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Troy, N.Y., July 29.

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—A vigorous statement of the scientific principles upon which the treatment of criminals should be based will open *The Popular Science Monthly* for August. It is by Professor Edward S. Morse, who takes as his title "Natural Selection and Crime." The Warfare of Science papers, by Dr. Andrew D. White, will be continued with a chapter on "Geography," in which are given the various mythological and theological ideas concerning the form of the earth and the proper mode of representing it that have prevailed in ancient and mediæval times. "The Manufacture of Boots and Shoes" will be described by George A. Rich. This is one of the illustrated series of Articles on American Industries, and, in both the text and the pictures, tells a story of wonderful progress. An ethical study on "Veracity," by Herbert Spencer, will be among the contents.

—The Geographical Society of Germany will shortly publish a volume commemorative of the four-hundredth anniversary of the discovery of America by Columbus, which will, it is said, be one of the most elaborate publications ever issued by the society. Dr. Konrad Kretschmer, the editor of the forthcoming work, has visited all the principal libraries of Italy in search of material, and has had access to many rare manuscripts hitherto unused. The memorial volume will contain forty five maps relating to the discovery of America, thirty-one of which are said to have never been published. Emperor William has contributed 15,000 marks

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towards the expenses of publication, etc., and the work will undoubtedly be a most valuable contribution to the early history of America. It is expected that it will leave the government printing office early in August.

—In a capital address on "tooth culture," delivered at the annual meeting of the Eastern Counties Branch of the British Dental Association, and printed in *Lancet*, Sir James Crichton-Browne referred to a change which has taken place in bread, as one of the causes of the increase of dental caries. So far as England is concerned, this is essentially an age of white bread and fine flour, and it is an age therefore in which we are no longer partaking, to anything like the same amount that our ancestors did, of the bran or husky parts of wheat, and so are deprived to a large degree of a chemical element which they contain—namely, fluorine. The late Dr. George Wilson showed that fluorine is more widely distributed in nature than was before his time supposed, but still, as he pointed out, it is but sparingly present where it does occur, and

the only channels by which it can apparently find its way into the animal economy are through the siliceous stems of grasses and the outer husks of grain, in which it exists in comparative abundance. Analysis has proved that the enamel of the teeth contains more fluorine, in the form of fluoride of calcium, than any other part of the body, and fluorine might, indeed, be regarded as the characteristic chemical constituent of this structure, the hardest of all animal tissue, and containing 95.5 per cent of salts, against 72 per cent in the dentine. As this is so, it is clear that a supply of fluorine, while the development of the teeth is proceeding, is essential to the proper formation of the enamel, and that any deficiency in this respect must result in thin and inferior enamel. Sir James Crichton-Browne thinks it well worthy of consideration whether the reintroduction into our diet of a supply of fluorine in some suitable natural form—and what form, he asks, can be more suitable than that in which it exists in the pellicles of our grain stuffs?—might not do something to fortify the teeth of the next generation.

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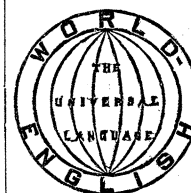
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