on the part of his friends and himself could have induced him to write this letter, from which I take the following extracts:

. . . "The middle classes are suffering frightfully in the present depreciation of money. Our salaries (which are for the present being paid) seem high according to the figures, but they are insufficient for the purchase of even the ordinary necessities of life. We may, for instance, possibly once a week have a bit of meat, but for the rest of the time we have to rejoice if we can get enough bad bread and vegetables to appease hunger. Sugar is enormously dear and never to be had in sufficient quantities. Clothing we can not buy, for a single simple suit would cost more than a month's salary. It is the same with underclothes and shoes. What our present conditions will lead to in the near future it is impossible to conceive."

. . . "You can imagine it is in the highest degree painful for me to write you such a letter, and only real suffering would justify it."

. . . "While we are suffering in Austria from actual need of food, packages of food sent by individuals in America rarely reach their destination. Money is practically of no value, for there is little food to be purchased with it."

Professor ————, whose name I withhold, writes that the American Relief Administration (whose office in this country is at 115 Broadway, New York), has established an American food warehouse in Vienna, from which food is distributed that has been shipped from this country.

Jas. Lewis Howe

Washington and Lee University,
Lexington, Virginia

JOURNALS FOR PRAGUE

To the Editor of Science: Dr. M. Kojima, surgeon-commander, Japanese Navy, has but now arrived from Tchecho-Slovak where he visited Professor A. Biedl. The latter has sent through him a message to American scientists asking if they can arrange to have sent to him the various scientific publications and periodicals, since he is unable to purchase the same on account of the rate of exchange, lack of funds, and general disturbed conditions in Tchecho-Slovak. It seems to me that the least we can do is to arrange through our editing boards some procedure by which Dr. Biedl may receive current numbers of our scientific periodicals. I would appreciate greatly your giving this communication publicity in "Science." Dr. Biedl's address is Das Institute fur Experimentelle Pathologie, Prag, Tchecho-Slovak.

Frederick S. Hammett

NOTES ON METEOROLOGY

THE SUPPOSED RECURRENT IRREGULARITIES IN THE ANNUAL MARCH OF TEMPERATURE

"The belief that periods of unseasonable heat and cold tend to recur at or about the same time from year to year has prevailed over a great part of the world for many centuries and has been the subject of extensive scientific investigation." This is the opening sentence in an extensive, scholarly discussion of the "Literature concerning supposed recurrent irregularities in the annual March of temperature," by C. Fitzhugh Talman, librarian of the Weather Bureau.[6]

Most of the literature deals with a cold period in May.

> Over a considerable part of continental Europe it has been popularly believed since the Middle Ages that destructive frosts were likely to occur at a certain period in the month of May, and with the elaboration of the ecclesiastical calendar these frosts became definitely associated with the days dedicated to Saints Mamertus, Pancras and Servatius (May 11, 12, 13), or, in south-central Europe, Saints Pancras, Servatius and Boniface (May 12, 13, 14), hence known as the "ice saints." . . . With the construction of synoptic weather charts, the barometric conditions that accompany depressions of temperature gradually became apparent. . . . [This cold period] was found to occur when, owing to the rapid warming of the land regions as compared with the ocean, a center of low barometric pressure develops over southeastern Europe while high pressure prevails over the ocean

[6] *Monthly Weather Review*, August, 1919, Vol. 47, pp. 555–565.

to the northwest, a situation that gives rise to cold northerly and northeasterly winds in central Europe. . . . While the immediate causes of these interruptions of temperature has thus been made clear, it is not yet certain whether or to what extent such interruptions, with their attendant barometric conditions tend to recur from year to year on certain dates, such as the days of the ice saints. Irregularities in a curve showing the mean annual march of temperature as deduced from a record of 50 or 100 years may be due to excessive departures in particular years rather than to a real tendency to recurrence on particular dates, and, on the other hand, a tendency to recurrence might not manifest itself in the mean curve, especially, if as some students have surmised the phenomenon is one that undergoes periodic fluctuations.

Bearing on this question is a mathematical discussion by Professor C. F. Marvin, entitled, "Normal temperatures (daily): are irregularities in the annual march of temperature persistent?"[7] Average annual temperature curves based on the averages of the means of each week over a period of years, may be well-covered mathematically in a curve of one or two harmonics. The residuals, which in a given period are much the same over a large part of the eastern United States, are mostly due to some extreme departures occurring in a single year of the record: which throws doubt on the existence of recurrent irregularities.

Professor Marvin's mathematical analysis of only 15-year averages shows that it is possible to get a surprisingly accurate, smoothed, normal annual temperature curve from a short record.

NOTES

The *Monthly Weather Review*[8] contains so much material that these occasional notes in SCIENCE have by no means covered even a majority of the 150 contributions, not to mention hundreds of abstracts and other items of meteorological interest, published during the past year. For a brief summary and mention of many of the important contributions published during 1919, and the reader is referred to the American Year Book; and for the articles and notes themselves, to the *Monthly Weather Review* files maintained at all Weather Bureau stations, and at a few hundred college, university and public libraries.

Hereafter, these notes on meteorology and climatology for SCIENCE will be continued by Mr. C. LeRoy Meisinger, assistant editor of the *Monthly Weather Review*.

CHARLES F. BROOKS

WASHINGTON, D. C.

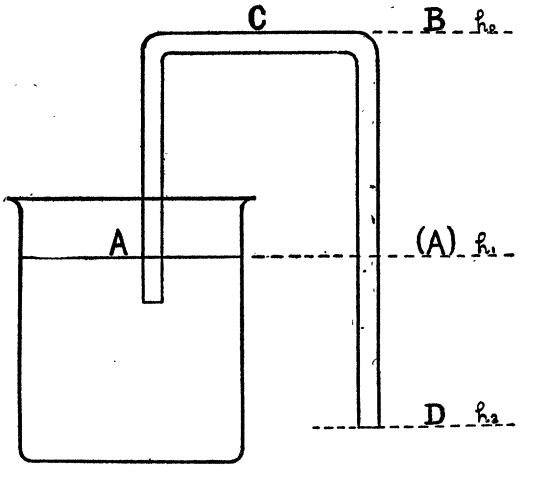
[7] *Ibid.*, pp. 544–555, 4 plates, fig.

[8] Government Printing Office, Washington, D. C., printed for the Weather Bureau.

SPECIAL ARTICLES

THE SIPHON IN TEXT-BOOKS

THE treatments commonly accorded to the siphon in text-books of physics of college grade may be classified in three groups. I have attempted to reduce the characteristic features of each group to a typical or standard form. There is no intention to quote and italics are strictly mine. Reference is made to the diagram, which will serve in common for the three methods of treatment.



I. The pressure at *A* is the resultant of an *upward* pressure equal to the atmospheric pressure and a *downward* pressure due to the column of liquid *AB*. The pressure at *D* is the resultant of an *upward* pressure equal to the atmospheric pressure and a *downward* pressure due to the column of liquid *DB*. As *DB* is greater than *AB*, the resultant pressure