

servants became feverish and could not obtain air enough except by breathing with open mouths, a proceeding which parched their throats. This induced a craving for drink. They found themselves, however, unable to drink, they could only sip and found it impossible to take a quarter of a pint at a draught. The normal rate of breathing was greatly accelerated and they were compelled every now and then to give a spasmodic gulp just as fishes do when taken out of water. A desire to smoke was felt, but the pipes would scarcely burn from lack of oxygen. One very peculiar fact was that at heights of 1900 feet the party could not make long steps. Mr. Whympers says "our steps got shorter and shorter until at last the toe of one foot touched the heel of the previous one."

Great indignation and surprise have been excited by the recent discovery of implements of destruction on British steamers sailing from American ports. These so-called "infernal machines" are simply chambers containing an explosive, the essential constituent of which is nitro-glycerine, together with a clock-work which is arranged so that in a given time it will cause a hammer to strike the explosive. This dangerous substance, nitro-glycerine, is prepared from the well-known and much-used glycerine. When glycerine is added to strong nitric acid at a low temperature and gradually mixed with concentrated sulphuric acid, nitro-glycerine separates as a yellow oil, the composition of which is represented by the formula  $C_3 H_5 (NO_2)_3$ . It is not an easy matter to explode nitro-glycerine by means of heat, indeed it is said that a lighted match may be plunged into it with perfect safety. When however it is exposed to a concussion an explosion takes place at once. The object of the clock-work and hammer in these machines is to bring about a concussion within a certain length of time after the clock-work is set in motion. Glycerine itself which has so many economic uses is quite harmless. It is prepared from fats which are compounds of glycerine and fatty acids. The purest glycerine is obtained by exposing fats to the action of steam, but a large quantity is obtained as a by-product in the manufacture of candles. Tallow is saponified by time when the glycerine separates in a crude form and this when purified forms the commercial article.

Dawsonite is a hydrous carbonate of aluminium, calcium and sodium, which was first brought before the Scientific world in 1874 by Dr. B. J. Harrington of McGill College, who named it in honor of Principal Dawson. This mineral has been discovered in very few localities, so far as we know, although it is comparatively abundant in some of the dykes of the Montreal Mountain. Dawsonite has recently been found at Piau in Tuscany, and the analyses which have been made show that the Tuscan specimens vary but little in composition from those obtained at Montreal.

In our August issue we presented a condensed report of a paper on Uniform Standard Time, read before the Society of American Civil Engineers at their late meeting in Montreal, by Mr. Sanford Fleming, C.M.G. We are glad to learn that Mr. Fleming is to attend the International Geographical Congress at Venice, in the interest of the question of Standard Time, and is already on his way thither.

J. T. L.