

Berlin Pneumatic Dispatch.—The proposed pneumatic dispatch in Berlin embraces 26 kilometres of tube, and has 15 initial stations. The wrought iron tubes have a clear breadth of 65 millimetres, and lie about one metre below the surface of the ground. The letters and cards which are to be forwarded, have a prescribed size, and are enclosed in iron boxes, or cartridges, each of which can hold 20 letters or cards. In order that they may pack closely, they are covered with leather. From 10 to 15 cartridges are packed and forwarded at a time; behind the last cartridge is placed a box with a leather ruffle, in order to secure the best possible closure of the tube. At four of the stations are the machines and apparatus needed for the business. The forwarding of the boxes is effected either through compressed or rarefied air, or through a combination of the two. Steam-engines of about twelve horse-power are used for the condensation or exhaustion of the air. Each main station has two engines, which drive a compressing and an exhausting apparatus, the steam for each engine being furnished by two boilers. Large reservoirs are employed, both for the condensed and for the rarefied air. The former has a tension of about three atmospheres; the latter, of about 35 millimetres of mercury. The air, which is heated to 45° C. by the compression, is cooled again in double-walled cylinders which are surrounded by water. The velocity of the boxes averages 1000 metres per minute, and a train is dispatched every 15 minutes. Each of the two circuits is traversed in 20 minutes, including stoppages. The entire cost of the enterprise will be about 1,250,000 marks.—*Dr. Grüneberg, in Wochenschrift des Vereines Deutscher Ingenieure*, March 31. C.

Change of Cane Sugar into Glucose.—Mons. U. Gayon finds that raw sugars, like molasses, gradually exchange crystallizable for incrySTALLIZABLE sugar, leading sometimes to a loss of 33 per cent. The change is accelerated by heat and moisture. It does not appear to be due to acidity but to a true fermentation.—*Acad. des Sciences*. C.

Phosphorescent Organic Bodies.—B. Radziszewski finds that the following bodies have the property of shining in the dark, as soon as they are put in contact with an alcoholic solution of caustic potash: hydrobenzamide, amarine, lophine, and the crude product of the action of alcoholic ammonia on benzile. C.