

but on the *Ctenophora*, a family well known to all students of pelagic animals.

ANTON DOHRN

Naples, February 28

### Faraday's "Experimental Researches"

IF your readers will compare Mr. Quaritch's letter in last week's NATURE with his advertisement of the two preceding weeks, they will see that it bears its condemnation on its own face. No words of mine can make it plainer than his do, that a reprint of an obsolete and valuable book was offered to the public as something not stated to be a reprint. Had that advertisement stated that the work was a "facsimile reprint" there could have been no ground either for complaint or for an indignation for which no apology is needed.

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SILVANUS P. THOMPSON

### Mimicry in Birds

ON the evening of the 24th inst. my attention was attracted by an interesting example of mimicry in the case of the starling. The first thing which attracted my attention was hearing the cry of a blackbird in distress, and on looking round, the only bird to be seen was a solitary starling, which, when I first observed it, was uttering its own note; but almost immediately thereafter it began to whistle loudly in imitation of the blackbird. After this, for the space of about half an hour, it kept up a constant succession of notes in mimicry of the chaffinch and sparrow, always, however, using its own note for the space of about half a minute between each change. I may add that it did not seem to have any particular order in which it repeated the various notes.

A gentleman in this neighbourhood tells me that last year he observed a similar occurrence in his garden; but this, so far as I can learn, is the only other instance of similar mimicry in this quarter. Perhaps some of your readers may be able to inform me if it is of common occurrence elsewhere.

Edinburgh, February 26

J. STUART THOMSON

### Great Waterfalls

SEEING Mr. Guillemard's inquiry (vol. xvii. p. 221), I refer him for accounts of the Falls of Tequendama, which I visited in 1851, to "Viajes Científicos a los Andes Ecuatoriales, &c.," por M. Boussingault, traducidas por J. Acosta; Paris, 1849, and "New Granada: Twenty Months in the Andes," by Prof. Isaac F. Hutton. (New York: Harper and Brothers, 1857.)

New York, February

THOS. BLAND

### SEVERAL NEW APPLICATIONS OF SCIENCE INTRODUCED INTO WAR

ON Saturday last, the Speaker of the House of Commons and a large following of members, visited the Portsmouth Dockyards, mainly for the purpose of witnessing some torpedo warfare; the *Inflexible* was also inspected. Near the starboard side of the ship, one of the sheds had been converted into a temporary lecture-room, and provided with numerous diagrams, a model of the ship, and a full-sized skeleton model of the 80-ton gun, 26 feet long, 6 feet broad at the breach, and having a calibre of 16 inches, with four of which it is intended to arm the turrets of the *Inflexible*. The diagrams were drawn on a scale of one-fourth of an inch, half an inch, and 6 inches (half-size) to the foot, and were designed with the object of enabling the visitors to draw a comparison between the structures of the *Dreadnought* and the *Inflexible*, and the respective thicknesses and disposition of their armour. As soon as the party had assembled around the drawings, Mr. W. B. Robinson, the Chief Constructor of the yard, stepped forward and delivered a brief illustrative lecture on the main points and differences of the two ships. He pointed out that while the length of the *Inflexible*—320 feet—was exactly the same as the *Dreadnought*, its beam—75 feet—was 11 feet 2 inches broader; that its volume of displacement was greater, its

armour heavier, its turrets thicker, and its armament more formidable. While, however, the *Dreadnought* was armoured along the water-line, the citadel of the other ship, which was placed upon an armoured deck below, was the only protected portion of the *Inflexible* above the water. The arrangements of the turrets was also different; for whereas those of the smaller ship were placed along the middle line, the turrets of the larger were *écheloned* to starboard and port in order that all the four guns might be trained upon an enemy either direct ahead or direct astern. The weather deck between the turrets had also been raised, so that the guns could be loaded from below without the necessity of depressing their muzzles. She was supplied with steam and hand pumps, and with Friedland's injectors, which would enable her to discharge 5,300 tons of water an hour. She had 133 water-tight compartments, and water would be admitted into the double bottom to reduce the rolling of the ship. Her torpedoes would be discharged from submerged ports in the bows instead of from above the water in the side, as in the *Thunderer*. The ventilating arrangements will be of the most perfect kind; for, as Mr. Robinson remarked, while in the other ships the fresh air is pumped into all parts, no means are adopted for assisting the vitiated atmosphere out of the ship. In the *Inflexible*, however, the ventilation comprises both supply and exhaust arrangements. The air is brought down into an air chamber, or cave of *Aëolus*, in the central part of the citadel, and is driven thence by steam fans through large pipes, which pass under the armour deck and up into the structures above, and by means of branch pipes fitted with cocks every compartment in the ship can receive an abundant supply. By these cocks an officer can regulate his air supply in much the same way that a householder on shore can regulate his water supply. The vitiated air is sucked up through pipes with perforated ends into the funnels, and thence through the citadel into the open air. The *Inflexible* will be brig-rigged, but her masts will be unshipped before going into action. Her engines are of 8,000-horse power, and she is expected to attain a speed of 14 knots.

Runs of the 16-inch Whitehead torpedo were next made. One was fired from a steam pinnace as in actual warfare, its course, which was in a straight line for about 200 yards, being distinctly traceable by the exhaust air-bubbles which it threw up. The other was discharged from the surface of the water for the purpose of showing how readily it sank automatically to the required depth. The next novelty submitted was the steam pinnace, which, without having a single man on board, can do everything but stoke and keep its own fires alight. Its engines are worked and its movements are controlled wholly by electricity, the cable which supplies it with its mysterious power being unwound from winches as the pinnace sails on its mission, "And drags at each remove a lengthening chain." Its principal use is to drop and explode countermines in the neighbourhood of an enemy's mines, and by destroying them clear a harbour for the approach of the fleet. It performed its work to the amazement of the beholders on Saturday. The countermines were represented by a couple of barrels containing small charges of gun-cotton, and with these slung over the sides it took its departure from the boat containing the battery and dropped the casks at a distance of about 200 yards, igniting at the same time the fuses which blew the barrels into match-wood, and returned obediently, like a "thing of life," to the controlling hand after having accomplished its duty. Near at hand in the basin the torpedo nettings for protecting ships against the locomotive torpedo were exhibited on the sides of the *Actæon*, while the prow of the *Bloodhound*, gunboat, was armed with the trawl with which it is proposed to pick up sunken mines. The notes of the bugle were next heard as a summons to quarters and for the *Thunderer* to be cleared for action. In an