HOBBIES weekly

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Add extra fun to the holidays

TOY SAND-CART

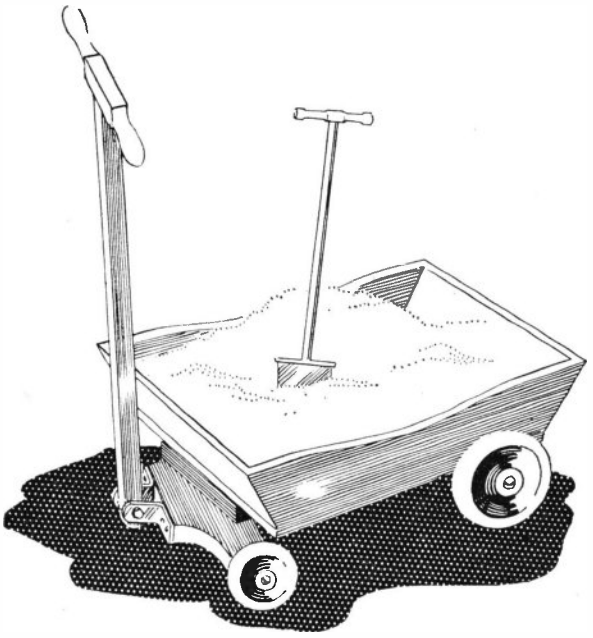
Hobbies

FOR CRAFTSMEN OF ALL AGES

6D.

For seaside or holiday fun

Make a toy sand-cart



A FEW odd pieces of wood and four turned wood wheels go to make this holiday toy. The construction is simple and it can be made in one evening to give endless hours of pleasure to the youngsters. The handle is pivoted by means of a small nut and bolt and can be removed for easy packing.

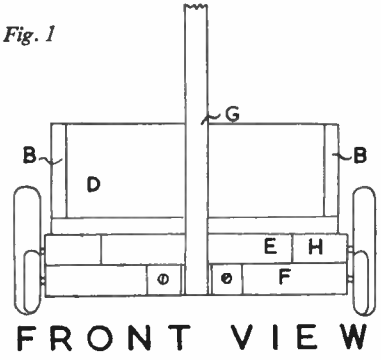
Measurements are not critical but it will be helpful to use those shown in the diagrams. This provides for a cart 18 in. by 9 in., with ample space for hauling sand or even for helping in the garden.

Study the diagrams in Figs. 1, 2 and 3, which show a front view, side view and plan, with measurements and general layout. You will see that the body of the cart slopes at each end and is supported by the two axles E and H. The front wheels are pivoted, allowing the cart to be turned without lifting the front wheels off the ground.

Commence by making up the body, consisting of the bottom A, the sides B, and the ends C and D, all being ½ in. thick wood. Nail or screw the sides B, to the ends C and D, shaping the ends to fit. Now screw the bottom in place, allowing it to come flush all round as shown in the sketch in Fig. 4.

Next add the pieces E and H which are 6 in. and 10½ in. long respectively and are cut from 1 in. by 2 in. timber. Piece E

Fig. 1



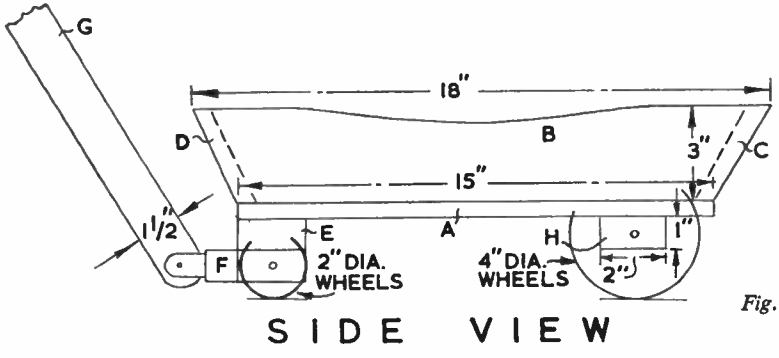


Fig. 2

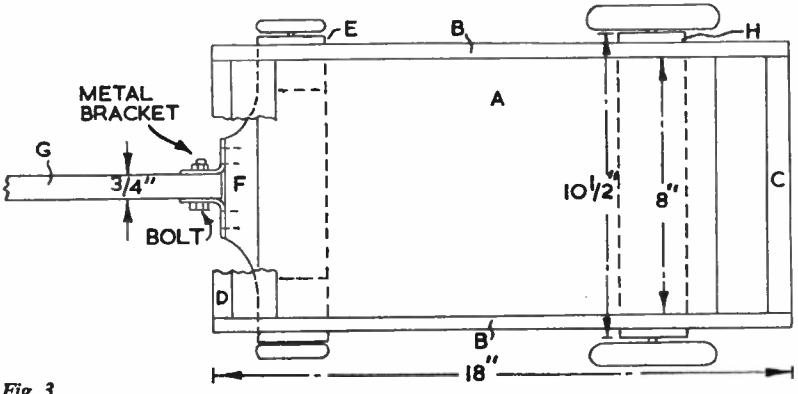


Fig. 3

is the support to which the front axle F, is pivoted and H forms the rear axle. Both pieces can be nailed centrally in position. Piece E comes flush at the front and piece H about 1½in. from the end.

The front axle F is cut from a piece of 1 in. thick wood using a fretsaw. The exact shape is not important, but the overall width should be 10½ in., the same as the rear axle H. Pivot to the support by means of a large roundhead screw, inserting washers if desired.

The handle G, is a piece of ¾ in. by 1½ in. wood about 20 in. long pivoted to the front axle by means of two metal brackets. These can be cut from brass or aluminium with a Hobbies metal cutting fretsaw and should be screwed to the axle F. Pivot the handle to the bracket by means of a small bolt and nut as suggested.

The handle bars I, are shaped from 1½ in. square wood and are halved to the end of the handle as indicated. Secure with a screw and waterproof glue for a strong joint.

Clean up all round and give an undercoat and a top coat of high gloss. Use bright colours such as red and yellow. For good effect leave the handle plain, giving two coats of clear varnish.

Use Hobbies turned wood wheels, two 4 in. dia. 2s. 8d. and two 2 in. dia. 10½d. (postage 1s. 2d.). They can be obtained from Hobbies Ltd., Dereham, Norfolk or from any Hobbies branch. Finish them off by colouring the groove bright red and coating the rest with clear varnish. (M.h)

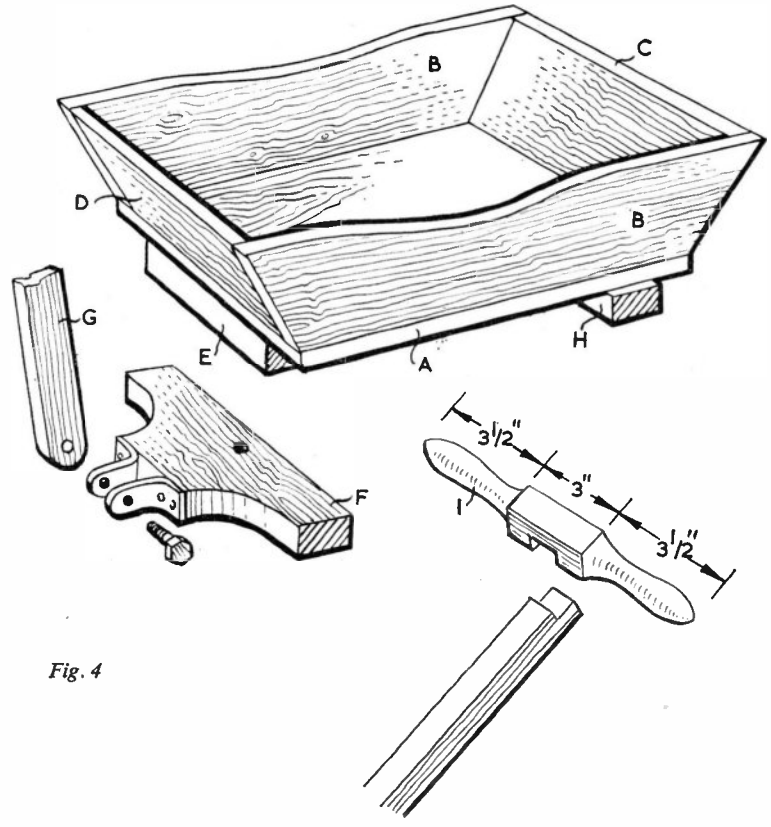


Fig. 4

CHEMISTRY AT HOME

CALCIUM COMPOUNDS

By L. A. Fantozzi

COMPOUNDS of the metal calcium, Ca, are so widespread that we are almost falling over them. Crack an egg, plaster a wall, lime the garden, tap a window pane or just go for a walk over limestone hill or on a chalk cliff, and there is the calcium. Do none of these things, and the calcium is still with us in bone and tooth.

The most common naturally occurring calcium compound is the water-insoluble salt calcium carbonate, $CaCO_3$. Egg and sea shells, limestone, marble, coral, calc spar and chalk all consist of more or less pure calcium carbonate. Fuse it with sand (silica, SiO_2) and soda ash (anhydrous sodium carbonate, Na_2CO_3) and glass is formed.

On heating it alone it is converted into quicklime or calcium oxide, CaO, by loss of carbon dioxide, CO_2:

$CaCO_3 = CaO + CO_2$.

Our limestone ranges provide the vast quantities of lime needed in the building trade. Powder some limestone, or other source of calcium carbonate, and heat it for some minutes in the blowpipe flame in a hollow on a charcoal block, Fig. 1. Let it cool, and then drop it on to a slip of moistened red litmus paper. The litmus paper turns blue, showing the alkaline nature of lime. The quicklime combined with the water in the litmus paper to form slaked lime or calcium hydroxide, $Ca(OH)_2$:

$CaO + H_2O = Ca(OH)_2$,

which is soluble in water forming an alkaline solution.

Slaked lime, of course, is the form of lime needed to mix with sand to make mortar, and also constitutes garden or hydrated lime. Great heat is given out in the slaking. Put a few pieces of quicklime into a flask, just cover it with water and plug the flask neck loosely with cotton wool. The quicklime falls to powder and the flask grows extremely hot. When the whole cools somewhat, add more water, cork the flask, and shake occasionally during a few hours. Filter the solution and preserve it in a well

corked bottle. The necessity for corking well will be seen by exposing a few drops to the air on a watch glass. The colourless solution gradually grows turbid from combination with atmospheric carbon dioxide and formation of insoluble calcium carbonate.:

$Ca(OH)_2 + CO_2 = CaCO_3 + H_2O.$

From this it is evident that calcium hydroxide solution, or lime water as chemists call it, is useful as a test for carbon dioxide. Add some dilute hydrochloric acid, HCl, to some crushed egg shell, limestone or marble chips in a small bottle furnished with cork and delivery tube with the end of the latter dipping into lime water, Fig. 2. Carbon dioxide is given off, and calcium chloride formed in solution:

$CaCO_3 + 2HCl = CaCl_2 + CO_2 + H_2O.$

A white precipitate of calcium carbonate forms in the lime water. When only small quantities of carbon dioxide are to be tested for, a drop on the end of a glass rod may be held in the evolving gas when the drop goes cloudy.

Continue bubbling the gas through the turbid lime water. Gradually it clears again owing to formation of soluble calcium bicarbonate, $Ca(HCO_3)_2$:

$CaCO_3 + H_2O + CO_2 = Ca(HCO_3)_2.$

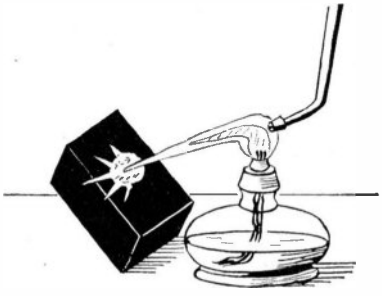


Fig. 1.—Formation of lime from limestone

Expose a few drops of the clear solution on a watch glass. It soon grows cloudy and dries up to an insoluble white film of calcium carbonate:

$Ca(HCO_3)_2 = CaCO_3 + H_2O + CO_2.$

These two simple reactions are the cause of some of the most beautiful phenomena in nature. Water containing carbon dioxide dissolved from the air trickles through fissures in limestone, dissolves some of the limestone to form the unstable solution of calcium bicarbonate and reaches an airy cave. Here drops collect on the roof or fall to the floor, decompose and slowly build up into beautiful stalagmites and stalactites, both of which consist of calcium carbonate. Petrifying wells, where common objects are covered with stony deposit, depend on dipping them in water highly charged with this naturally formed calcium bicarbonate. Many fossils, too, are formed in a similar way, the original organism gradually being replaced by calcium carbonate.

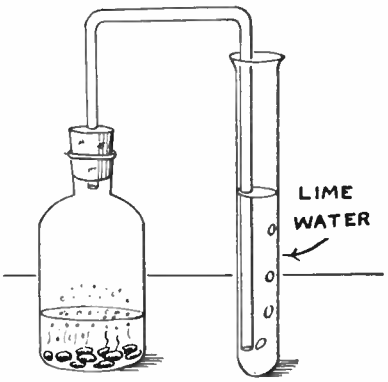


Fig. 2.—Lime water and carbon dioxide reaction

The mixture left in the carbon dioxide generating bottle can be used as a solution of calcium chloride for reactions. Filter it from undissolved calcium carbonate. If the filtrate has a yellowish colour it contains ferric chloride, $FeCl_3$, due to the presence in the carbonate of ferric oxide, Fe_2O_3, as an impurity. This may be removed by adding enough ammonium hydroxide, NH_4OH, to give a slightly alkaline reaction (red litmus paper turning blue when dipped in the solution). Ferric hydroxide, $Fe(OH)_3$, is precipitated and may be filtered off:

$FeCl_3 + 3NH_4OH =$
$Fe(OH)_3 + 3NH_4Cl$
(ammonium chloride).

Evaporate the filtrate to dryness and fuse it to drive off excess ammonia and ammonium chloride. Keep the solid calcium chloride in a well closed bottle. The reason for this is seen by exposing a little on a watch glass. It quickly attracts water from the air and forms a solution. This avidity for water makes it useful for drying gases.

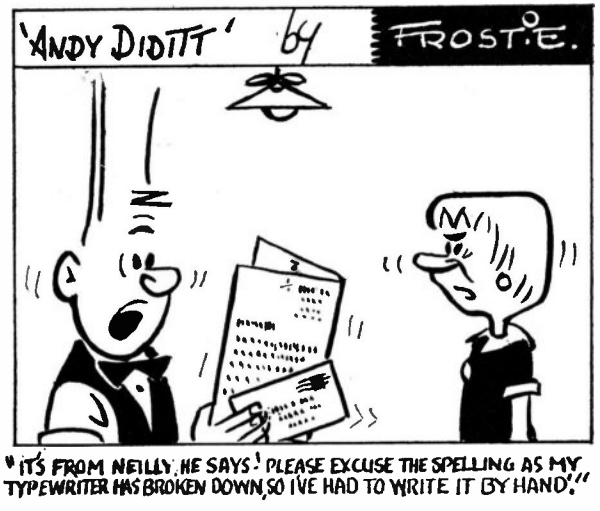
Dissolve some calcium chloride in water and add to it dilute sulphuric acid, H_2SO_4. White calcium sulphate, $CaSO_4.2H_2O$, is precipitated:

$CaCl_2 + H_2SO_4 + 2H_2O =$
$CaSO_4.2H_2O + 2HCl.$

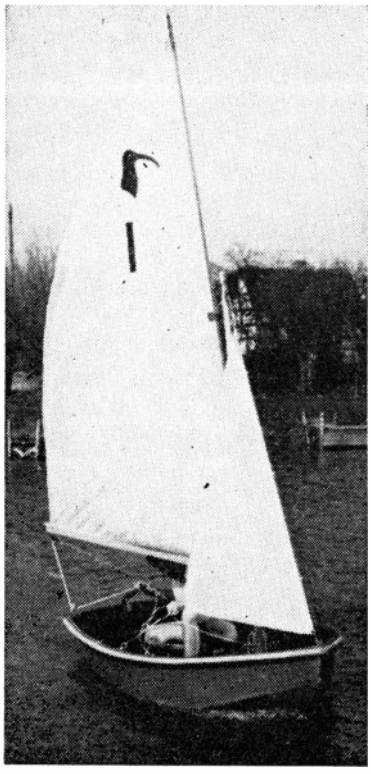
Filter it off, wash it several times until one wash water shows it to be free from hydrochloric acid by its not turning blue litmus paper red, and then let it dry. This soft white powder is chemically the same as the beautiful alabaster statuary we see in our art galleries. It also occurs naturally as gypsum from which plaster of Paris, $2CaSO_4.H_2O$, is made. By heating gypsum to 120 to 130 degrees Centigrade it loses three-quarters of its water:

$2(CaSO_4.2H_2O) =$
$2CaSO_4.H_2O + 3H_2O.$

Now try heating some plaster of paris in a dry test tube to low redness for some minutes. The rest of the water is given off and anhydrous calcium sulphate, $CaSO_4$, results. Mix this to a paste with water. It does not set like plaster of Paris, remaining pasty for a very long time. The retention of just one-quarter of the original water of crystallization thus makes all the difference between a useful and a useless substance. Anhydrous calcium sulphate also occurs naturally as the mineral anhydrite, which is used as a source of sulphur, S, in sulphuric acid manufacture.



SAILS AND GEAR FOR THE 'CURLEW'

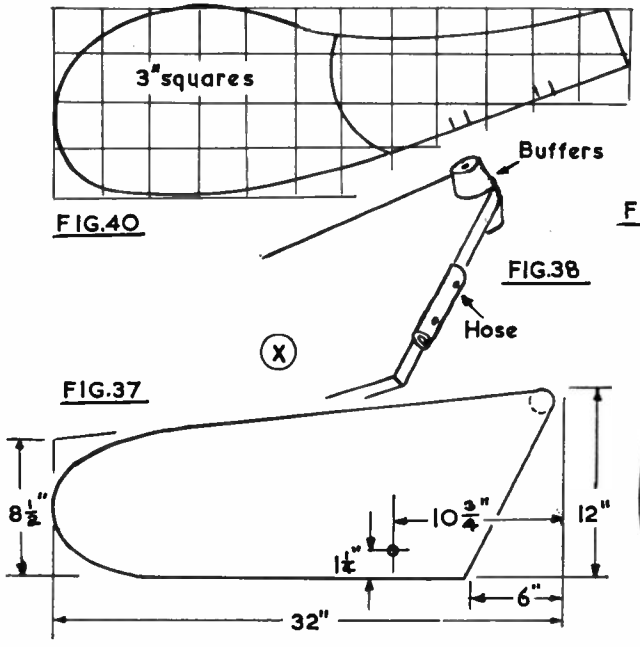


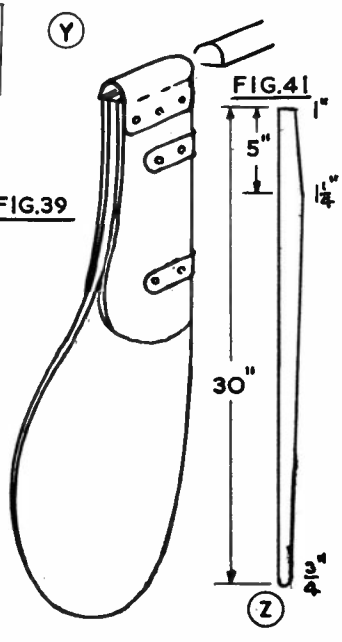
'Curlew' showing her paces under sail. In tests the prototype proved a very ready performer and a boat to be proud of

FOR sailing, 'Curlew' has a sloop rig, with a gunter main sail. There is a hinged centreboard to provide keel surface and a rudder which may have a fixed or lifting blade. All of the sailing gear may be stowed in the boat when out of use.

The spars are best made of spruce, although other soft woods may be used. Make the mast, U, square at first, tapering from 2 in. to 1½ in. Plane off the corners to make it octagonal then take off these corners and finally sand to round. At the foot cut a tenon to fit the mast step, Fig. 24. Round the top and cut a slot for a sheave to take the main halliard. Screw and glue two chocks to take the wire stays, Fig. 25. A small block for the jib halliard is fixed to a screw eye between the chocks.

Gaff V, and boom W, have grooves to take the roped edges of the sail, and are best made in halves. There is a square groove to take the roping and narrow slot to clear the cloth, Fig. 26. Cut the grooves in each half, either with a plough plane or a small circular saw, then plane down the edge to make the slot. Make sure the inside of the groove is smooth. Glue the halves together, with scrap wood under cramps or weights to spread the pressure. At the outer end of both spars drill a hole for the sail lanyard, Fig. 27. For easy insertion of the sail, open out the inner ends of the grooves for a few





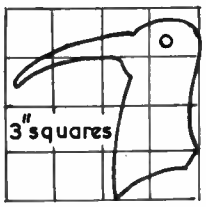


FIG.32

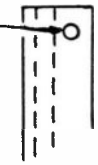


FIG 27

FIG.29

FIG.30

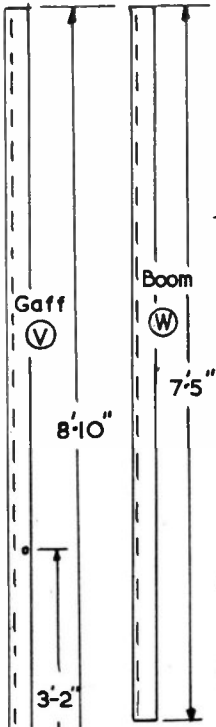
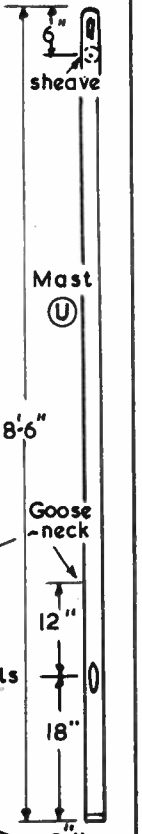
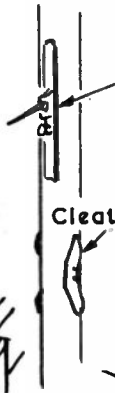


FIG.25





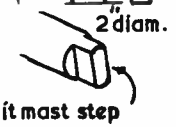


FIG.24

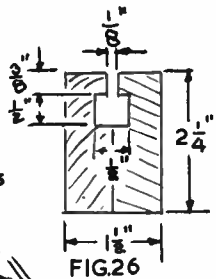
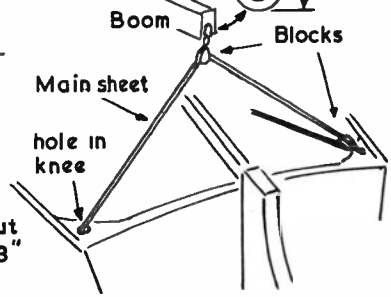


FIG.26

FIG.35



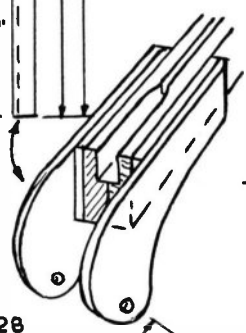


FIG.28

FIG.34

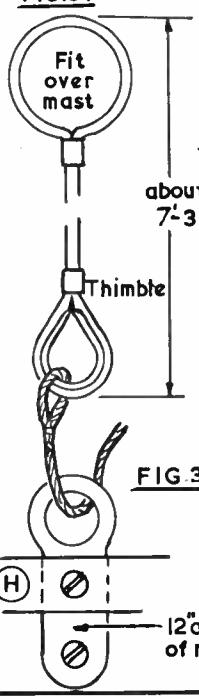


FIG.33

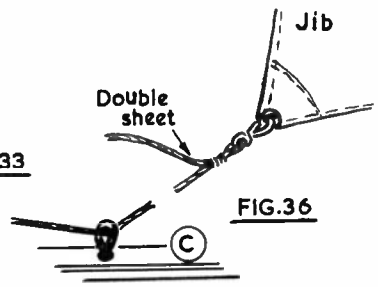


FIG.36

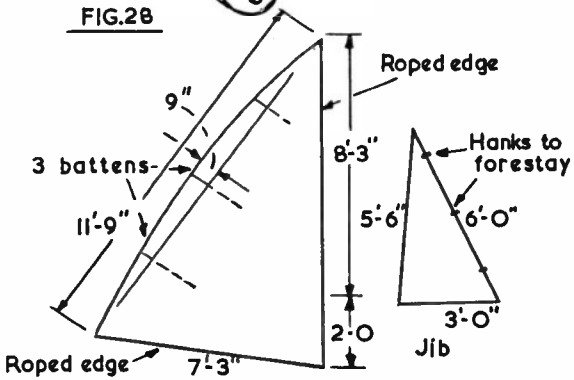


FIG.31

inches, Fig. 28. At the lower end of the gaff make up the thickness to 2 in. and add plywood jaws. The holes, Fig. 28 are for a rope strop to keep the jaws around the mast. An alternative to jaws is to fit a slide on the gaff and a track on the mast. This equipment may be bought as a set from chandlers. There may be a hole in the gaff for attaching the main halliard, Fig. 29 or a kicking strap plate may be fitted and the halliard attached by a key, Fig. 30. Thoroughly varnish all three spars.

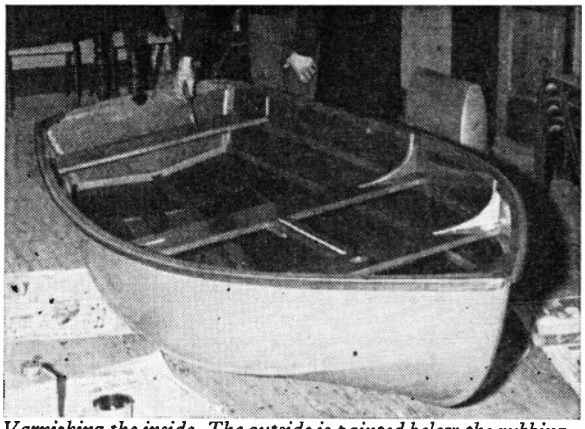
The drawing, Fig. 31 gives sufficient information for a sailmaker to follow. Terylene sails cost about £13. 10s. 0d. and cotton sails about £11. 10. 0. Terylene has a longer life and needs less attention. If sails are made at home, follow the instructions in a book on the subject. The insignia is shown on the full-size drawing or may be enlarged from Fig. 32.

The mast is supported by three stays — a forestay to an eyeplate on the top of the stem, and one each side (called 'shrouds') the shroud plates on each gunwale, Fig. 33. These pass through the notched rubbing strips. The stays may be ordinary fibre rope about 1 in. circumference, although they are neater if made of $\frac{1}{8}$ in. diameter flexible steel wire, Fig. 34. Many chandlers have the equipment for machine-made splices, or special clips may be used. The upper ends of the stays slip over the mast. The lower ends are tensioned by several turns of a lanyard.

The sails are hoisted by fibre rope halliards, each about 15 ft. long. Hemp or terylene about 1 in. circumference is suitable. The main sail is controlled by a sheet 20 ft. long. Although 1 in. circumference may be strong enough, $1\frac{1}{4}$ in. or $1\frac{1}{2}$ in. is more comfortable to handle. A block pivots on a plate held by a screw to the end of the boom, Fig. 35. The sheet is knotted under a hole in one quarter knee, then goes to the block on the boom and down to another fixed to an eyeplate on the other knee. The end is held in the hand.

The jib sheet is doubled, with a spring hank to attach to the sail at the centre, Fig. 36. The ends go each side to thimbles spliced in cords which go through holes in the gunwales immediately above the forward edge of the main thwart M.

When the sail is fitted to the spars, slide its roped edges along the grooves and lash the inner ends to the spars, then stretch slightly along the spars and secure with lanyards through holes in the ends. The inner end of the boom is attached to the mast with a universal joint, called a 'gooseneck', of which there are several varieties. Hoist the sail and locate the position of the gooseneck on the mast by trial. A light flag on a stick may be pushed into a hole in the top of the gaff to act as a wind indicator.



Varnishing the inside. The outside is painted below the rubbing strips

The centreboard is a piece of plywood, Fig. 37. The part which projects below the boat should be well-round. To provide a handle and stop, two rubber door buffers are bolted across the part which projects above the case. To provide enough friction to hold the board in any position, fix a short length of rubber hose to the board with two screws, which can be used to compress the hose and regulate friction, Fig. 38.

The rudder is shown with a fixed blade, which goes between two pieces which form the stock, Fig. 39. The full-size drawing which is available, also shows a method of making a rudder with a lifting blade. Mark out the shapes of the three parts, Fig. 40. Glue and nail them together. Round the edges of the projecting part of the blade. Where the tiller, Fig. 41 is attached to the rudder is should be the same width as the rudder and given a slight rounded taper. Taper and round the other end to make a comfortable grip. Bend a piece of sheet brass over the tiller and rudder head. Screw it in place. Arrange the rudder to pivot on the transom with a set of gudgeons and pintles. Paint or varnish the centreboard, rudder and tiller.

MATERIALS TO COMPLETE 'CURLEW'

Part	Number required	Length ft. in.	Width in.	Thickness in.
U Mast	1	8 9	2	2 spruce
V Gaff	2	9 0	$2\frac{1}{2}$	$\frac{3}{4}$ spruce
W Boom	2	7 6	$2\frac{1}{2}$	$\frac{3}{4}$ spruce
X Centreboard	1	2 9	12	$\frac{1}{2}$ plywood
Y Rudder	1	3 0	12	$\frac{1}{2}$ plywood
Y Rudder	2	1 6	9	$\frac{3}{8}$ plywood
Z Tiller	1	2 6	$1\frac{1}{4}$	$1\frac{1}{8}$ ash or mahogany

Rudder: 1 set gudgeons and pintles, to suit $1\frac{1}{8}$ in. rudder; 1 brass bolt with nut $1\frac{1}{2}$ in. × $\frac{1}{4}$ in.; 18 in. × $\frac{3}{8}$ in. shock cord; 1 piece brass 8 in. × 4 in. × 18 gauge.

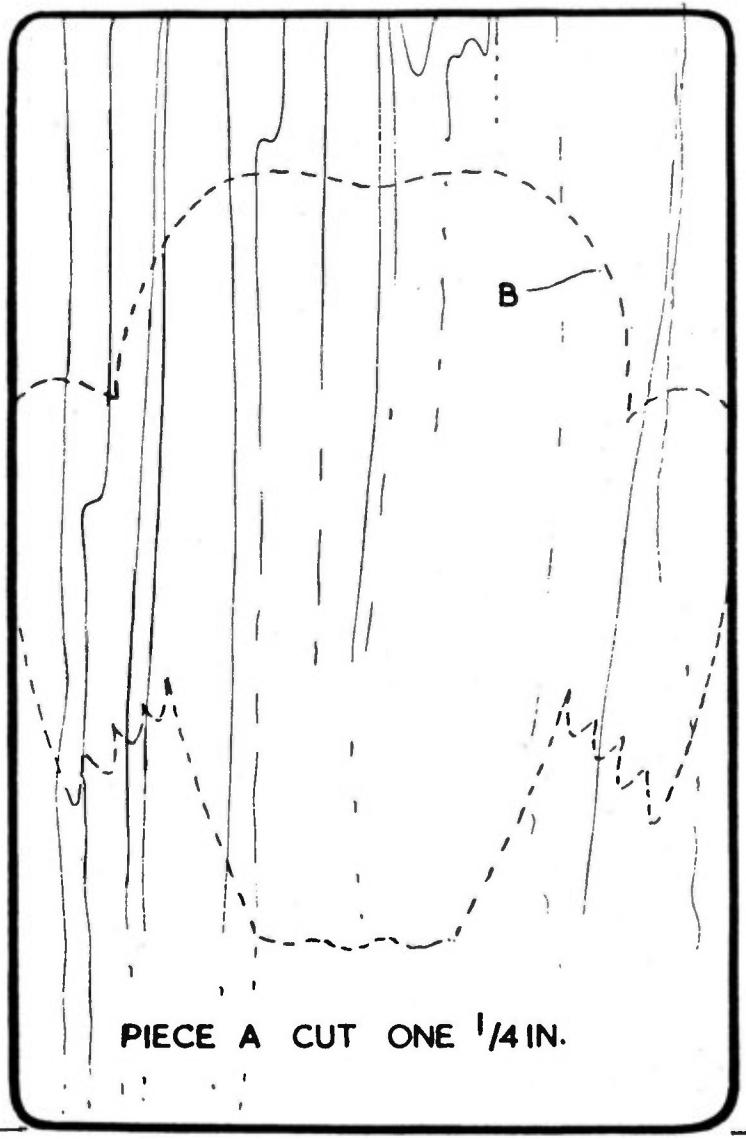
Centreboard: 2 door buffers about $1\frac{1}{2}$ in. diam.; 1 piece $\frac{1}{2}$ in. bore rubber hose 6 in. long.

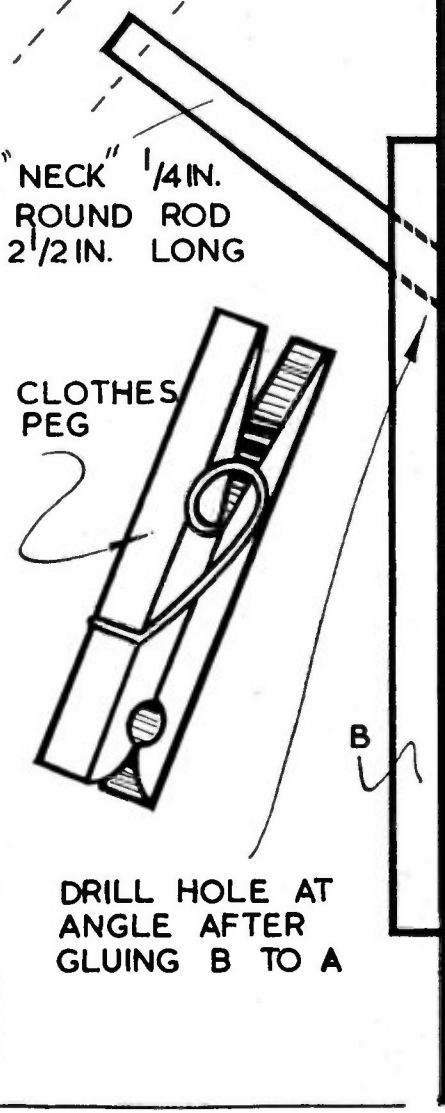
Fittings: 1 small gooseneck (Fig. 24); 3 single blocks to suit ropes (Fig. 25, 35); One $1\frac{1}{2}$ in. sheave (Fig. 25); 1 spring hank (Fig. 36); two 3 in. shroud plates (Fig. 33); 2 eyeplates; 2 thimbles, about $1\frac{1}{2}$ in. (Fig. 36); two 3 in. cleats (Fig. 24).

Rigging: Rope — 30 ft. × 1 in. circumference for halliards.
35 ft. × $1\frac{1}{4}$ in. circumference for sheets.
Stays, as drawing (Fig. 34).
Sails, as drawing (Fig. 31).

'LOUISE' The LESSER KNOWN 'PEG OWL

"SHOULD YOU EVER WANT TO JOT SOME
LOUISE WON'T EVEN CARE 'TWO HOO
BUT SHE WILL PROVIDE PENCIL &
PAPER





WL'

OME NOTES,
HOOTS"—

PIECE B
CUT ONE 1/4 IN.

DRILL HOLE
THROUGH B

DRILL HOLE
IN PEG TO
TAKE DOWEL

WALL
HANGER

A

MEDIUM
GAUGE
WIRE PUSHED
THROUGH B
AND BENT TO
FORM HOOKS
AS INDICATED

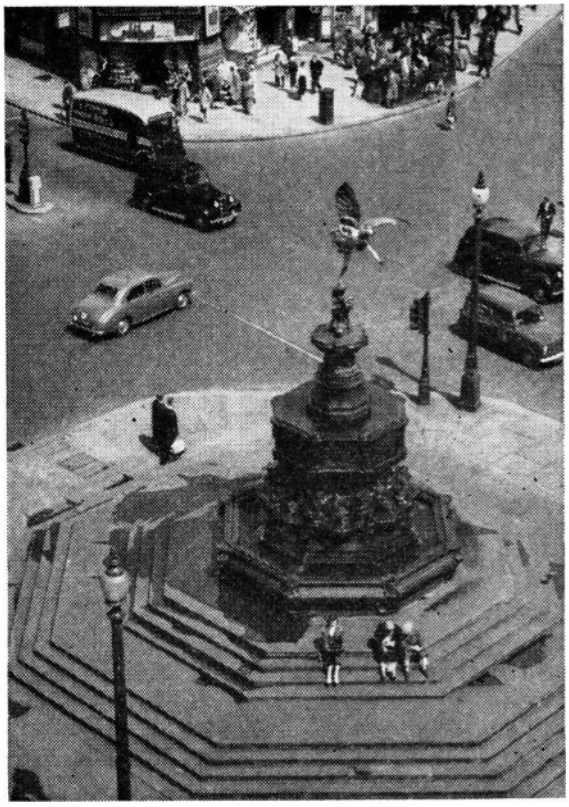
PENCIL

HOLES IN
NOTE PAD
TO TAKE
FEET

LOOKING UP AND DOWN

WE NORMALLY operate our cameras so that they are perfectly vertical and square with the subject. This is quite correct and our aim is to hold the instrument so that the plane of the film is parallel to the subject. Moreover, we try to hold it level so that any horizon in the picture remains level. These elementary rules are intended to prevent distortion, especially where buildings are concerned. Indeed, some early cameras incorporated spirit levels to ensure accuracy.

Taken very near to a tall building



This is a picture of Piccadilly Circus taken from a department store staircase. The distortion is not apparent.

While these rules should be observed for the majority of subjects we can introduce a freshness of appeal by deliberately breaking them. And we open up a new series of subjects in our towns and cities. Some of the new buildings are so high that is is almost impossible to take shots of them without special lenses. So if you want a record, or to try something new why not tilt the camera deliberately, taking some fascinating pattern pictures ?

The tall new buildings in our cities make admirable subjects and while we do not propose any strict rules we can make some practical suggestions. The width of a street may make some considerable difference in the final result. In a narrow street we may be obliged to point the camera at an acute angle and this has the effect of making the verticals lean towards each other. Taken at eye level we avoid traffic and pedestrians cause no interference by getting in the way. If you can take your shot from a corner you may be able to stand a little further away when the camera angle is not so acute and consequently there is less distortion. The better way is to take critical observations through the camera viewfinder, selecting the angle which is likely to produce the best result. Incidentally, many of the newer buildings with numerous glass windows make pattern pictures which have a fascination of their own.

We may also use the same method for taking angle shots of all kinds of statuary. What we are after are unusual angles of commonplace subjects. e.g. a statue seen from immediately below, perhaps against a nice sky, can often be far more attractive than a straightforward head-on shot. The same technique applies to a host of subjects awaiting experiment.

Extreme angle shots can be taken from the knee level and you will be surprised at the exciting pictures you can produce and which are so much different.

It follows that if we can point the camera upwards we can also point it downwards, providing we can obtain suitable viewpoints. By climbing the stairs of tall buildings we can look down on city streets and it is not unusual to find that the staircase is conveniently built at a corner and adequately provided with windows. Most public buildings and shops are constructed in this fashion and there is nothing to stop us from taking pictures of the streets below. The windows are ideal for photographers and providing they are not dirty you may take pictures in the usual manner. Needless to say we have to watch out for the sun, which must not be shining on the glass or you will catch the glare, otherwise it is possible to take a shot of the scene below without any trouble whatever.

Once again it becomes necessary to make some observations, looking at the scene as you climb the stairs. Or it may be that you have to proceed from one landing to the next, in other words we seek the best bird's eye view.

While we are fully aware that there will always be an element of distortion we are prepared to accept this in favour of the unusual and novel angle shot. At the same time you will be surprised how little is the actual distortion in the finished print. Look up, look down and see whether you can capture some of the really fascinating new viewpoints. (S.H.L.)

Know your

CIVIC HERALDRY

says S. H. Longbottom

EARLIER in this century it was quite common for holiday-makers to return home with china bric-a-brac bearing the coat-of-arms of the resort they had visited. Sometimes these were presents for friends, tiny vases, teapots, bowls and the like, and in the course of time they possessed, without knowing it, small collections of civic heraldry which adorned corner brackets and mantelpieces. There are still some people who are keenly interested in the collection of specimens of civic heraldry as a hobby.

Most towns now have armorial bearings and for your information a courteous request to the Town Clerk of a County Borough will bring a copy of the coat-of-arms. Details usually accompany the picture but please note that some towns charge a small fee, perhaps 2s. 6d., for a copy. Moreover, you should write to the Clerk of the Council where a Borough Council is concerned.

Our illustration shows some specimens obtained as mentioned but in order to understand what is referred to in the description the following notes should assist.

There are several component parts, sometimes called accessories, in armorial bearings and reference to any specimen will quickly reveal the method of designing.

ARMS is a term often loosely applied to the whole but we are actually referring to the central ornament, namely the shield. The latter is usually of simple shape and bears different emblems. Sometimes the shield is divided by bands or it may be quartered.

There are far too many methods of partition to describe here but you should know that the band across the top is called the *chief*. The right side of the shield is called the dexter and the left side the sinister from the point of view of a man holding the shield. We find bands running from the dexter side to the sinister and sometimes vice versa. These are called *bends*. In addition to bends we may have crosses, piles and chevrons. The diagram gives a few examples, the central one being the partition of the Norfolk County Council bearing. All these different partitions are known by special terms which are quoted in the description or blazon.

Bearings of Norfolk County Council

A shield may be partitioned vertically down the centre and this is said to be *palewise*. When the division is horizontal it is called *fesswise*. These terms can be found by reference to some of the many standard works on heraldry.

A CREST is usually added above the shield and this owes its origin to the fact that it represented the adornment worn by a knight on ceremonial occasions. In civic heraldry the crest has had to be modified considerably and often indicates some reference to local tradition or industry. The crest rests on a *wreath* which by custom bears no more nor less than six turns. The colours used for this wreath are normally the first metal and the first colour given in the official description.

SUPPORTERS stand at each side of the shield to guard and maintain the arm. Usually they are represented by lions, monsters, birds and sometimes human beings. For example, Sheffield City Council coat-of-arms has men standing at the sides, similarly with Barnsley, while the Oxford City Council coat-of-arms uses an elephant and a beaver.

During the course of time these animal supporters have become a little exaggerated, no doubt due to the fact that the artist has used considerable imagination. It is also interesting to note that some are pictured in postures which are almost physically impossible. Once again we find many different terms for the attitudes of the beasts supporting the shield. For example a Lion Coward will be a lion with its tail between its legs, a Lion Passant is a lion walking, the animal having the nearside leg raised and the off hind leg advanced, a Lion Rampant is an erect lion with the fore legs in the air and the off hind leg raised.

A MOTTO is normally found at the base inscribed in a scroll like ribbon. The wording is often in Latin but it may be in any language, usually indicating the town's motto.

Any civic authority possessing arms is entitled to display them on a BANNER. The shield form is omitted but the emblems forming the arms may be spread out. Such a flag may then be flown on a public building for local commemorations or in conjunction with the Union Jack on national occasions.

In every blazon you will be confronted with terms which are traditional. A start is made with the *field* (surface) of the shield. It will be of a *tincture* (metal, fur or colour) or it may be *parted*. The following heraldic terms will clarify the various tinctures.

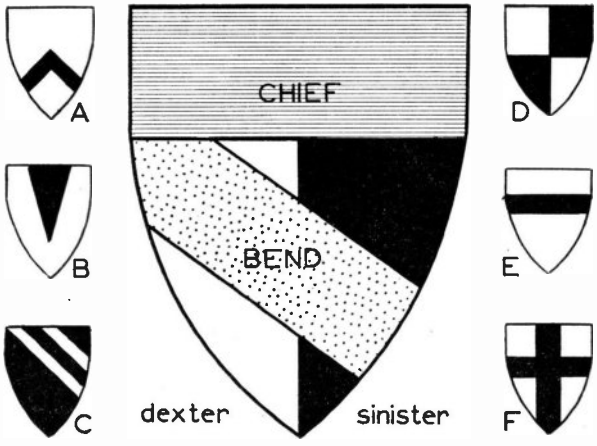
Metals	Argent – silver, or white	
	Or – gold	
Colours	Azure – blue	Gules – red
	Purpure – purple	Sable – black
	Vert – green	
Furs	Ermine – a white fur with black tufts.	

When a blazon adds *proper* it means that the emblem is represented in its natural or ordinary colours.

Most of the devices used in civic heraldry bear some relation to the trade or industry carried on in the locality. On many of the bearings of Lancashire towns we find shuttles or the cotton flower to represent cotton spinning and weaving. Seaside resorts often use ships while the shield will have wavy lines fesswise. They also use fishes, seagulls and the like. Agricultural areas prefer to use wheatsheaves while in some of the coalmining areas miners are used for supporters.

Despite the connections with local industry there are towns which have historic traditions. It may be hornblowing and we then find that hunting horns are introduced into the design. Similarly, the red rose of Lancashire and the white rose of Yorkshire, which are traditional emblems, cannot be ignored.

While heraldry has been a custom for many centuries it was not until about 1700 that civic authorities sought bearings. This is probably because the towns were only just expanding and it should be noted that it was only when a town became important and prosperous that the arms were acquired. Some of the older towns already had traditional emblems in their seals and these were often incorporated. More recent designs of towns which are becoming better known and without traditions have turned to modern devices.



The central shield shows the partition, with names, of the Norfolk County Council arms. The small shields show other partitions known as (a) chevron (b) pile (c) bendlets enhanced (d) quarterly (e) fess (f) cross

While royal lions and the fleur-de-lis do appear in civic bearings it is normally only an old town with some royal connections. The civic arms of Wakefield bear a fleur-de-lis, a royal emblem, and it is said that permission for its use was granted by Henrietta of France, Queen of Charles I. She was returning from France where she had collected some crown jewels. These were to be sold to assist her husband's war effort. Landing at Bridlington she was pursued across Yorkshire by Cromwell but found refuge and hospitality at Wakefield. You will no doubt appreciate that there are lots and lots of similar stories attached to traditional bearings of this kind.

If you are interested in civic heraldry as a hobby — since it is relatively easy to collect specimens at the moment — the question arises as to the best method to make a start. The size of the specimens varies, some are on postcards, some larger and some smaller but they can be stored in albums. Descriptions are usually printed on the backs of the cards so it is preferable to use a slot-in arrangement in your album.

You may write anywhere you like but I suggest that it is better to go about the job methodically and tackle one county at a time, perhaps starting with Anglesey, Bedfordshire, Berkshire, Breconshire, Buckinghamshire and so on to Yorkshire. Prepare a list of the counties in alphabetical order and then refer to a map to obtain the names of the towns within those counties. And remember that both the town councils and the County Councils usually have their own bearings. In Yorkshire there are three different County Councils, the East Riding, the North Riding and the West Riding and each has its own bearings.

You will learn a lot about geography, history and many other interesting facts. You will be able to compare the different coats-of-arms and as your collection grows quickly learn to recognize the meanings of the different emblems. You can also photograph boundary signs bearing the heraldry.

Your public librarian will be able to recommend good textbooks on this fascinating subject.

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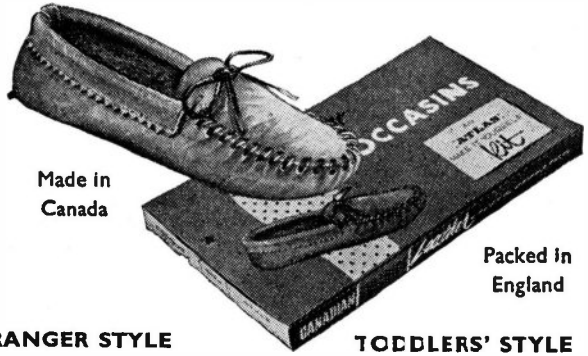

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New match labels from Russia

TOPICS FOR COLLECTORS

SPORT seems to be the main theme of current Russian match labels. The covers shown depicting football, netball, tennis and boxing are taken from a long set covering almost all known sports.

A most unusual cover is the one showing whale-boats. Ships fitted out for the whale fishery are generally not very large. But they are built strongly to protect them from the ice, as whales are chiefly found in the Arctic Seas.

Each ship carries six or seven whale boats, sharp at both ends, so that they may be rowed backwards or forwards, and large enough for a crew of from five to seven men. Each boat has two harpoons and five or six lances. In the bow of the boat is a tub with a long rope coiled up in it. One end of this rope is tied to a harpoon.

When a whale is seen from the ship the boats are lowered into the water. As soon as one of them comes near enough, the harpooner, who sits in the bow beside the tub, casts the harpoon with all his strength into the whale's body, at the same time shouting — 'Stern All.' The boat's crew at once back water with their oars, that is, they row backwards, so as to get away from the whale, which, as soon as it feels the harpoon, generally dives down to a great depth, dragging the rope after it so fast that water has to be thrown on to the side of the boat to keep it from taking fire through friction.

In about 20 minutes the whale has to come up to blow; the boats row up to it again, and a second harpoon is cast into it. Down it goes again, striking the water with its tail, so that great care has to be taken to keep the boats from being crushed. When it comes up again it usually spouts blood, and is then killed with lances.

The body of the whale is now towed alongside the ship and fastened to the side with chains. Some of the crew then get on to the whale, having spikes in their boots so they they may not slip, and cut into the blubber with sharp spades, taking out great pieces, which are hoisted to the deck by hooks and chains. All the blubber is thus cut off, and after the whalebone has been taken from the mouth the rest of the carcass is turned adrift.

The game of chess has been featured on a number of labels. The Russian cover, however, with its pleasing design, should prove popular. This game was invented in India to divert men from the attractions of actual war by giving them warfare in miniature.

For about 5,000 years the colossal tombs we call the Pyramids have reared their great bulk from the hot sands of Middle Egypt, challenging the wonder and admiration of the generations. Built to protect the bodies of the Pharaohs, they have long since yielded up their secrets. The polished granite and limestone slabs which once encased many of these monuments, concealing the entrance to the tomb chamber and making the sides impossible to scale, have been removed, but the ponderous interior structures, composed of rough-hewn blocks of stone or of brickwork, still stand as the greatest of all architectural achievements in point of massiveness. Here again this subject has been used on labels on many occasions, but the recent death of King Farouk should give this cover special interest.

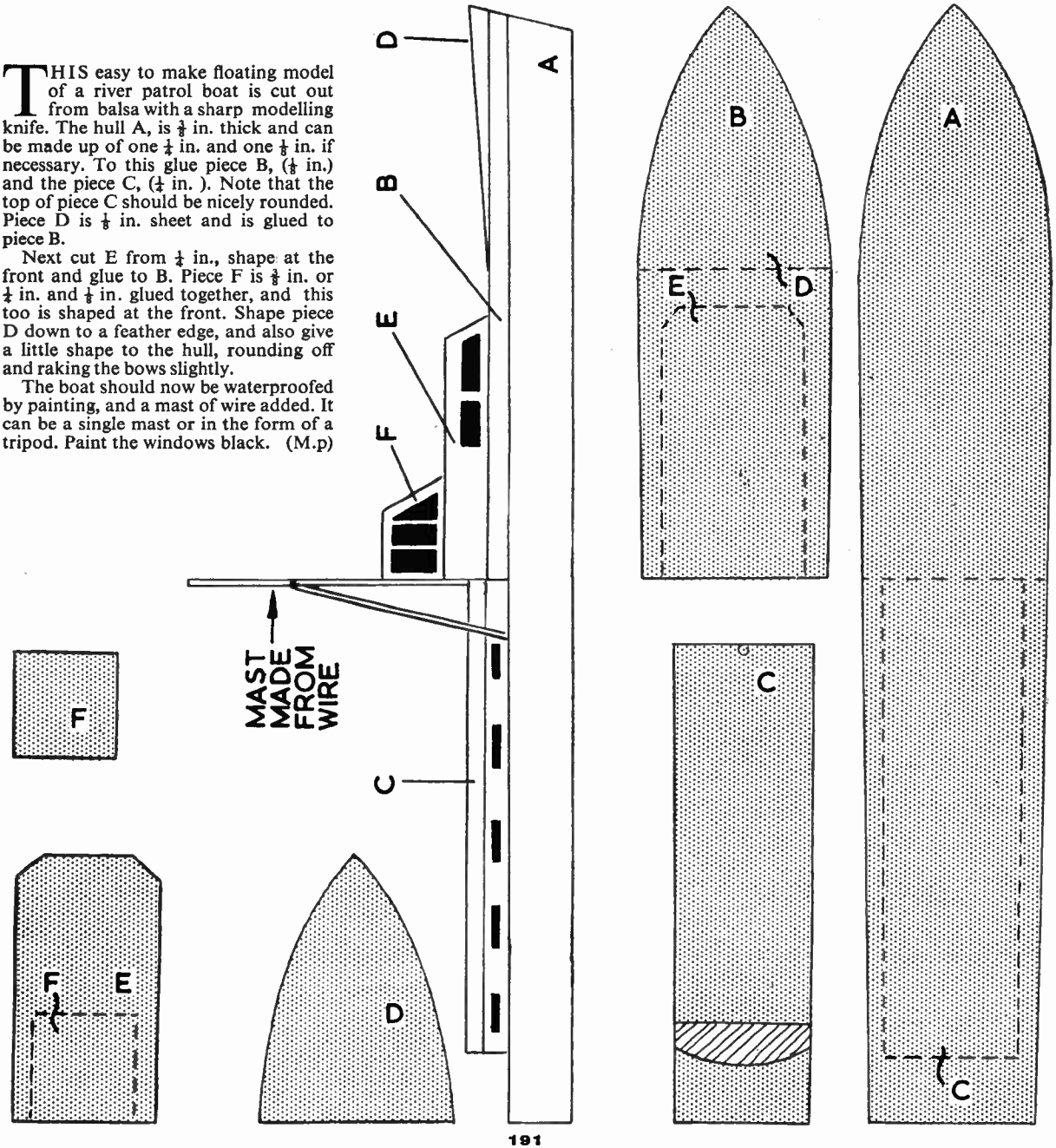
The Swan label belongs to a large set depicting most species of these beautiful birds, while the cover showing sheep is from a set on Farming.

River Patrol Boat in Balsa

THIS easy to make floating model of a river patrol boat is cut out from balsa with a sharp modelling knife. The hull A, is $\frac{3}{8}$ in. thick and can be made up of one $\frac{1}{4}$ in. and one $\frac{1}{8}$ in. if necessary. To this glue piece B, ($\frac{1}{8}$ in.) and the piece C, ($\frac{1}{4}$ in.). Note that the top of piece C should be nicely rounded. Piece D is $\frac{1}{8}$ in. sheet and is glued to piece B.

Next cut E from $\frac{1}{4}$ in., shape at the front and glue to B. Piece F is $\frac{3}{8}$ in. or $\frac{1}{4}$ in. and $\frac{1}{8}$ in. glued together, and this too is shaped at the front. Shape piece D down to a feather edge, and also give a little shape to the hull, rounding off and raking the bows slightly.

The boat should now be waterproofed by painting, and a mast of wire added. It can be a single mast or in the form of a tripod. Paint the windows black. (M.p)



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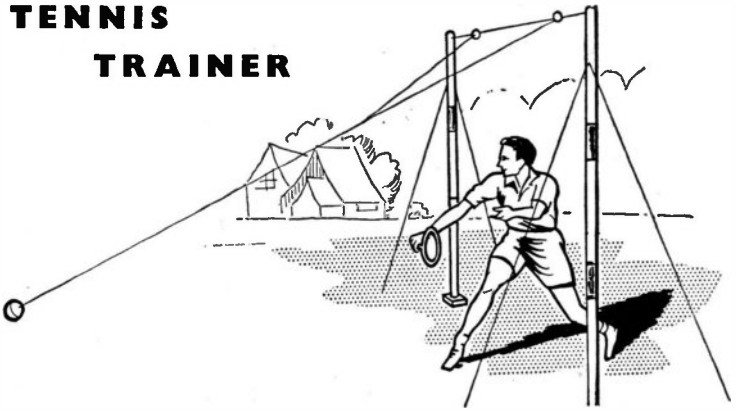

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