

available knowledge which is furnished in clear and simple terms. The University of Melbourne is contemplating something of the kind at present.

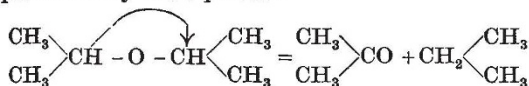
To me, systematic popular education is requisite if the ideals voiced by Sir Walter Fletcher are to be translated into practical action. Perhaps the end can be achieved in some other way, but ultimately the public-spirited citizen and the elector must be pleasantly instructed in the necessity for adequate support. Lecturing him for his neglect will not advance matters.

JAMES W. BARRETT.

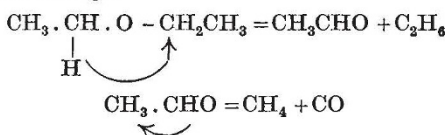
105 Collins Street,
Melbourne, C.I., Jan. 2.

Homogeneous Catalysis of Gaseous Reactions.

A SHORT time ago it was shown that the decomposition of di-isopropyl ether in the gaseous state is subject to a remarkable catalytic influence of iodine. The course of this reaction, which is homogeneous, and quite distinct from that of the uncatalysed reaction taking place at higher temperatures, can be represented by the equation



We now find: (a) That the same reaction takes place under the catalytic influence not only of iodine, but also of various alkyl iodides and, to a smaller extent, of bromides (*iso*PrI, EtI, MeI, *iso*PrBr, EtBr, C₂H₅Br₂, HBr); chlorides have little influence; (b) that this catalytic mechanism, involving the transfer of a hydrogen atom within the molecule, is a general one. Thus the changes



both occur readily in this way.

The decomposition of ethyl ether is quite different from the normal homogeneous decomposition (conditioned by the collision of two ether molecules).

It is to be noted that the hydrogen atom, the transfer of which is catalysed, is in each case attached to the carbon atom adjacent to the oxygen.

Kinetic studies of these and similar reactions are being published shortly.

It is interesting to note that this phenomenon, where the hydrogen atom is loosened and transferred under the influence of an electronegative atom, is in a sense complementary to the fundamental process of acid and basic catalysis in solution, which according to Brönsted always involves the giving or accepting of a proton by the catalyst.

K. CLUSIUS.
C. N. HINSHELWOOD.

Physical Chemistry Laboratory,
Balliol College and Trinity College,
Oxford, Jan. 29.

Do Glass Tubes or Rods Bend under their own Weight?

ABOUT seven years ago, in discussion with some scientific friends, I heard the opinion expressed that glass tubes if stored upright tend to bend permanently under their own weight. The same idea is to be found in print. Thus, in Ostwald's "Physico-Chemical Measurements" (English Translation, 1894, p. 66), we read that glass tubing "must be kept lying flat, otherwise it will become permanently curved".

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It seems difficult to reconcile this with the known fact that the annealing temperature of soft glass is somewhere about 500° C.; but it was thought worth while to test the point directly. A glass rod 4.9 mm. in diameter was laid across two nails about 1 metre apart on a brick wall, and loaded at the middle with 300 grams, which was judged to be near the limit of what it would safely bear. (In fact, after the experiment was concluded, it broke under test at 1060 grams.) The height of the mid-point was read on a mirror glass scale; the initial loading produced a depression of 2.8 cm. After that, for seven years there was no further movement large enough to be considered significant. Slight changes of reading were observed from time to time, but they were not systematic, and probably due to internal movements in the wall. The final reading was 1 millimetre lower than the initial one. If we have regard to the last four years alone, the net change of reading has been too small to measure.

The stress applied in this experiment is very great compared with any that can be caused by the weight of the rod itself. It is therefore quite certain that glass of mature age does not bend in the way suspected. It is perhaps just possible that newly drawn glass may do so.

RAYLEIGH.

Terling Place, Chelmsford,
Feb. 18.

"Encyclopædia Britannica."

THE version of the article "Tides" in the 14th edition of the "Encyclopædia Britannica", to which Prof. Proudman refers in his letter published in NATURE of Feb. 15, has appeared only in five per cent of the sets we expect to distribute. That it appeared at all was due solely to an accident at the printers, which we much regret.

The publishers have spared neither trouble nor expense to satisfy their distinguished contributor over this article; many thousands of sheets containing the first version have been destroyed, and new pages containing the revised article printed to replace them.

Moreover, in fairness to our subscribers, we think it should be added that Prof. Proudman has conceded to two of our representatives that there is no error or misstatement of fact in the first version of the article, and has founded his objection to it on the ground that space was not given for a fuller elaboration of his views.

The Encyclopædia Britannica Co., Ltd.,
W. H. FRANKS
(Manager).

Imperial House,
80-86 Regent Street,
London, W.1, Feb. 17.

The Classification of the Primates.

IN his letter on "The Classification of the Primates" in NATURE of Jan. 25, Dr. Tate Regan twice refers to "the Mascarene Lemurs". The term "Mascarene" is usually restricted to the Islands of Bourbon, Mauritius, and Rodrigues, of which the first two were discovered by Mascarenhas at the beginning of the sixteenth century. Is there any authority for extending it, as Dr. Tate Regan does, to Madagascar?

The direct evolution of the Platyrrhines from a Lemuroid ancestor, independently of the Catarrhines, was suggested by W. D. Matthew (*Am. N.Y. Acad. Sci.*, 24, pp. 215-16), but he offered no valid evidence.

HENRY BURY.

The Gate House,
Bournemouth West, Feb. 1.