

### THE REMAINS OF PIZARRO, FOUNDER OF PERU AND CONQUEROR OF THE ANCIENT INCAS.

BY E. C. ROST.

In the famous ancient cathedral of Lima, Peru, are on exhibition the remains of Captain-General Don Francisco Pizarro, who founded Lima January 18, 1535. These remains are contained in a white marble coffin, with a glass front, thus exposing to view the well-preserved remains within. The coffin stands in a niche or more properly a vault, entrance to which is had through a massive iron-barred door. To view these remains one must fall into the good graces of an attendant in the cathedral, who for one sol (fifty cents) opens the iron doors, lights a candle and by this light the remains are examined.

It was my ambition to obtain a photograph of these remains, perhaps of greater historic interest than all else in South America. Pizarro was at once the founder of Lima (if not of South America), conqueror of the ancient and highly-civilized Incas, and may be regarded as one of the most brutal of all warriors. It required some very strong influences to procure the desired permission, and it was only after an appeal to my good friend Emanuel Elguerra, twice secretary to the Peruvian Legation in Washington, that the necessary permission was finally granted.

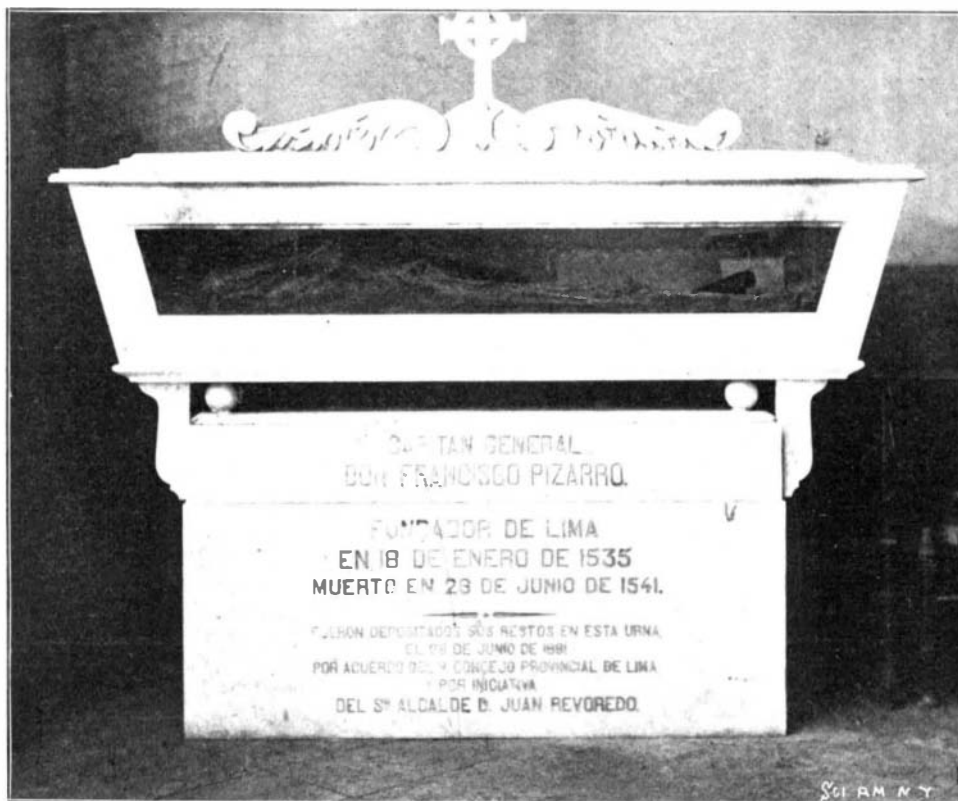
Owing to the poor light in the vault I was obliged to give the plate two and one-half hours' exposure, with the result herewith shown. Several rolls of parchment manuscript visible near the foot of the body are also contained within the marble coffin, which was placed where it now stands in 1891. Pizarro was killed in the palace at Lima June 26, 1541, and his remains were previously buried in a subterranean vault of the old cathedral.

### THE RUSSIAN ARMORED CRUISER "GROMOBOI."

Russia has always favored the armored cruiser, and she was, indeed, the first navy to put afloat any of those long, fast and powerful armored vessels which have recently become the popular and predominant type among the leading navies of the world. The SCIENTIFIC AMERICAN some time ago made its readers familiar with the Russian armored cruisers "Rurik" and "Rossia," which so excited the interest of the British navy that a quick reply to them was made in the "Powerful" and "Terrible." These latter vessels, however, because of their lack of side armor, would be a questionable match for the two small but better-armored Russian ships.

The "Gromoboi" is one of the latest of the Russian armored cruisers, and both in design and appearance is certainly a handsome and formidable-looking fighting ship. She is 473 feet in length, 68 feet 6 inches in beam, her draft is 26 feet, and displacement 12,336 tons. Like our own "Minneapolis" and "Columbia" she is driven by triple screws, her engines of 14,500 horse power serving to give her a speed of 20 knots an hour when everything is pushed to its full capacity. Built at St. Petersburg, and launched in 1899, she may be said to embody the very latest ideas of Russian naval designers as to what goes to make an efficient vessel of

her class. She carries, in the first place, a partial belt of 6-inch steel face-hardened by the Harvey process, and her main gun positions are also protected by 6 inches of the same armor. Although the belt is not carried entirely to the bow and stern, it is associated with deck plating 3 inches in thickness, and this, of course, with its turtle-back form, offsets in some measure the undeniable weakness of the unprotected ends. The armament is carried entirely in broadside,



THE REMAINS OF FRANCISCO PIZARRO

with the exception of a bow-chaser and stern-chaser, which fire through casemates on the main deck at the stem and stern. On the upper deck, at the four corners of the central armored citadel, are four 8-inch rapid-fire guns. Forward of these, on the main deck, but outside of the citadel, are three 6-inch rapid-fire guns, one on either bow, and the third as above mentioned, mounted in the bow as a bow-chaser. There is another 6-inch gun on this deck which is mounted, as also mentioned above, as a stern-chaser, a gun port being cut for this purpose on the main deck through the stern. There are also a dozen 6-inch rapid-fire guns mounted in broadside within the citadel on the main deck, six on either broadside. The "Gromoboi" also carries twenty 3-inch rapid-fire guns, while several smaller rapid-fire guns are mounted on the bridges, superstructures and in the fighting tops.

The Russians are great believers in the automobile torpedo and, unlike other great naval powers, they continue to mount a large number of these on their modern ships. The "Gromoboi" carries five torpedo tubes, of which one is above the water-line and the other four are submerged, the Russians using a special form of submerged launching tube designed for this purpose. Another characteristic feature of this vessel is her large coal capacity, which is set down in the official list as 2500 tons of coal. This handsome cruiser is designed primarily for service in Chinese waters, and this will account for the very large coal capacity (that is, large in proportion to her displacement) which has been given her. Our photograph was taken when the vessel was on her way out to Chinese waters and preparing to pass through the Suez Canal.

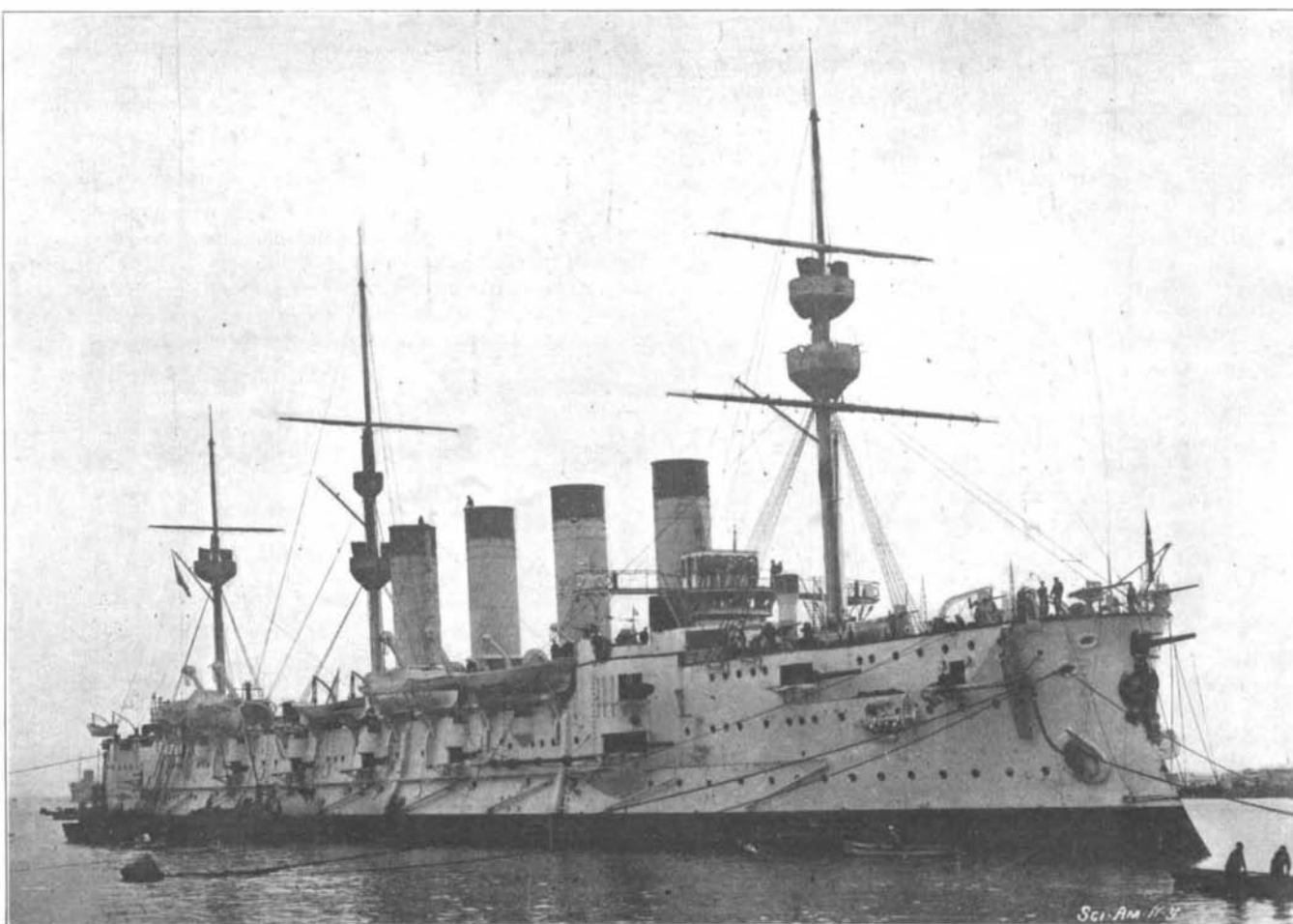
### New Type of Submarine.

Particulars are to hand of the new submarine boat invented by Mr. Claude Goubet, which has just been sold to the newly-formed British Submarine Boat Company. It is said to differ very widely from the newest "Holland" type, to which the present British submarines belong. While the latter have a reserve buoyancy when submerged, and are kept under by means of horizontal rudders, the Goubet boat possesses no reserve buoyancy when beneath the water, its weight equaling its displacement. The new type, in fact, weighs nothing when submerged, and it is said that the addition of a very small weight will set it sinking. In order to keep the boat on an even keel and prevent its either rising or sinking

the inventor has devised an arrangement which pumps water from a forward tank to one situated aft, and vice versa. The method of working is described as follows: Should the vessel incline in any direction a pendulum swings forward, and in so doing forms a connection between a motor and the batteries; the former at once commences working the rotary pump in a direction which causes the water to flow through the pipes from the lower tank to the higher, until the addition of water to the latter is sufficient to bring both the boat and tanks level again. The pendulum swinging straight then cuts off the electric current and the motor instantly stops.

An interesting work of creating a waterfall for the purpose of supplying power is now being carried on at the headwaters of the Little Blackfoot River, about

30 miles west of Helena, Mont. Miles of flumes and ditches are being constructed, by means of which a number of small streams are being brought together and carried five miles to the mouth of Hat Creek over a precipice of 500 feet. Here a power plant will be erected, and it is calculated that there will be 1000 horse power available. The current generated will be transmitted a distance of 10 miles to the Porphyry Dike Mines, at the summit of the main range of the Rocky Mountains, where there is one of the largest deposits of free-milling gold to be found in this country. The work is being done by a syndicate of St. Louis capitalists, and the active work has been in progress for two years and is now rapidly reaching a state of completion.



Displacement, 12,336 tons. Speed, 20 knots. Maximum Coal Supply, 2,500 tons. Armor: Belt, 6 inches; gun positions, 6 inches. Armament: Four 8-inch; sixteen 6-inch rapid-fire guns; twenty 3-inch rapid-fire guns and several smaller rapid-fire guns. Torpedo Tubes, 5. Complement, 750.

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