

# POWER-DRIVEN MODEL BOATS



Photo: Technical Editorial Service

**M**ODEL boats driven by machinery possess a fascination all their own, which is quite distinct from that of the model sailing-boat; and the model boat which "goes by itself," instead of being dependent for its motive power upon the vagaries of the wind, is firmly established as one of the favourite playthings of the modern boy or girl.

This has led naturally to the provision by leading model-makers of a very wide choice in power boats.

The cheapest and simplest power boats are driven by clockwork, and range in length from 12 in. to 30 in. or so. They are suitable for small ponds and quiet waters. A 24-in. to 30-in. boat is the smallest that is of any real ordinary use, and some wonderful products are available from Messrs. Bassett-Lowke, the world-famous model manufacturers of Northampton, at modest prices.

### Some Different Types

A particularly interesting line comprises a selection of characteristic types of ocean-going steamers, including cross-channel packets, which are modelled with two funnels, upper and lower decks, deck cabins and saloon, captain's bridge and chart-house, masts, and miniature wireless installation, as well as some minor but equally important details, such as accurately modelled ships' lifeboats on davits, stanchions running around the decks, and other fascinating items.

Along the same lines is an Atlantic liner with four funnels which, when placed at a short distance away, bears a striking resemblance to the great original. The "P" boat,

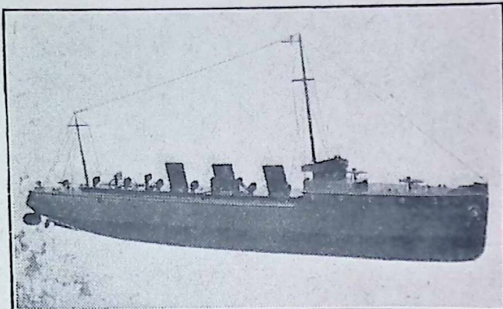
or submarine chaser, is another type of model which will appeal to the young seaman. These models faithfully represent the class of boat which did such splendid service during the war in the pursuit of hostile vessels and in the destruction of submarines. They are noted for their rakish body lines. Then there is the long, lean torpedo-boat destroyer, a fine model of which is illustrated.

Quite a different note is struck in the models of steam yachts, vessels famous throughout the world for graceful lines and peaceful intent. In the models all the features are faithfully represented, and the whole is particularly attractive, being finished with green enamel and lined with gold, and the deck cabins and saloons in polished mahogany.

An up-to-date model is the police patrol boat of the type used in the endeavour to suppress the smuggling of liquor. These little vessels have rakish lines, and a single funnel, and are faithfully representative of the vessels that perform the necessary task in such an admirable manner.

### Steam, Clockwork, or Electricity

On a model power boat the motive power is either clockwork, steam, or electricity. A clockwork motor will drive the vessel at full speed for several minutes with one winding. It has the merit of requiring little in the matter of care and attention beyond periodical cleaning. The electrically-driven boats are, of course, capable of much higher speeds, and the motive power is supplied from a small accumulator which can be recharged at a garage, or charging station, in the same way



A realistic steam-driven model of a Torpedo Boat Destroyer

as small accumulators used on the motor-car. The current from the accumulator is controlled by a switch which, when turned on, enables the electric motor to start revolving at high speed, this driving the propeller through a flexible coupling and so propelling the boat at a tolerably good speed.

Usually, the average electrically-driven boat will run for upwards of an hour on one recharge. The time of running can easily be lengthened by having a spare accumulator ready to fit immediately the other has run out.

In the 30-in. class the Dixey motor-boat is world famous for its notable performances. Several types are available. In the simplest, the motive power is an electric motor energised from an accumulator. Another pattern is made with a steam boiler and engine. The boiler is made throughout of solid brass, and contains a safety valve and filler. It is heated by means of a special type of methylated spirit lamp. One filling of spirit and water will run the boat for half an hour or more, and it can readily be refilled and as many more runs made with it as time and circumstances permit.

The engine is quite a simple little one, with an oscillating cylinder and a heavy flywheel, but its simplicity is its chief charm. It is quite sufficient to drive the boat at a speed a good deal

greater than the electric motors; in fact, for racing this type is preferable. Another type of Dixey racing motor-boat has two separate propeller shafts and two propellers. This of course, adds greatly to the speed and power of the boat, and is well worth the extra expense.

#### The Importance of Proper Design

To the uninitiated any small model motor-boat looks very much like another, but everything depends upon the scientific design of the hull and the care and accuracy with which it is made. This requires first that the design should be technically accurate, and the lines properly proportioned to the speed of the boat and the power of its engine. The hull must be made from well selected dry pine, and accurately shaped. This is only possible by the employment of highly skilled workmen, which would make the cost of the boats very high. Fortunately, however, by introducing special machinery and the adoption of modern methods of mass production, it has been made possible to turn out a perfectly moulded and absolutely accurate hull at the cost of a few shillings. Consequently, scientifically-designed models are now on the market at prices within reach of all.

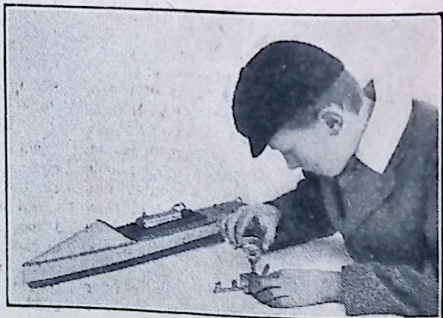


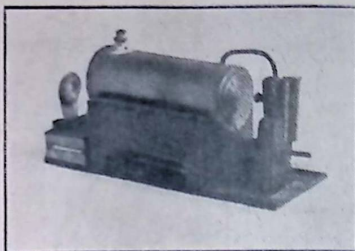
Photo: Technical Editorial Service  
Filling the spirit lamp of a model motor-boat



This method of production is not restricted to these little vessels. The same principles are applied in the modelling of torpedo-boat destroyers, police patrol boats, steam yachts, and other vessels of a like character with the same advantages to the purchaser. Nor is the production restricted to the little models for the purposes of the youngsters. A wider range of boats has been produced that can be used indoors at any time, and are therefore very attractive in wet weather, or when circumstances prohibit a visit to the pond side.

#### Water-line Models

These models only measure a few inches in length, and are known as water-line models, because the hull is cut off at the level of the water. Consequently, these boats can stand up on a flat table, which may be covered with blue cloth to represent the water. The models only cost a few shillings, and are wonderfully perfect in detail, as can be judged from the illustration, where the great liner *Majestic*, one of the very largest vessels in the world, has been modelled to a length very little more than the length of a man's hand, the picture showing the boat held between the finger and thumb. At the same time, it will be seen that every important detail has been reproduced, including the boats, cabins, bridges and other numerous details, with the result that these models have a particular charm and fascination. By building up a little model harbour, a set of boats can be



The simple and compact power-unit of the Dixey motor-boat

made to perform a number of evolutions, and various vessels can be traversed from side to side of the table as if making their voyages, while those who care to study naval tactics, or the movement of mercantile vessels at sea, and the rule of the road as adopted by mariners, can follow all these manœuvres with the small boats and

learn to appreciate how it is that when dozens of boats are passing to and fro in a crowded waterway, such as the mouth of a river, or the approach to a great seaport, they do so without collision or danger.

At the other extreme are model boats large enough to carry a crew of two or three men. One such is illustrated, and represents a large model warship some 25 ft. in length, driven by electric motors supplied from a large battery of accumulators. The crew are comfortably seated within the hull, and look out through conning towers and apertures cut through the super-structure of the boat, so that although they are out of sight themselves, they command a full view of all around them.



A miniature warship which will carry a crew of two or three men

Models of this type are to be seen at the great exhibitions where a miniature fleet is worked according to a regular naval plan of campaign, and wonderfully realistic results are obtained in this way. Access to the boats is through a removable part of the super-structure or upper works, and in the illustration the crew are seen attending to the details before going afloat.

Models of this character cost a good deal of money,

but are very interesting, and are especially appropriate for use in rivers and inland water. They are not suitable for use at sea.

There is still another field for the energies of the model mariner, especially those with a handy turn of mind and able to use simple tools. In such cases nothing is better than to obtain the requisite number of component parts and actually build up a model ship in every detail.

The actual handling of a model power boat of small type is comparatively a simple matter. The safety valve or filler cap is first removed and the boiler about two-thirds filled with clean water. It is best to take some in a clean medicine bottle as the pond water is likely to be very dirty and would choke the boiler. Sea water is salty and should never be used in a small boiler. The lamp is then filled with the best quality methylated spirit and the wicks adjusted and lighted. The lamp is placed beneath the boiler and in a few minutes steam is raised and the engine can be turned round a few times by hand to free it from condensed steam. All moving parts are given a drop of oil and the steam is turned full on. The boat should be in the water when this is done, and then the nose of the vessel is pointed seawards and the little ship sets out on her first voyage.

The rudder has to be so adjusted that the boat will steer as closely to the desired course



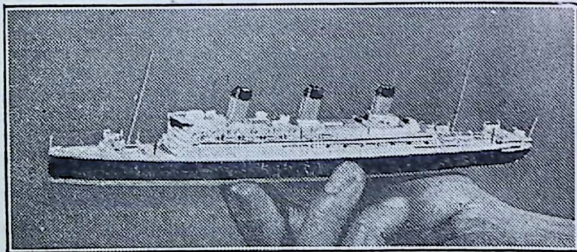
A model cross-channel packet on her maiden trip

as possible, but this can only be judged by experience, and by taking the pressure and direction of the wind into account. After some skill in handling the boat has been acquired, the owner or skipper can turn attention to racing and the more exciting aspects of this most delightful and healthy hobby.

To avoid the necessity of stopping and turning the boat by hand it is a good plan to provide a thin walking stick wherewith to

alter the course of the ship as she comes ashore.

Care should, of course, be taken not to allow the little craft to bump head on into the side of the pond when going at full speed, as there is a chance that the shock might injure the mechanism.



Water-line model of the famous liner "Majestic"



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