

to parallel in the past. From accurate observations it has been ascertained that this unusual British weather was determined for particular localities not by the height of the barometer but by the direction and force of the wind.

A movement is on foot in the United States for securing the adoption of a uniform standard of time throughout that Country. Considerable disagreement exists, however, as to the best standard to be adopted, i.e., whether Washington, or New York, or Pittsburg, or Greenwich time shall be observed. The strongest claim appears to be put forward in favor of Washington, not only as being the capital city, but as possessing the well-known National Observatory, which being the only astronomical institution should, it is contended, do for the United States what Greenwich does for Great Britain. The Signal Service Bureau proposes to utilise its system of telegraphic communications for distributing accurate time signals to all important points.

The light emitted by various plants and animals is commonly, but erroneously, supposed to be due to the presence of phosphorus. Dr. T. L. Phipson of London has carefully studied this subject and has arrived at the conclusion that the luminosity of plants and animals is, in the majority of cases, due to the presence of a peculiar substance which he has termed *noctilucine*. This substance is the cause of the light of the fireflies and of the organisms which commonly produce the so-called "phosphorescence" so frequently seen in the sea. Noctilucine is at summer temperatures a fluid nitrogenous substance, slightly viscous or oily in appearance, but containing neither phosphorus nor phosphoric acid. The light emitted by phosphorescent beings is produced by a slow oxidation of this noctilucine which is secreted by a special organ just as the bile is secreted by the liver.

Every one has heard of butterine and oleomargarine and few are they who can be sure they have not consumed a certain amount of these substances. A Mr. Bateman has lately prepared an elaborate account of the manufacture of these "Butter Substitutes" in the United States. The manufacturing process is as follows: Beef suet is thrown into tanks containing tepid water, and after standing a short time it is repeatedly washed in cold water and disintegrated and separated from fibre by passing through a meat-hasher, worked by steam, after which it is forced through a fine sieve. It is then melted by surrounding the tanks with water of a temperature of about 120° F.; great care is taken not to exceed that point, otherwise the fat would begin to decompose, and acquire a flavor of tallow. After being well stirred, the adipose membrane subsides to the bottom of the tank, and is separated under the name of "scrap," whilst a clear yellow oil is left above, together with a film of white oily substance. This is removed by skimming, and the yellow oil drawn off and allowed to solidify. The refined fat, as the substance is now termed, is then taken to the press-room which is kept at a temperature of about 90° F, and is packed in cotton cloths, and placed in a press; on being subjected to pressure oil flows away, and cakes of pure white stearine remain; these find their way to the candle makers. The oil is known as "oleo-margarine;" it is