

BRITAIN, Japan, France and Germany are preparing to add new dreadnaughts to their fleets. America is expected to start construction of two 35,000-ton monsters this year. Floating fortresses, protected with hundreds of tons of tempered steel armor and armed with guns that can hit a foe beyond the horizon, the greatest of all fighting ships are starting a grim new race in naval armaments.

Now the ancestry of navies is a very long one, dating far back to the rude war canoes of pre-history. But the ancestry of the modern battleship is very short—only three quarters of a century to be exact.

"Exact" is the word. For it was just 75 years ago—on March 9, 1862—that the first of all sea-fights between iron-

clad ships took place.
On that date, in the enclosed waters of Hampton Roads, Virginia, the Merrimac and the Monitor fought one of the most fateful engagements in naval history. The clang of shot on their iron sides sounded the knell of the wooden navies of the world and made every fleet on earth obsolete.

In the early summer of 1861, both the Confederate and Union governments ordered experiments in the construction of iron-clad warships.

The Federals had evacuated the Gosport navy yard at Norfolk, Va., in the spring of 1861, burning and scuttling such ships as they were unable to take away. Among these was the fine steam frigate Merrimac, a ship-rigged vessel of 3500 tons mounting 40 guns. A Confederate naval officer, Lieut. John M. Brooke, suggested that she might be raised and rebuilt with armor. His suggestion was adopted.

So the Merrimac was brought to the surface. She was cut down to what had been the berth-deck. On the midship section, for a length of 170 feet, a raised superstructure was built, with sides slanting at a 45-degree angle, rising from the waterline to a height over the gun deck of 7 feet. These sides were made of pitch-pine and oak 24

The pilot house, rising at the forward end of this superstructure, was similarly armored. The ship was designed to lie so low in the water that the decks forward and aft to the raised portion would be just awash. A four-foot iron beak was fastened to the bow.

Rechristened the Virginia, the welrd-looking vessel was given an armament of 10 guns, equipped with a crew of 300 men, placed under the command of Commodore Franklin Buchanan, and ordered into active service.

THERE was no time for a trial trip; no time even to fire the guns in target practice. On March 8, 1862, when the ship cast off from the dock and headed out into the roads on her first cruise, she had to engage the enemy before her officers and men had a chance to find out how she would handle.

She handled, they learned, very badly. Drawing 22 feet of water, she was confined to the deepest parts of the channel. Her maximum speed was five knots. She steered so badly that it took her a good half hour to turn around. Nevertheless—ugly, cranky, untried, powered by condemned engines and manned by a green crew most of whose members had never been to sea at all—she was the mightiest warship in Chesapeake Bay that sunny March day.

The Northern fleet was moored off Newport News, across the channel. The Merrimac (that name will be used here, as it is the one most people are familiar with) went lurching and lumbering across, heading for the big wooden warships Congress and Cumberland.

As the Merrimac came within range, both ships opened fire. So did the shore batteries. The solid shot bounced harmlessly off the slanting armor; the shells burst without having the slightest effect. Waiting until he was within close range, Commodore Buchanan

slammed a destructive broadside into the Congress and drove the beak-like prow of his ship straight into the starboard side of the Cumberland—making a hole, as a member of the crew said, big enough to drive a wagon through.

The Cumberland promptly sank, her crew heroically firing their guns to the last without making any impression at all. The Congress tried to fiee, ran aground, and then exchanged broadsides with the Merrimac for an hour—at the end of which time the Congress was a wreck, her decks covered with dead and wounded, while the Merrimac was practically unscathed.

The Merrimac's armor was undamaged, although for a time she had been under the fire of 100 heavy guns. She had 21 men killed or wounded, due principally to projectiles coming in through the gunports. Commodore Buchanan was among the wounded, and the command passed to Lieut. Catesby ap R. Jones (spelling correct).

THE day's events had thrown the Federals into a panic. The South had an irresistible ship. Could she not, at her leisure, raise the blockade. destroy the Northern fleet piecemeal, steam up the bay and shell Washington, and bring final triumph to the Confederacy?

Wheezy and cranky as she was, the Merrimac might have done those things—had it not been for an equally cranky and uncouth warship which, while thatday's fighting was going on, was steaming in past the Virginia capes from the open sea. This ship was the Federal warship Monitor.

The Northern government had begun

its own iron-clad experiments at about the time the Confederates were raising the Merrimac. Capt. John Ericsson had contracted to build an armored vessel; and it was his vessel, the Monitor, built at New York, which—providentially—was nearing the end of its trip to Hampton Roads while the Merrimac was in its first fight.

The Monitor was even less like previous warships than the Merrimac. She was 172 feet long, and as low in the water as a raft, her sides rising hardly two feet above the surface. Near the bow was a low pilot house. Amidships was a huge cylindrical turret. Aft of it were two stubby smokestacks.

All of this—hull, pilothouse and turret—was heavily armored with iron. The turret, fitted to revolve on a bronze ring set in the deck, contained two 11inch guns, which were loaded inside and then run out through gunports.

So, when March 9 dawned, it was this strange ship, commanded by Lieut. J. L. Worden, that steamed out into Hampton Roads to meet the Merrimac, coming out to continue its havoc of the day before.

The battle itself was a draw. For four hours the two ships lay in the channel and hammered away at each other without doing any real damage. Each tried to ram the other and failed. Each took a terrific pounding at close range without being badly harmed. Each one, too, operated under difficulties.

In the end, the battle was broken off as if by mutual consent, the Monitor retiring to shallow water where the Merrimac could not float, and the Merrimas returning to her base.

Eventually, the Confederates evacuating Norfolk, the Merrimac was destroyed to prevent her falling into Northern hapds. In the fall of that year the Monitor foundered in a gale off Cape Hatteras, N. C.

