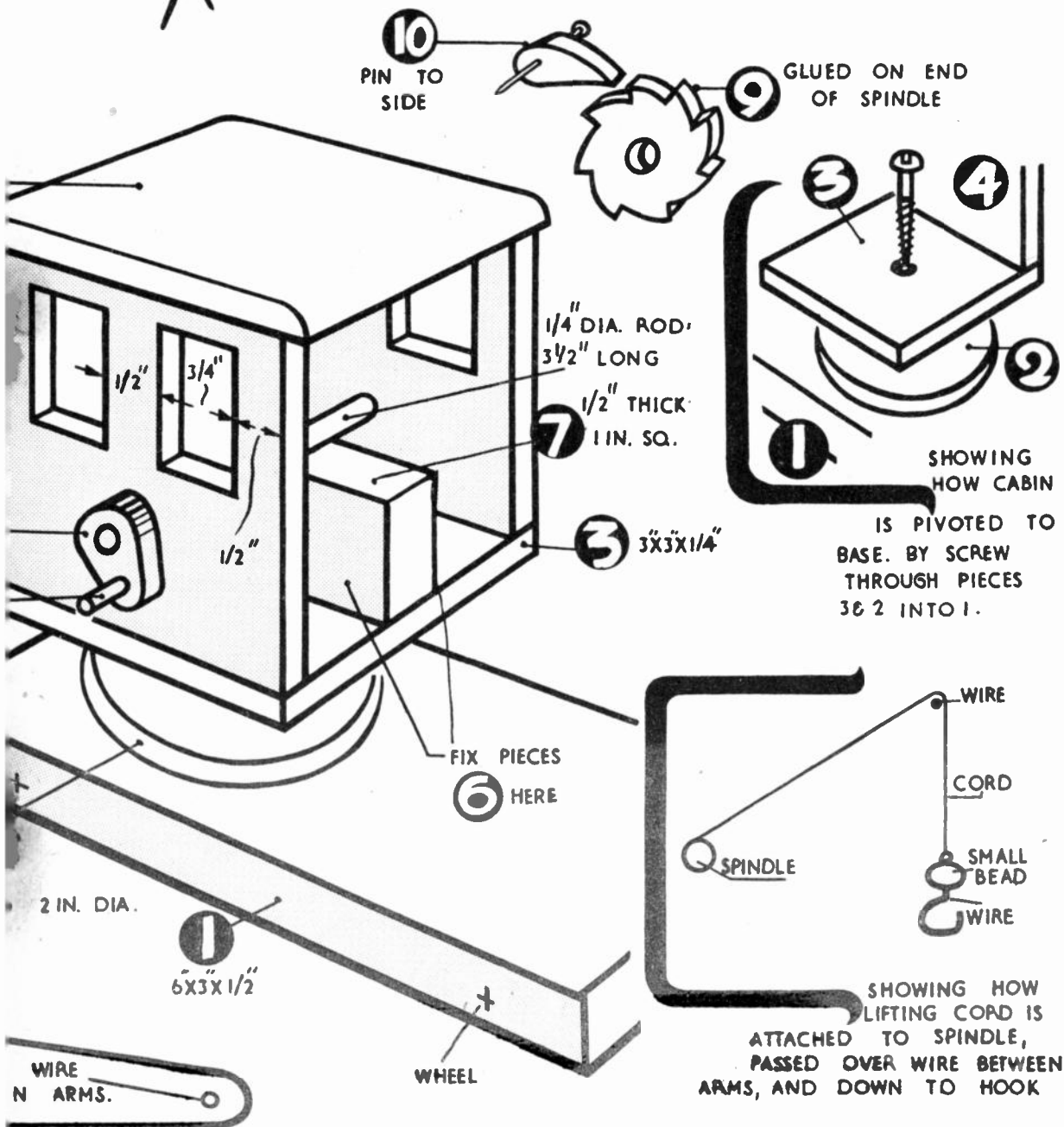
1 IN. PLASTIC WHEEL
FOUR NEEDED



PIECES 6 CUT TWO $\frac{1}{4}$ IN.
GLUE ONE EACH SIDE OF PIECE 7

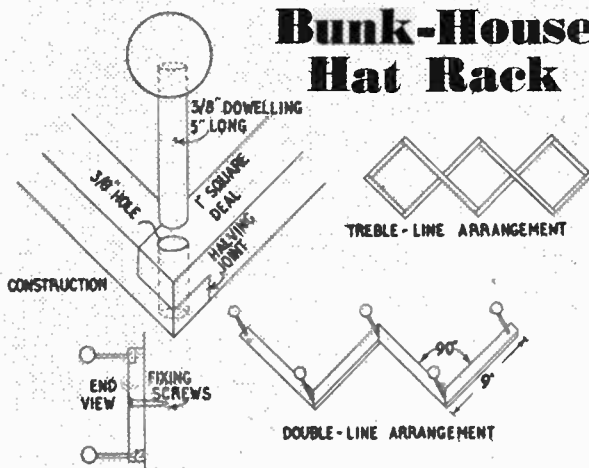
MEDIUM BETWEEN

E * A Project for Christmas



THREE PROJECTS TO MAKE

Bunk-House Hat Rack



USE 1in. square planed deal for the framing, $\frac{3}{8}$ in. dowelling for the pegs and round wooden balls for that contemporary touch.

Simple half-joints are used for connecting the pieces. A point to watch. Do not attempt to cut 9in. lengths and joints before drilling. The wood will most probably split. It is wiser to drill holes whilst your wood is in one length and then to cut off and make joints around holes.

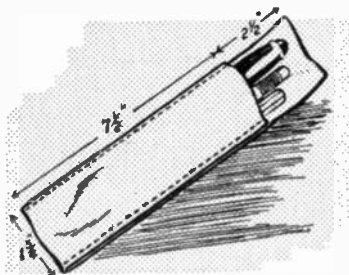
Glue the joints and pegs into place. When drilling the hole in the ball, keep it central.

You can make any multiple of the pattern shown but in the treble line arrangement, rebate joints are of course, used where the framing intersects.

Fix rack to wall with screws passing through suitable points in frame (see end view).

Paint frame and pegs black, and the balls red or choose any contemporary scheme of contrasting colours. (E.C.)

A Leather Case for Pencils



SHARPENED pencils carried in the pocket not only mark the lining but often the points poke through the cloth. A case can easily be made to hold three or four long or short ones and even a pen if desired.

First find an old leather belt about 1 1/2ins. wide. A lady's is really best, for this will be softer. Too thick a leather is difficult to handle. Any colour can be used. In fact, the prettier the colour,

the more attractive the case.

Cut a piece of leather at least 17 1/2ins. in length from the belt avoiding the holes. Fold this over lengthwise leaving about 2 1/2ins. free at one end for the flap. The folded section is now 7 1/2ins.

The open sides of the folded section are sewn together as close to the edge as possible. The pencils are inserted and the flap bent over. Your pencil case is quickly finished. (H.M.)

Spare Hall Rack

SOMETIMES the odd mirror about the house can make a very useful hall rack. Although still remaining a mirror, it can also serve as a holder for many items when the children are on holiday or there is extra company.

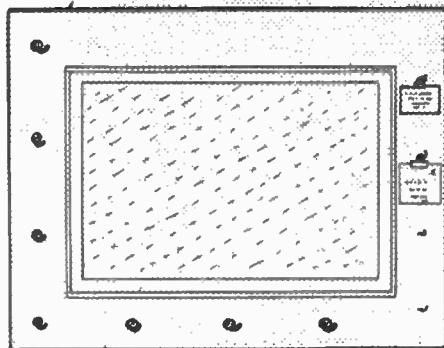
See that the mirror is safely set in its frame and then prepare a large-sized panel in plywood or hardboard. Plywood is better, because one can fix the hangers without having to add battens, as in the case of hardboard.

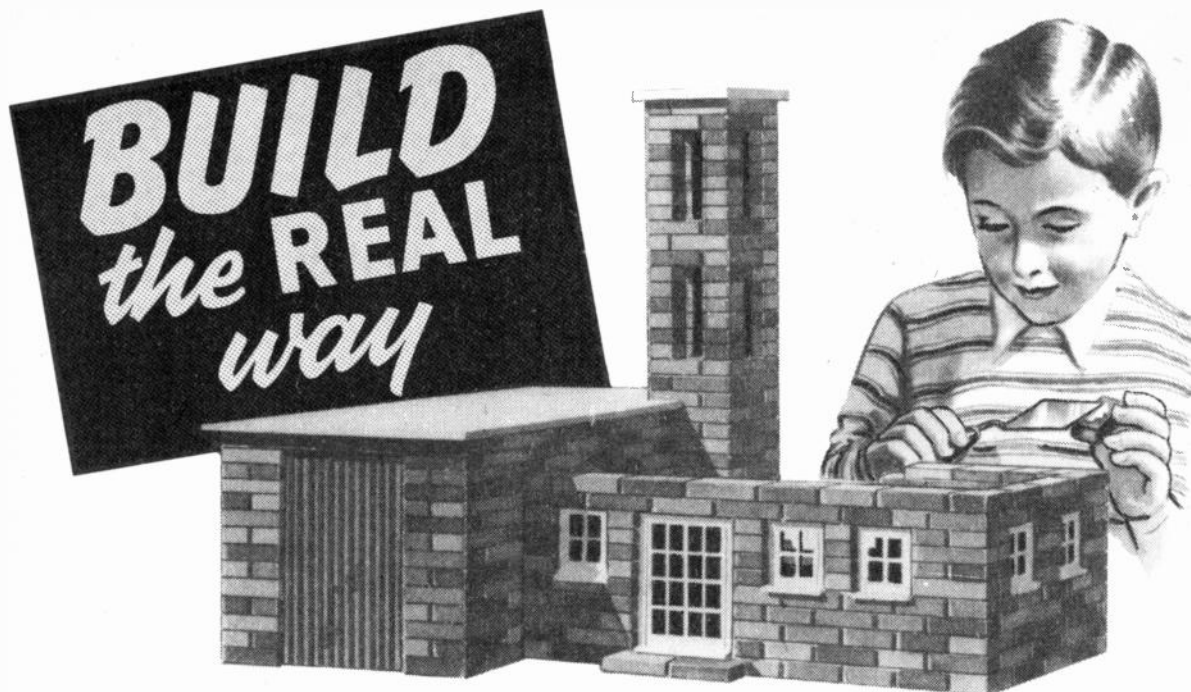
Be sure that the supporting chain is strong enough because it will have to

take extra weight. Arrange the hooks on the sides, and some can be fitted along the base. Stain up the whole fitem to match in one colour.

It depends on the space available, but it is a good plan to arrange the clothes hooks on the side and along the base, and then small hooks and some bull-dog clips on the opposite side to hold messages for members of the family.

(V.S.)





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Replies to Readers

Is this YOUR Problem?

Boxing-in a Sewing Machine

I HAVE an old-fashioned Singer sewing machine, box top and treadle, and wonder if you can tell me how to convert it to a drop-head cabinet type. (M.G.—Walsall).

BY your machine, you would need to contact the makers; your pattern may not be suitable, and also you would need if it is, the counterweight movement that only Singers could supply. A much easier alternative is to box the machine in a simple cabinet. Such should be made in two sections, upper and lower. The latter reaching from floor to baseboard of machine, and provided with doors to open, and the former covering the machine top. Both should match in appearance, but the upper part would not need doors, as it should lift off as a cover. Framework of $\frac{1}{2}$ in. by 1 $\frac{1}{2}$ ins. deal with plywood panel would serve. The whole would then appear as a low cabinet, and it would only be necessary to open the doors and lift off the cover to get access to the machine.

Framing Tapestry

I WISH to frame an embroidered panel for use as a firescreen. Can you advise me how to mount this to prevent the material wrinkling and/or causing the weaving of the material becoming uneven? (G. Y.—Sandy).

TO frame a tapestry, first prepare a wooden framework of softwood and of suitable size, and say, one inch wide by $\frac{1}{2}$ in. thick if the tapestry is not above, say, 18 in. by 24 ins. Next, hang the tapestry in a damp atmosphere until it is limp, then lay it face downwards on a smooth flat surface; place the framework upon it and turn up the edges of the tapestry. This must be done with care, beginning with the middle of one side; insert a pin to hold the tapestry, then pin the opposite side. Next similarly pin the centre part of the top and bottom. Continue in this way, inserting a pin on one side and then a pin opposite to it on the other side. If the margin around the tapestry allows, it is best to turn it over the edge of the framework and fix it to the upper side. When well pinned in this way, the tapestry should be flat and the weave undistorted — if not, alter the pins accordingly. The

tapestry can now be finally fixed with small fine tacks, the pins removed and the whole mounted in an ornamental frame similar to a picture frame. The back can be covered with material or left plain as desired.

Plaster Ornaments

I HAVE been making plaster of paris ornaments. Some of these have broken after they have set. I do not use any plaster hardener and would like to know if I can possibly use the broken plaster again by crushing and drying it, as it does seem a waste of good clean plaster. (H.H.—Cornwall).

USED plaster cannot be regenerated by drying and regrinding. Plaster is made from the mineral gypsum. This contains combined water, which is driven off by heating to 110–120 degrees Centigrade until it loses no more weight. Plaster combines with

water in the casting mixture to reform an artificial gypsum. Only by reheating the used plaster to constant weight at the above temperature can it be regenerated. The brittleness of the present castings is, undoubtedly, due to the use of too much water.

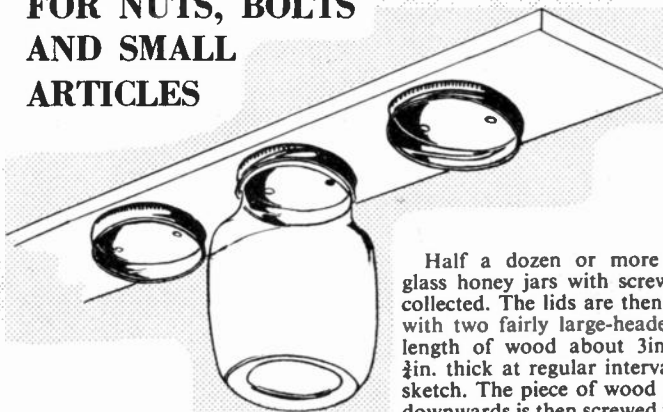
Softening Plastics

WOULD you kindly give me an idea how to withdraw a screwdriver head from a plastic handle? The screwdriver is a mortise type with changeable heads (German make) and I have pushed the head too far and it has stuck in the handle. I have tried heating the handle in warm water, but the idea does not work. (V.B.—Liverpool).

SOME plastics are thermo-setting; they can be softened by heat during manufacture, but any further application of heat has no effect. If yours is of this type there is nothing you can do about it except apply brute force and hope that you do not break anything. Other plastics need much more heat than boiling water to soften them. Try putting the tool in a domestic oven. Examine it occasionally, and you may find it soften at higher temperature — maybe 300°C.

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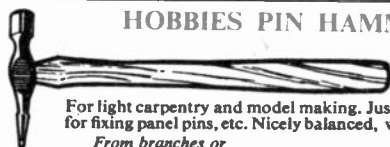
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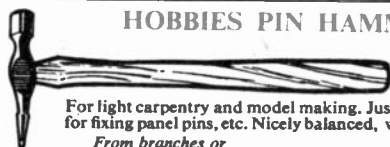
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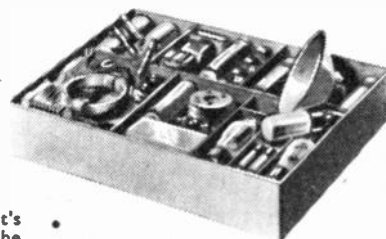
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The toy should be made to balance on the extreme edge of the table when a gentle tap will set it in motion. The wire must be bent and the weight adjusted until a perfect balancing position is found. (M.p.)

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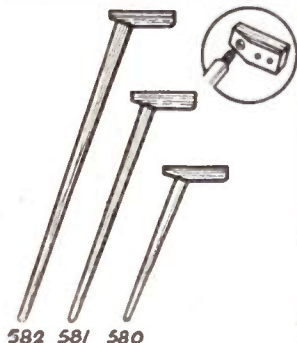
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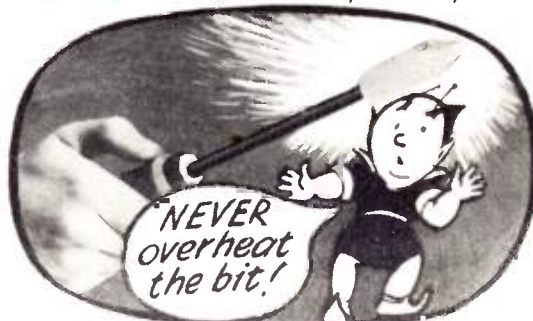


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