

Miniature Electric Battleship

By Carrol Wakeman

A WONDERFUL electrical working model of the United States battleship Massachusetts, which took two and a half years to construct, has been recently placed on exhibition. It was built by Samuel Orkin, who labored on it an average of 16½ hours a day. This most remarkable little craft is built entirely of steel, and after setting the automatic timing device runs entirely alone. She is capable of running at a speed of 14 knots an hour for six hours, or will tow three men in a canoe at the rate of eight miles per hour. It carries 12 miniature 14-inch guns, 12 six-inch guns, four rapid-firing and two aeroplane guns, also six torpedo tubes. It is 13 feet long and two feet in breadth, having a displacement of 750 pounds and a draft of 9½ inches. She is manned by a dummy crew, which, in accordance with the size of the ship, are three inches in height. There are two derricks, which lift the miniature

Then you gaze in wonder! Sharp sparks of real wireless messages are sent out, signal lights are flashing Morse code to other imaginary ships, and did you know the code you would ascertain that the officers of the dreadnought are flashing orders to other ships to fall into double battle line.

The doors in the superstructure of the ship swing open, and over 200 bluejackets, running from all parts of the deck, disappear through them into the heart of the vessel.

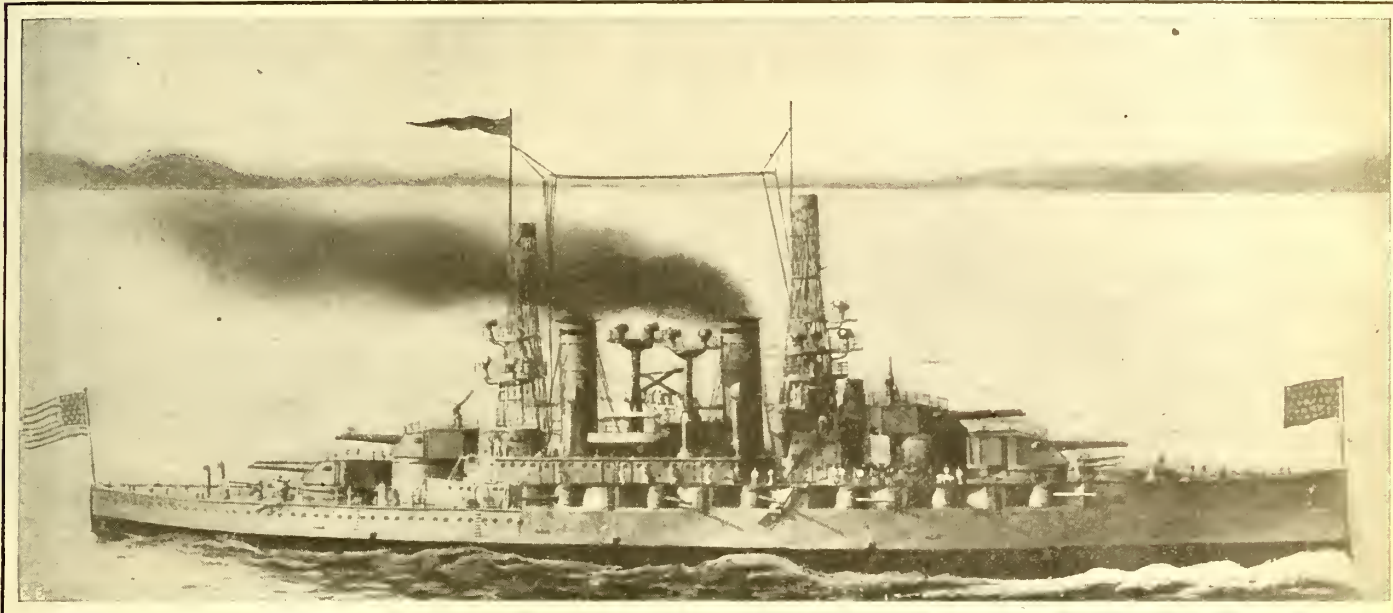
Suddenly an order is given, the siren whistle signals to clear the harbor, and anchors are hoisted automatically. The propellers begin to revolve and the rudder turns in response to the steering levers operated by the officer on the bridge, and this mighty engine of destruction is under way.

With her decks cleared for action and her crew below, all save the little group clustered around her commanding officer,

ors enter the cabins and the boat becomes motionless. As the automatic devices have stopped, it would take but a minute to repeat the same or send her in another direction. Mr. Orkin intends to build next a complete fleet of boats having submarines, torpedo boats, aeroplanes, et cetera. Then a genuine sea battle in replica can be faithfully staged, giving a most wonderful sight.

WAR EXTENDS APPLICATION OF WIRELESS.

France has about 10 wireless stations, the most powerful being the Eiffel Tower. The Germans have a great many more, especially the big station at Nauen, with the transmitting power occasionally raised up to 7,200 miles. They have a similar post in Spain, and until recently operated directly from Sayville, L. I. The latter plant is now in the hands of the United States Government, and German operators are



A Replica of the U. S. Battleship "Massachusetts" in Miniature. It Measures 13 Feet Long and by Means of Electricity Fires Guns, Flash Searchlights, Signals by Radio, Etc., Most Realistically.

steam launches and swing them over the side into the water, where they run for 15 minutes entirely independent of the mother ship. The vessel is run by nine motors, three of which revolve the three propellers; the main motor developing one horsepower. The motors receive their current from specially designed storage batteries, having a capacity of 72 amperes. The portholes have lenses; but, should any water get into the hull of the ship, it would be forced out by pumps working automatically every five minutes. A rudder which has a resistance of 50 pounds steers the ship automatically in any direction.

When the automatic device is released, and the various motors commence to work, magic is out-wondered. Suddenly the clash of a miniature band playing "The Star-Spangled Banner" rings out, and as the flags are hoisted slowly signal lights begin to flash in the fighting masts, real wireless messages are being sent, miniature metal sailors run along the decks, opening the doors and shutting them, saluting exactly as though they were human. They climb the shrouded ladders and begin to operate the 12 searchlights, throwing the powerful rays in all directions, at the same time elevating them at all angles.

you see her steaming away with a trail of smoke belching from her smokestacks. As she is maneuvering, the lower of the superimposed turrets swing to the right and a puff of smoke leaps from one of them.

Instantly the next gun speaks, and the next. When the turrets swing again, this time to the left and a full broadside is fired, the report is tremendous from all 12 guns.

Now the after turrets are taking up the cannonade, shooting their spirals of smoke far out and filling the air with the smell of powder. Next, the warship draws closer to the imaginary enemy, the smaller guns in the broadside batteries—the six-inch guns—come into action, swinging to a new angle at each shot.

When the supposed enemy has been sunk the battleship slows down in speed. The doors in the superstructure open again and her ship's company pour out again. The boat is steered automatically to the shore, wireless messages being sent to the victorious sailors. (The boat is steered automatically to the shore.) The band strikes up "The American Patrol," the siren shrieks, to clear her path, sailors marching, flags hoisting up. Gradually the ship draws near the shore, the band stops playing, the sail-

not permitted to dispatch messages. The Sayville plant apparatus was made in Germany.

When the cables connecting America and Germany were cut the great wireless system in nowise impaired Teutonic communications directly with the United States. It has been shown that the power of the German wave from this station paralyzed almost entirely all other wireless communications. It is said that as much as 90 per cent. of the successes of the Germans' offense and in escapes have been due to their innumerable wireless stations.

GERMANS TAKE CABLES FOR COPPER.

Abandonment of little-used cable street car lines, so that the copper may be obtained for war purposes, has been ordered by the municipality of Kiel, Germany, according to a Reuter dispatch from Copenhagen, which says that the work of tearing up three streets for this purpose has begun and that about 3,000 yards of cable, weighing approximately seven tons, will thus be available.

Other lines are expected to be similarly treated in Kiel and other German cities.