

several members. Some doubted the antiquity of the pottery; others said the representations were from a patient suffering under a local disease called *llaga*. In summing up, Professor Virchow concluded that the pottery was authentic and that the lesions shown were pathological, but that whether from leprosy or some other disease must be left for further investigation.

THE THROWING-STICK IN AMERICA.

At the last meeting of the French Association for the Advancement of Science Mr. Henri Michel brought sufficient evidence from new finds to show that the throwing-stick was in use in some parts of Peru. He calls attention to the Eskimo throwing-stick described by the traveler Pinart as in use in the Kadiak Archipelago, and also that found in very ancient deposits in France.

It is gratifying to see that, instead of arguing that Peruvians, Eskimo and Cave-men borrowed one from the other, he pointed out that these are examples of independent invention. Evidently, it is not surprising to come across it again in the old village sites of Florida (Cushing), and it is equally needless on this recurrence to found any theory of the affinities of the ancient key-dwellers.

I may add that Mr. Michel is not the first to observe the presence of the *atlatl* in Peru.

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NOTES ON INORGANIC CHEMISTRY.

THE large quantities of compounds of the rare earths accumulated by the Welsbach Light Company, at Gloucester, New Jersey, under the direction of Mr. Waldron Shapleigh has been alluded to in SCIENCE. Of these earths none are rarer than neodymium and praseodymium, the two elements into which Auer von Welsbach separated what had been previously considered the

element didymium. It is pleasing to chronicle that Mr. Shapleigh has put generous quantities of salts of each of these elements in the hands of Professor Harry C. Jones, of Johns Hopkins University, for atomic weight determinations, and the results are published in the last *American Chemical Journal*. More than two kilograms of the ammonium neodymium nitrate, and nearly as much praseodymium, were used as the basis of a careful series of purifications. Twelve determinations were made with each metal, and the atomic weight results are praseodymium = 140.45 and neodymium = 143.6. It is curious that these results are almost the reverse of those found by the discoverer, von Welsbach, 143.6 and 140.8, and almost suggests a question as to whether the discrepancy does not arise from a typographical error in von Welsbach's work. From the fact that the stable oxids are Pr_2O_3 and Nd_2O_3 , the higher weight might be anticipated for neodymium, but the placing of these elements in the periodic system is yet a problem.

In a recent voyage from the Cape of Good Hope to England samples of water were drawn daily from the ocean and analyzed. The results are published by C. J. S. Makin in the *Chemical News*, and compared with the results from the *Challenger* expedition. The average total solids was 36.31 grams per thousand, the quantity being slightly greater in the North Atlantic than in the South, as was found in the *Challenger* samples. In general the results correspond to those of the *Challenger*, but the amount of sodium chlorid was found slightly less (76.9 as against 77.76 parts per hundred of total salts), while the amount of magnesium chlorid (11.4 to 10.88) and calcium sulfate (4.23 to 4.07) was slightly greater. Free ammonia was found 0.19 milligrams per liter; ammonium salts 0.36, and albumenoid ammonia 0.56.

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