HOBBLES

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* FREE INSIDE *
A Design Sheet for this

SCALE MODEL CABIN YACHT

'VENTURESOME'

NE of the many appealing features about 'Venturesome', this scale model of a cabin yacht, is the fact that its cost to make up is well within the reach of all—a real bargain for such a snappy little job. On its final trials the prototype proved extremely fast and buoyant—having eight separate watertight compartments it is practically unsinkable—and the rudder responded well to the settings. In view of its performance and reasonable cost, this is a model which we are pleased to add to Hobbies his range of nonular kits.

add to Hobbies big range of popular kits. 'Venturesome', which we feel sure will live up to its exciting name, is of the Bermuda sloop type in which the mainsail extends to the top of the mast, as distinct from the gaff-rigged sloop. Visitors to the Norfolk Broads will have seen this type being used there in abundance by holiday-makers. Ours is a scale model of a 21ft. two-berth cabin yacht

for this
ODEL
CHT
OME'

with the exception that a deep keel has been added for stability when sailing. On the Broads, of course, a shallow draught is essential. Although in competitive racing there is no class yet available which caters for this size of craft, the owner of such a yacht as 'Venturesome' can nevertheless

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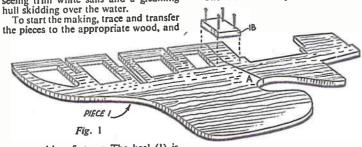
For Modellers, Fretworkers and Home Craftsmen



derive many pleasurable hours in its company. It is definitely a project for the ardent model-maker—be he man or boy-and for those who delight in seeing trim white sails and a gleaming hull skidding over the water.

along the keel stops short at former 2. Glue these stringers in position and hold together until thoroughly hard by knocking in small household pins.

The well of the yacht can now be



completed. Glue in guides 8, 9, 10 and 11. The first two are glued to former 5, and 10 and 11 to former 6. They are glued inside the well, as is clearly shown in Fig. 3. They form ledges to which the seats inside are now added. First to the foot of the well glue parts 12 of the seats. The backs (13) and the seats themselves (14) are then glued in position. The floor (16) cut from thin plywood is trimmed exactly to shape before fixing. To finish the well, glue the shaped piece 15 at the back. All these operations are shown clearly in Fig. 3 and help in completing the well can also be gained by consulting the dotted lines on formers 5 and 6.

The bow of the yacht is made up of two blocks (21), cut to the shape shown

cut out with a fretsaw. The keel (1) is made up in two pieces, and joined together at A. Lay the two pieces flat as in Fig. 1, then glue them together and pin two pieces IB on either side of the join, as shown. The exact positions of these two pieces are indicated by dotted lines on the keel. When the glue is completely dry, bore a hole through with a fretwork drill to take the helm. Note that it is essential to do this at this particular stage.

The formers 2, 3, 4, 5, and 6 and tran-

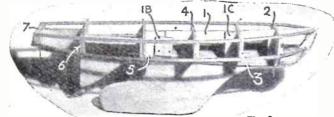


Fig. 2

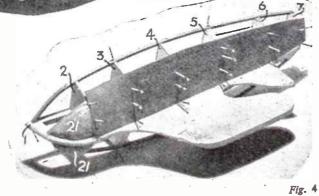
on the design sheet, from lin. by lin. stripwood. They are roughly shaped and glued in position as at Fig. 4. It is essential at this stage that you do not take off too much from these blocks as allowance has to be made for the thicknesses of the skins on the sides and bottom which will be added later. Now cut two pieces of lin. square strip and glue them on either side of the keel above the blocks, as shown by the dotted lines on the design sheet.

Now all is ready for the skinning. This consists of gluing thin plywood in position, first along the bottom, and then in various stages to complete a watertight hull. If you look at Fig. 4 you will see how the first piece is fitted along part of the bottom, nestling snugly

Fig. 3 som 7 are now glued into position on the keel. It should be stated here that throughout the making of the yacht, a waterproof glue is used in all the

assemblies. Now glue pieces 1C on each side of the hole which is to take the mast, thus forming a box. The positioning of pieces IC and IB can clearly be seen in Figs. 2, 3 and 5.

The next step is to lay a piece of lin. by in. stripwood along the top grooves of the formers (this will be one of the stringers). Chamfer the formers and transom to fit. There are three stringers along each side all of lin. square stripwood-one along each side of the keel and two along each side, as shown in Fig. 2. Notice that the bottom stringer



against the keel and block 21 to overhang the stern and side. Do not be afraid to apply plenty of glue, and fix with small household pins into the formers while this is drying. The pins. of course, are only tapped in far enough to hold the skin temporarily in position while the glue is drying to ensure a. strong adhesion, and are later removed when the glue is thoroughly set.

stringers of the sides. The skins for the sides can now be cut, allowing an overlap all round. Apply glue to the ends of the formers and stringers all along the sides and commence pinning off at the transom end. Pin all along as for the bottom, and trim off excess plywood at the bow to fit exactly. Complete the other side in the same manner.

When you come to the skinning of the deck, it is advisable to cut out a template of its shape in thin card (Fig. 6). In



COMPLETE KIT FOR 14/3

To build this splendid model you can

buy a complete kit (No. 3104), contain-

this template prick through the position of the mast and also obtain the exact position of piece 15. The template can then be laid on the plywood, traced round and cut out. It is not necessary at this stage to cut out the whole of the well. Just enough should be cut away so as to indicate its location, and the excess can be trimmed away when the glue is dry. Pinning can also be used to advantage while the deck is being fixed. Both the well and the hole for the mast are trimmed with a sharp modelling knife.

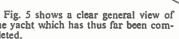
Fig. 6

Fig. 7 shows the underside view of the cabin top, which is the next job to be tackled. Pieces 17, 18, 19 and 20 are first glued together, and the curved top is then covered with thin plywood, again using household pins as when skinning. The inside of the cabin top should be given two coats of paint at this stage to assist in waterproofing, and left to dry.



Fig. 9

DOORS

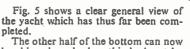


RUNNING

HORSE

Fig. 5

The other half of the bottom can now be skinned, and when this is dry, trim off the excess plywood with a sharp knife to the level of the stern and lower



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MAKE YOUR OWN TRANSFERS

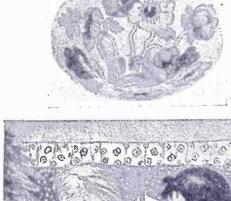
ERE is a new way of making lovely transfers, simply, quickly and cheaply. Beautiful results can be obtained on brooches, boxes, table mats, trays and firescreens, to name but a few things. Coloured pictures from greeting cards, magazines and catalogues

Says Harold Ridgway

pictures printed on poor class paper and transferred to poor quality wood.

The following are the things needed: A small, fairly stiff brush; a softer brush; face. For preference, use a glue that can be, if necessary, treated with a thinner. This glue must not be too thick or too rapid in setting. When the first coat is dry, add a second to the face of the picture. While this is tacky, press the picture firmly on to the article to be decorated, paying particular attention









These photographs are of transfers made from Christmas cards and cuttings from magazines

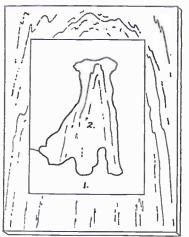
As the transfers appear in reverse, certain pictures, of course, cannot be used, but an unlimited number of child. animal, flower and country studies, as well as decorative designs, such as those illustrated, are readily available. Good results can be achieved even from

a packet of wallpaper stripper; waterproof glue; flour paste; sponge or soft rag; small craft knife or penknife; clear matt or gloss varnish, or glaze if the work is to withstand hard wear.

Now select your picture. Apply a

to the edges. Leave to harden.

In the case of larger pictures—that is, over Sins. by Sins.—I have found it an advantage to apply waterproof glue to the wood also. Now waterproof glue, once it has hardened, is very difficult to the state of the thin, even coat of waterproof glue to its remove from wood without damaging



its surface. It follows then that this glue must be applied only to the area of wood which is to be covered by the transfer. The following method will ensure this being done. Say you are making a transfer of a picture from a magazine. Remove the page on which the picture is printed. Now carefully cut out the portion to be transferred. Keep the rest of the page from which the picture is cut out. This part of the page, called the 'frame', should be fixed first with flour paste on to the wood to be decorated. Its purpose is to prevent the waterproof glue from spreading outside the area of wood covered by the transfer.

Having fixed this paper 'frame' in

position, the shape of the picture will be position, the shape of the picture will be seen on the wood, and this shape must now be coated with waterproof glue, as previously mentioned. The transfer fits into this shape. Apply waterproof glue to the face of the picture which is to make the transfer, and fix it in position in the frame. Remember that two thin, even coats of glue are better than a thick and uneven one. As the work proceeds, this paper 'frame', which serves only a temporary purpose, comes easily away from the wood, leaving only the transfer

permanently in position.

The next stage is to prepare some of the wallpaper stripper. Apply this to the picture with the fairly stiff brush. Allow the solution to soak into the paper for a minute or so. Then, firmly but not harshly, begin to scrub with a circular motion and also in the direction of the grain of the wood. Unwanted paper starts peeling off. Clear this away with the wet sponge. Apply more of the paper-stripping solution and continue working with the brush and the sponge. Soon the picture will be visible. Use the softer brush at this stage, and also the knife to remove any obstinate flecks of paper. Do not use the point of the knife, and carefully work towards the nearest



- 1. Paper from which picture of dog has been cut. This paper is pasted first to the wood to be decorated.
- 2. Shape of the dog seen on the wood.
- 3. Cut out picture, glued down at 2.

edge of the picture. You will be sur-prised how easily the unwanted paper comes away, leaving only the transfer adhering to the wood.

The paper 'frame' can now be taken off. Apply some of the stripping solution to it, allow this to soak in, and the frame will then come away quite easily.

After giving the picture a final sponge over with clear water, dry it by dabbing it with a cloth and by holding it near to the fire for a moment or two. There is nothing in the whole process which will damage the wood or the transfer.

When dry, any slight cloudiness of the picture will disappear when the varnish is applied. Two coats are best.

Work the first gently into the transfer, When the varnish has set the transfer is very tough, and may be sawn or trimmed, leaving absolutely smooth edges. By this method, all the colours and highlights and even delicate tints are preserved.

There is nothing difficult in making these original transfers; it is definitely not a long and involved process. Remember, of course, the better the wood and the picture are, the better will be the transfer.

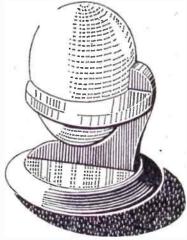
Test your picture by applying water-proof glue to a small area. If the ink does not smear (and in the great

and in the great majority of cases it does not) you can go ahead and produce a really fine transfer. Practise first with small pictures on odd pieces of well-smoothed wood. You will speedily get the 'feel' of the method, and be able to do bigger things with success. Begin by making, say, a few brooches for you can produce some success. Begin by making, say, a few brooches, for you can produce some really lovely ones by this method. If, at the outset, small pieces of the print lift, exposing the wood, you may work a matching oil colour over the spot, brushing it into the first coat of varnish. It will be an invisible repair. Wherever possible, I prefer to apply the transfer first, and do any staining or engageling. first, and do any staining or enamelling afterwards.

If you follow these directions carefully, you will achieve results which will bring a feeling of pride and satisfaction. You will produce transfers having a character and quality all their own.

SIMPLE FRETWORK

A Modern Egg-Cup Design



THIS little novelty makes a companion to the egg server published in a previous issue. Tiny individual cosies can be knitted for these if desired.

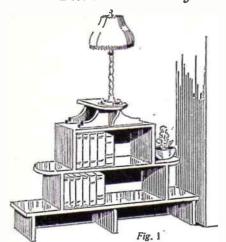
Full-size patterns are on page 63

Construction is quite straightforward as will be seen from the pattern page. Only three simple pieces are required for each cup.

Piece 1, the base, is cut from in. wood and the edges rounded as shown in the section. Note the mortise in the centre

The upright, piece 2, is cut from inplywood, which is also used for piece 3. Plywood is used because of the shape of these pieces which will tend to fracture if ordinary wood is used. The diagram on the pattern page shows how the various pieces are glued together.

Clean up the pieces before painting and use the same shade as for the server. If a good quality enamel paint is used it can be kept spotlessly clean. (M.P. Fill that recess by making



A Book Fitment with Lamp Stand

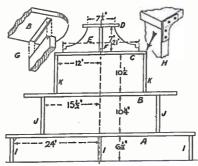


Fig. 2

Fig. 5

Fig. 3

ERE is a pleasing piece of furniture that will fit the fireplace recess of a room, or, of course, it is equally suitable to be placed against a plain wall. As will be seen from Fig. 1 it has been designed with a central stand or bracket to take an electric lamp.

The bookcase is very simple to make and consists of three plain shelves and uprights, all in the modern style. The simple shaping of the lamp stand and its front bracket gives just that added character so essential where a plain

appearance is intended.

Wood 1 in. thick is used throughout, and the lengths of the shelves may be designed to suit any particular width of recess. In Fig. 2 the dimensions are given, and it should not be difficult to set out the various pieces, allowing for the housings of the uprights if it is decided to include them in the work. At (G) in Fig. 1 the method of forming the stopped-housings is shown, and at (H), stiffening plates which may be of stout brass to go at the rear of the shelves and their uprights.

Common Centre Line

When setting out the shelves it should be borne in mind to work from a common centre line, as shown, and each shelf should have the position of its uprights set across accurately, as in Fig. 3, so that the holes may be bored for the screws which form the fixing. Shelf (A) is quite plain, as also is the shelf (C), but shelf (B) has its ends cut to a semi-circle as in Fig. 3. The top shelf (D) is given in detail at Fig. 4, and its shaped front bracket in Fig. 5. There are two pieces to be cut as (E) and their simple shaping can be followed from the measurements given in Fig. 2.



Glue and screws should make a sound fixing for all parts, and in addition brass plates, as at H in Fig. 2, may be put at the ends and junctions of shelves with uprights. Angle fillets can also be included at certain joints. Pieces I, J and K will, of course, have the grain of the wood running vertically, so that the screws will run into the end grain of the

wood. Precautions must, therefore, be taken to have long screws and a well-

made joint.

The two pieces (E) are connected byhaving a cross-piece centrally measuring 7\fins. by 5\fins., the screws running through piece (E) with the centre crosspiece hidden at the front by the bracket (F). If the fitment is made from deal or pine, then it would look well if given two coats of cream paint and then finished in light oak and treated with steel comb, etc. to get a stained and grained effect. With oak or mahogany, of course, the natural grain should be preserved, and finish provided with a

For Your Bookshelf

The Ship Modeller's Workshop

The Saip Modeller's Workshop by R. K. Battson

M. BATTSON brings to the reader knowledge gained over a period of 25 years in ship modelling. He goes through the various appurtenances of a ship one by one, and indicates the best method of their construction. Ship modellers will find construction. Ship modellers will find this book of great assistance in fashioning those parts of their models which at first sight may appear to be too com-

Published by Percival Marshall & Co. Ltd., 19-20 Noel Street, London, W.1Gummed Strip and Paper Modelling by Frederick T. Day

THE author describes how many I fascinating models and articles may be made from gummed strip. The modeller can gain many ideas from this informative book, which deals with the making of moulds, etc., from wood, cardboard, plaster or wax shapes, and illustrates the use of gummed strip as applied to handicrafts in general.

Published by Newnes Educational Publishing Co. Ltd., Tower House, Southampton Street, London, W.C.2FOR THE WOODWORKER

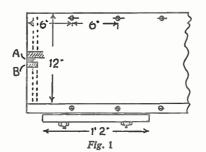
A Table Bench Top

ANY readers living in rooms or flats have to do their carpentry on the kitchen table, which does not do the table any good. The absence of a vice also proves a detriment to good workmanship. A special removable top, which can be slipped on and off as occasion requires, is the best answer to this problem, and the one illustrated, which embodies most requirements of the woodworker, should

prove invaluable.

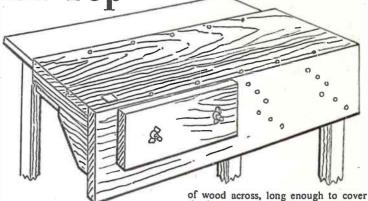
It consists, basically, of a board with a front attached, the latter with a vice. Its suggested width is given in plan view (part) Fig. 1, but can be extended, of course, if preferred. A thickness of in. planed deal is advised for this, also the front, and vice cheek. It may be necessary here to glue two boards together to make up the width, and if so, tongued and grooved boards are best though dowelling can be substituted if the tongued boards are difficult to obtain.

The length should be that of the table, plus lin. extra each end. To these ends, underneath, glue and nail a strip of wood, a shade less than lin. wide and the same thickness as that of the table



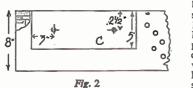
top itself, as shown at (A). To these strips, glue and screw covering strips, a little wider, as at (B), the result being a grooved fitting at each end of the bench top, into which the table top can slide. The bench top can then be fitted on the table by a simple sliding movement, and as easily withdrawn.

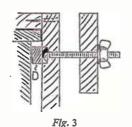
The front is shown at Fig. 2. It should be the same length as the bench top, and be firmly screwed to the front edge of same. Countersink these screws. To better ensure the board being truly at right-angles to the bench top, cut a pair of wood brackets, say, 6ins. long and 4ins, wide, and screw these at the ends to strips (B) and the inner face of the front board. These are shown in the view of the completed bench top. Steel furniture brackets could be substituted here, if preferred.



By W. J. Ellson

At (C), Fig. 2, is shown the dimensions of the vice cheek. Cut to these sizes, and where shown, bore a pair of holes, large enough to admit the bolts which are to act as bench screws. In a bench top of this description, there is not the room





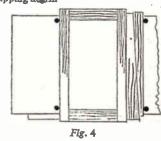
necessary for the usual bench screws, so in their place a couple of strong steel machine bolts, fin. or fin. and 5ins. to 6ins. long are to be substituted. Con-

tinue the holes through the bench vice.

The inner face of the front board is now exposed and the bolts pushed through their respective holes. Run a pencil round the bolt heads (preferably of the hexagon shape) and removing the bolts, chisel out a recess into which they can afterwards sink level. To prevent them slipping out, screw a strip

the heads, as in detail (D) in Fig. 3. Provide the bolts with washers and wingnuts to complete. The thickness of strip (D), by the way, should be equal to the space between board and rail of the table, as in the diagram, to ease any strain likely to come on the board when screwing up the vice.

The general usefulness of the bench top can be supplemented with additions.
To assist, for instance, in supporting a board for edge planing, bore a double series of holes in. diameter, and spaced lin. apart vertically in the front, as in Fig. 2. These are staggered to avoid possible weakening of the board. Pegs, cut from in. round wood rod, are provided; these fit in the selected holes and keep the wood to be edge-planed from slipping down.



A series of similar holes, this time spaced 6ins. apart, centre to centre, are bored in the bench top. These are shown in Fig. 1. Pegs are provided for these too, and also a pair of wedges, by the aid of which an excellent cramp is available for tightening up a frame, as in plan, Fig. 4, and similar purposes. The addition of a simple bench stop will complete a useful job of work, and one of much benefit to the amateur carpenter and handy craftsman in his labours.

GLUES FOR HOBBY WORK

Collulose cements take pride of place among the synthetic adhesives. They are recommended for use in the construction of model aircraft and are widely known as 'balsa cements', but this is a bit misleading as to the variety and properties of the various adhesives which come under this heading.

Apart from the jointing of balsa itself, which is a very porous material and thus readily joined with almost any type of 'strong' adhesive, joint strength can vary enormously according to the formulation of the cellulose cement. As a rough rule, the slower the drying time the stronger the cement for general

jointing purposes.

For model aircrast work a quickdrying cellulose cement is normally employed. Properly made, joint strength is normally stronger than the balsa wood itself, this being a weak material to start with. Thus prominence is given to producing a balsa cement which dries rapidly, so that joints may be set in a matter of minutes and can safely be handled within, say, one hour at the most. Packaged in tubes, which facilitates application, it is easy to appreciate the attractiveness of such quick-setting adhesives, not only for model aircraft work but for assembling card models, joining other porous materials, etc. Building time is cut to a fraction of what it would be by using slow-drying adhesives.

Some Disadvantages

There are, however, disadvantages, A rapid drying balsa cement implies that a high proportion of volatile solvents is incorporated. Unless these are properly sealed in the package, the cement will harden during storage. Lead tubes are the universal type of containers for these cements and are in themselves somewhat porous by nature. Some manufacturers overcome this by using tincoated lead tubes, which, of course, are more expensive. The cost of either tube. incidentally, is amazingly high in proportion to the contents-probably more than the value of the cement itself. However, there is no suitable alternative packaging which offers the advantage of convenience of use. At one time balsa cements were packaged in phials but were so awkward to use, by comparison, that this method never gained favour.

Even with a perfectly sealed tube, of course, once it is pierced for use the container can never be completely sealed again, even if 'closed' with a pin.

In his second article on glues and adhesives used in hobby work, R. H. Warring describes the synthetic type.

The faster drying the cement the shorter the working life of the tube; and also, the shorter the shelf life unopened (since complete elimination of porosity of the tube is impossible). The

led to the appearance of some very good 'high strength' balsa cements. These are good all-round adhesives for woodwork in general, such as Britfix, Titanine, and Le Pages No. 29. One of the strongest of the cellulose cements, Durofix, is a long-drying type and excellent for general woodworking. Normally, however, cellulose cements are less economical for such jobs than animal glues.

Besides wood jointing, etc., cellulose cements are widely used for repairing

		Workshop Temperature				₩
Adhesive		50°	60°	70°	80°	Ř.K.
Cascanite One-Shot'	Pot Life Clamping Time	9 hrs. 18 hrs.	3 hrs. 5–6 hrs.	1-1} hrs. 2}-3 hrs.	_	WORKING TIMES OF
Cascamite and Liquid Hardener	Pot Life Clamping Time	1 hr. 2 hrs.	30 mins. 1 hr.	10 mins. 15–30 mins.	-	OF TYPICA
Aerolite 300 GBM. X Hardener	Shuffling Time Pot Life Clamping Time	60–70 mins. 2 hrs. 8–12 hrs.	40 mins. 1½ hrs. 2 hrs.	20 mins. 40 mins. 1 hr.	10 mins. 20 mins. 30 mins.	TYPICAL PROPRIETARY SYNTHETIC RESIN ADHESIVE
Cascophen RS-216M	Shuffling Time Pot Life Clamping Time		3- 4 hrs. 9-10 hrs. 16-24 hrs.	1 j-2 hrs. 3 g hrs. 7 hrs.	1 hr. 1‡ hrs. 4 hrs.	ARY SYNTHE
Aerolite 300 A. GBP. GBM.	Shuffling Time	60-70 mins.	40 mins.	20 mins.	10 mins.	TIC RESI
Aerolite GBP	Shuffling Time	30 mins.	20 mins.	10 mins.	5 mins.	HQY N
CBQ.	Shuffling Time		10 mins.	5 mins.	_	ŒSIVI

In the case of Aerolite 300 the working life is governed by the type of hardener used

so-called 'field cements' which have a drying time of a minute or so are even worse and have been dropped by many manufacturers as having an impractical (short) shelf life.

While almost any type of cellulose cement will give satisfactory results with balsa, paper, card, etc., only the slow-drying types give satisfactory joint strength with harder materials, such as plywoods, etc. Considerable efforts have been devoted to retaining the desirable strength properties of the slow-drying cellulose cements and shortening the drying time, which have

china, glass, etc., marketed under such names as 'waterproof cements', etc. Typically, these are of the cellulose nitrate type with slower drying qualities (although still rapid drying by comparison with many other types of adhesives). Because they are so convenient to use and quick drying, cellulose cements are excellent for repair work of all kinds, but it may be advisable to test for suitability first. They are, of course, waterproof and the cellulose nitrate types are heatproof to a certain extent. Both acetate and nitrate cements themselves, however, are

inflammable due to the nature of the solvents used.

In quite a different category there are also a number of other interesting 'acetate' adhesives. Cellulose acetate can be produced in a form which is soluble in water (water-soluble cellulose) which makes up into a thick, quick-drying paste for easy application and good jointing properties. It can be supplied in the form of powder or grains which readily dissolve in water, swelling up into a gelatinous mass, the consistency of which can be adjusted by varying the proportion of water added. Such adhesives now have a variety of uses, particularly as 'binders' in chemical

There are, however, certain limitations in the use of P.V.A. adhesives. They react chemically with ferrous metals and so cannot be used on iron or steel. The joint also fails if subjected to excessive heat or moisture. The joint itself is of a plastic nature which will flex slightly under heavy loading and in this respect is excellent for jointing flexible materials or conditions where a perfectly rigid joint would be overstressed (e.g. due to uneven expansion of one of the joined components).

The synthetic resin glues now comprise a vast group by themselves. These are the types of glues now widely adopted throughout the woodworking

Dependent upon Temperature

Another primary characteristic of synthetic resin glues is that they are very temperature dependent when mixed. Shuffling time, setting time and pot life of the mixed resin and hardener vary considerably with temperature, tending to decrease rapidly with increasing temperature. None are suitable for use below about 50 deg. F. and the ideal workshop temperature is about 60 to 70 deg. F. This could be a disadvantage where exterior work may have to be tackled in cold weathersuch as assembling a boat hull outdoors during the winter months. Working temperature governs the time available for adjusting the joint faces after bringing together, time required for clamping the joints, how long before the joint can be re-worked, and how long the glue mixture will stay usable. Typical data are given in the tables, where it will be seen that clamping time, as a particular example, can vary from an hour or so to a whole day.

user (Aerolite and Cascamite) and one

of these even gets round the problem of

It is a characteristic of synthetic

resin glues that they set permanently

and irreversibly by chemical action. To

promote this action a hardener is mixed

with the resin. Once mixed, setting

starts and cannot be stopped. Thus

hardener and resin are mixed im-

mediately before the glue is required for

use (or hardener applied to one of the

joint surfaces and resin to the other),

giving the mixture a limited pot life.

having to employ a separate hardener.

SYNTHETIC ADHESIVES SUMMARISED

Туре	Formulation	General Properties	
Cellulose Cements	Celluloso Acetate or Cellulose Nitrate ia Acetone or similar solvents	Can be very rapid drying. Water- proof. Good specific adhesion. For iointing porous woods, paper, etc. Variety of types	
Water- soluble Celluloso	Cellulose Acetate—water solutions	Used as 'binders'. Also for wallpaper pastes	
Polyvinyl Acetate	White, non-tacky, non-staining adhesive	Excellent general purposo adhesive. Slightly flexible bond. Strong. Must not be used in contact with iron	
Synthetic Resins (A)	(i) Liquid Resin + Liquid Hardener (ii) Powder Resin + Liquid Hardener (iii) Liquid Resin + Powder Hardener (iv) Powder Resin + Powder Hardener	Limited 'pot' life and resin storage life. Excellent bond strength and high specific adhesion. Waterproof	
(B)	Polyesther Resins	Used with fibreglass, Also excellent adhesives in themselves	
(C)	Formular and Phenolformaldehyde Resin (Redux)	Exceptional metal-to-metal bond streagths	
(D)	Epoxy Resins (i) Heat Setting (ii) Cold Setting	Araldite type adhesives with ex- ceptional specific adhesion	

products (toilet preparations and medicinal pastes), foodstuffs, and as a paper adhesive, particularly as a wallpaper paste, although they cannot be used over ordinary 'size'. Numerous advantages are claimed over normal wallpaper pastes of the dextrin type.

A strong, general purpose adhesive with the characteristic of producing slightly flexible joints is derived from polyvinyl acetate, usually abbreviated P.V.A. This is one of the latest of the synthetic adhesives to appear in this country (e.g. Casco P.V.A.), although it has been widely used in America and elsewhere for a number of years.

P.V.A. glue is a white, non-tacky, non-staining adhesive which sets almost immediately and is completely dry in a matter of 30 minutes to one hour (depending on the formulation). The glue joint is nearly transparent when set. It is excellent for jointing all types of woods, laying veneers, marquetry, etc. Also for leather, wood, canvas and similar porous materials, and for photo mounting, etc., as in the case of dextrin adhesives. Joint strength is definitely superior to the latter.

industry on account of their superior jointing properties, such as exceptional joint strength, ability to glue almost anything (according to the resin formulation), complete resistance to water, etc. A majority are made from urea and formaldehyde as a starting point and are generally termed U/F resins.

Limited Shelf Life

To the small user, such as the amateur carpenter, etc., these adhesives are still something of an unknown quantity. All glues of this type tend to have a limited shelf life which, coupled with the fact that until recently they have not been available in small packages, meant that unless there was a definite and appreciable use for such an adhesive within a limited period of time, they were not economic to buy. They cost much more than the 'traditional' glues in the first place and if a good proportion may be expected to 'go to waste', then they become even more expensive.

Happily this position is now changed. At least two proprietary types are available in small packages for the home

Ideal for Boat Hulls

However, the exceptional durability and strength properties of modern synthetic resin adhesives make them most attractive for woodworking where high-duty joints are required. Thus in making boat hulls, for example, model or full size, such a glue is about the best possible for the job. Most types, too, are also gap-filling, which is an additional advantage on this type of structure. Joints are also heat-resistant and mould-proof.

Numerous types of resin adhesives are available. The resin may be in liquid form (e.g. Cascophen, Aerolite 300, Beetle, etc.), or powder (Aerolite 306, Cascamite, etc.). The latter have a much longer shelf life (over a year as compared with 3-6 months) and are made up into a resin solution, when required, simply by the addition of the right proportion of water. Hardeners may also be liquid (mixed with the resin, or applied to the mating surface), or solid, In the case of Cascamite, resin and hardener powders are supplied ready. mixed, requiring only the addition of water to make up the 'pot'.

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- 5

Catching Trout on the Dry Fly

RY-FLY fishing for trout is considered by many anglers to be the most fascinating and interesting of trout-fishing methods. Although it is a somewhat specialised branch of angling and needs a bit of skill and knowledge, you need not think that only the clever ones can succeed in catching fish this way. Any fly-fisher, or aspirant to fly-fishing, can master the art. You can't, of course, expect to become a ready-made dry-fly expert. Practice is needed.

When the beginner has acquired the trick of throwing a fly with reasonable definess on the water, and has gained some knowledge of the water-borne flies and their special times and seasons, he is well on the road to becoming a passable exponent of this fine art.

At one time dry-fly fishing was regarded as being suitable only for the placid streams of the south-country—the chalk waters and similar. But it has long ago been well demonstrated that this unique style of fishing can be applied with success on almost any type of river; as one authority puts it—'Wherever a natural fly will float, wherever a trout will lie, there also will a dry fly sail and entice fish to their doom'.

During the summer holiday period and to the end of September, on those days when trout are rising to surface insects, you may tempt them by fishing with a floating dun, when other means fail.

Not Expensive

Dry-fly equipment need not be very expensive, though the better your outfit the more satisfactory the handling of it. There are moderately-priced fly-rods that will serve your purpose; in fact, any decent fly-rod of 9½ or 10ft., fairly stiff in action, will do.

stiff in action, will do.

The line should be fairly heavy and tapered, of dressed silk. The fly-casts should be fine for clear-water fishing. The nylon products are popular nowadays. All casts should be tapered from 1x to 3x or 4x. 5ft. is a useful length for a casting line; the reel line can be 30 to 40ft. The reason why the dry-fly artist prefers a tapered cast is that by this medium he gains in accuracy of direction and also in the knack of dropping the fly lightly on the water.

When angling with dry fly it is imperative that the fly should float well, and to gain this advantage you anoint the lure with Linflot, Mucilin, or similar preparation which can be purchased at tackle dealers' shops. When the float gets waterlogged it must

By Arthur Sharp

be well dried and re-oiled. Some anglers also grease the cast to within Ift. or so of the fly. Remember, a water-logged fly is not enticing to the wary fish; you must keep the lure floating serenely on the surface.

You may whip the fly about in the air between casts at the fish, in order to dry it; but when it fails to respond and sinks a lot, dry the fly by squeezing it between a fold of blotting paper or other absorbent material. Then give it a touch up with the Linflot or Mucilin. Some anglers use liquid paraffin.

Fishing the Rise

The dry-fly angler usually fishes for the trout that he actually sees rising; in angling parlance he 'fishes the rise'. He waits until he spots a fish coming to the surface methodically taking floating insects, before he offers it his artificial fly.

On fairly fast water there need be no waiting for a rise. The angler just rigs up his tackle, anoints his fly, and proceeds upstream, throwing his floater into the more promising and likely holds of trout, almost as though he were wet-fly fishing, but letting his lure float over the trout-haunts instead of permitting it to sink and be swept submerged into the hovers and 'pockets' where the speckled fish love to lurk.

Keep your eye on the fly; it is quite possible that a trout may snatch at it the moment it pitches on the surface of the pool, With a quick turn of the wrist go instantly into action and drive the hook into his jaw before he discovers his error and ejects the imitation that he took for the real thing.

took for the real thing.

Dry-fly fishing is a big subject and many large books have been devoted to it. Here it must of necessity be drastically cut down. There are, however, a few things worth noting. For instance,

always find out by observation just what kinds of insects are on the water; and, if possible, what insects the trout are taking. Then select a likely imitation from your fly-container to try them with. The fish do not necessarily always stick to the same kind of fly when feeding, and if they refuse time and again your imitation of the real thing, try them with a 'fancy' fly—a Tup's Indispensable or a Wickham. Frequently a 'fancy' proves a 'trump card', and does the trick.

Avoid 'Drag'

You may ask: 'What do you mean by "drag"?' Well, whenever your artificial fly departs from the course which a natural fly, unaffected by the breeze, would take, or has its pace affected by an influence other than the current, it is said to 'drag'.

Trout seem suspicious of a dragging fly. Therefore, if you can maintain the lure on the water in a natural manner, without any interference from 'drag', you are more likely to attract a feeding fleh.

Remember, too, that when dry-fly fishing, hackled flies will frequently prove as killing as the orthodox winged patterns of trout artificial flies, and they are worth a trial on some streams, such as quick waters, and moorland or mountain burns where wet-fly is the usual lure. Hackled dry flies have won a good reputation in many districts. The latter include such patterns as Red quill, Blue-wickham, Greenwell's glory, Olive quill, and Tup's Indispensable, etc. Winged dry flies include Black gnat, Blue dun, Red spinner, Blue winged olive, Sedge fly, and many others. It is admitted that the art of the dry-

It is admitted that the art of the dryfly calls for much patient apprenticeship before one becomes really expert; however, if you fail to shine as a real expert artist, as many of us do, you'll get plenty of fun, and a trout or two, all the same—if you persevere.

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ITH the growing popularity of the 'Do-it-Yourself' campaign, complete kits, including pattern and construction data sheets, for a number of household articles made almost entirely from aluminium are being produced by Newmans, of 86 Hampstead Rd., London, N.W.I.

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Lining a Roof

FIND that the roof of my house is not lined. I thought of fixing sisal craft paper to the underside of the rafters with battens, or failing that, to line the floor of the loft with this paper. Can you tell me if there are any disadvantages in either of these methods, or suggest a not too expensive alternative? (R.W. -Romford.)

WE would say that, undoubtedly, fixing the sisal paper to the underside of the rafters, as suggested, is the cheapest and quickest method. The only danger lies in loosely-fitted tiles letting in rain or fine snow, which might be trapped in the spaces between tiles and paper. Though it would be a longer job, it would really be safer to cut the paper in strips of suitable width, and glue these to the underside of the tile

Damp Floorboards

DLEASE give me some information regarding the precautions one can take respecting floorboards in a new bungalow. Would creosote prevent dampness, as I intend laying lino on top, and would newspapers be sufficient as an underlayer? (J.W.—Southampton.)

THE creosote would help against damage by damp in the room itself, but would not avail if dampness is liable under the floorboards, and that is usually the case. We advise you to take up a floorboard occasionally, especially if the foundation is not cemented all over, and if dampness is apparent it would be cheaper in the long run to take up the whole floor and creosote joists and underside of floorboards. For laying under lino. Willesden paper would be much better than ordinary newspaper.

Making Concrete Blocks

I AM interested in making concrete blocks, and would like some information on obtaining a good smooth finish. (R.B.—Guernsey.)

THE roughness mentioned in con-I nection with the concrete blocks is probably the result of using too coarse aggregate. For smooth cast blocks, aggregate of lin. shingle is advised, the mix being 1 cement, 2 sand, and 3 shingle. Trowel in the moulds a little at a

time, and tamp well down in the corners. Grease the mould well beforehand, and smooth down with the trowel when mould is filled. Make mixture damp enough to fill up every corner. This should result in good, shapely blocks, but if the outer surface of the wall built of them is still not smooth enough, render over the whole surface a lin. thick layer of 1 cement and 2 sand mix.

Magnetising Screwdrivers

AN you tell me how to magnetise Iscrewdrivers to pick up tiny screws? I have heard this can be done from a 12 volt car battery. (J.J .-- Uganda.)

STEEL screwdrivers may be magnetised, and will then pick up steel or iron objects. It is not possible to magnetise the screwdrivers if they are of metal other than steel, or to pick up brass, copper, or other non-ferrous screws or objects. One method is to take a permanent magnet and stroke the screwdriver throughout its length, in the same direction, a number of times, always using the same pole of the magnet. A 12 V car battery could be used by making up an electro-magnet. This could be 200 to 400 turns of 18 S.W.G. or similar wire, on a 1 in. diameter iron core. Connect one lead to one battery terminal. Place the end of the screwdriver against one end of the core of the magnet. Then touch the second lead from the winding on the other battery terminal a number of times, maintaining contact for only a second or so each time. If the screwdrivers lose their magnetism after a time, this shows they are not of really hard steel. Iron or soft steel cannot be magnetised permanently.

Blackboard Dado

T SHOULD be grateful if you will Ladvise me how to erect a blackboard dado, and what materials to use. (C.C .-Norwich.)

WE think that for a dado, hard-board would be a suitable material. It could be fixed to the wall with small nails, and edged with a simple moulding. then given two coats of black varnish. If you require a 'blackboard' surface, rub down the varnish lightly with worn

glasspaper, then coat with the following special black:-to half-pint clear varnish, add toz. ivory black and toz. ultramarine. Well mix and add a level teaspoonful of flour emery.

Sticking Silver Paper

My wife makes pictures with silver paper, but after a while the silver paper seems to rot in small circles. We cannot account for this and should be glad of your advice. (C.K.—Bristol.)

OST of the so-called silver papers consist of very thin metal foil, and in all cases are porous. Consequently the adhesive gradually works out through the pores, and in the case you mention, it necessarily deteriorates and discolours, being mainly organic in origin. The remedy is to use a synthetic adhesive such as cellulose dope, as used on some model aircraft, or Canada balsam, the adhesive used for mounting microscope specimens.

Cleaning a Ciné Screen PLEASE tell me the best method of cleaning a home ciné screen. (C.R.— Birmingham.)

TOROBABLY the best method will be to use a degreasing agent such as carbon tetrachloride. Put a few drops on a clean fluffless (preferably linen) rag and gently rub the surface while the screen is lying flat on a level surface.

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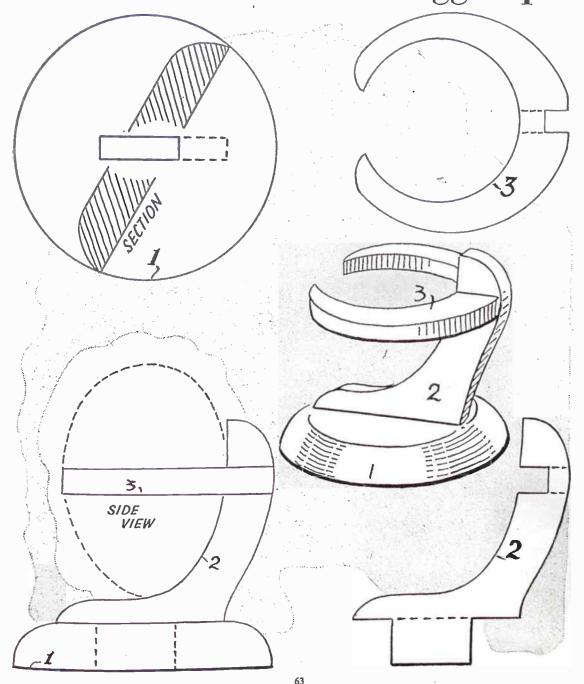
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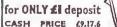
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