

two hundred and thirty times sweeter than cane-sugar. Experiments in giving it to animals show that it has no deleterious effects upon the system. Unlike sugar it acts as a preventive against fermentation, which fact alone is an important point in its favor. Though its price is yet high the sweetening power is so great that it is even now in reality cheaper than sugar.

THE SODA LOCOMOTIVE.—When caustic soda is exposed to the action of steam, intense heat is the result. In this new locomotive this fact is made use of in the production of steam. At the starting point the boiler is heated by superheated steam, and by allowing the exhaust steam to play upon the soda, the heat generated keeps the water at the required temperature. When in about six hours the soda has become saturated, it can be dried and used over again. George Kuchler, a German, is the inventor of this new departure in engineering. It is used in Berlin and other European cities, and in the St. Gothard tunnel.

PICTURES BY TELEGRAPH.—A method has been invented by W. Gemmil by which a photograph taken at one end of a line can be reproduced at the other. The picture is first projected upon a selenium shell placed in a telegraphic circuit, which, according to the degree of the intensity of the light received, acts upon the current and, through it, a number of subsidiary currents connected with an incandescent lamp shining with various degrees of intensity consonant with the strength of the current. These successive illuminations, says the *Photographic Times*, would give patches of corresponding broadness to the points of the picture thrown upon the selenium shell, and the final picture, of course, would consist of these points in various depths of shade.

A NEW INCANDESCENT LAMP.—A lamp which is a good substitute for the lime light and for the electric light in private experiments has been discovered by Dr. Regnard. It acts by the ignition of air and petroleum vapor in contact with platinum.