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**CURRENT SCIENCE—50 YEARS AGO**


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[From *Current Science*, Vol. 1, May 1933, Page 360]

**A New Method of Producing Extremely Low Temperatures**

(F. Simon. *Physikal. Zeitschr.*, 34, 232, 1933).

**I**N the reports of the Proceedings of the Thuringian-Saxonian section of the German Physical Society which met at Breslau on the 8th and 9th January 1933 a new method of producing liquid helium is described. The principle is extremely simple. A small vessel filled with helium at about 100 atmospheres pressure is cooled to about 11° Abs. by means of solid Hydrogen and then is thermally isolated from the surroundings; the helium is now allowed to escape through the inlet itself. The work done in the expansion cools the

helium so that about 60% of it becomes a liquid and remains in the vessel. The method is so simple that it could be easily demonstrated before the meeting. In the discussion that followed it was suggested that by demagnetising gadolinium sulphate, even 0.1° Abs. might be reached whereas the lowest temperature reached by evaporating helium was 0.7° Abs. (Keesom, 1932). Further details of the method are to be published in the *Zeitschrift fur Physik*.

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**Production and Hatchability of Eggs as affected by different kinds and quantities of Proteins in the Diet of Laying Hens.**

[By T. C. Byerly, H. W. Titus and N. R. Ellis., *J. Agric. Res.*, 46, 1933, 1]

**T**HE above has been the subject of a number of previous researchers, but the present authors would appear to be the first to obtain quantitative data in support of their conclusions. The results bring into relief the following—(1) feeding with meat, fish, crab or butter-milk as the source of protein led to not only more intensive egg production but also better hatching than that with grains and vegetables; (2) increasing the percentage of protein in the diet within limits of 11.2 and 23.6 augmented egg-production by increasing (a) intensity of production, (b) average egg-weight, and (3) diets containing

vegetable proteins only increase the incidence of chondrodystrophy in the embryos of hens. Embryos in eggs from such hens had also a high second-week mortality.

The above results would suggest that there was some fundamental deficiency in the vegetable proteins tried by the authors. It would be of interest to extend their observations to different other forms of vegetable and animal proteins and to determine the precise chemical nature of the deficiency leading to chondrodystrophy in chicken.

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