

On December 8, 1869, Lapham petitioned Congress to inaugurate a system of forecasts, reciting the losses of men and ships in storms on the Great Lakes and the success of the French weather service which organized a telegraphic weather service with maps in 1855 (Cong. Doc. Ser. No. 1431, Doc. 10). The bill requested by Lapham was introduced by Congressman H. E. Paine of the First Wisconsin (Milwaukee) District on December 14, 1869, and became law on February 9, 1870 (16 Stat. 369).

The Wisconsin Historical Society possesses a holographic letter from Abbe to Lapham dated January 7, 1870, acknowledging Lapham's authorship of the legislation in the words, "I must express the pleasure experienced in realizing the energy with which you are pushing the matter of a telegraphic meteorological system of storm warnings."

The society also has the holographic commission appointing Lapham assistant to the chief signal officer of the United States on November 8, 1870, signed by the chief signal officer, Albert J. Myer. According to the Annual Report of the Chief Signal Officer for 1871, Lapham had "supervision of the signal service on the lakes" (page 7), and Lapham's report in the same volume (page 167) shows that he issued a storm warning on the day of his appointment and continued making weather maps for forecasts until the end of the season of navigation.

The appointment of Abbe to a similar position at Washington took place on January 3, 1871 (*ibid.*, page 8) and he began forecasting on February 19, 1871, 103 days after Lapham.

It is also interesting to note that this society has two weather maps issued by Abbe for the Cincinnati Board of Trade and similar to those issued by the Western Union Telegraph Company at Cincinnati in continuation of Abbe's maps (see W. H. Alexander, "A Climatological History of Ohio," Columbus, 1923, pages 24-25). None of these maps contains isobars, forecasts or other "analysis." Only data of temperature and wind direction are given.

For a fuller account of Lapham and his contributions, reference is made to Eric R. Miller, "New Light on the Beginnings of the Weather Bureau from the Papers of Increase A. Lapham," *Monthly Weather Review*, February, 1931.

EDWARD P. ALEXANDER,
Director

STATE HISTORICAL SOCIETY,
MADISON, WIS.

A RELATIONSHIP BETWEEN DENTAL CARIES AND SALIVA

A CLEAR relationship has been discovered between the rate of starch hydrolysis by saliva and the inci-

dence of caries in the individual. Without exception among those studied, individuals with extensive caries (twenty or more cavities) produce saliva which hydrolyzes starch under standard test conditions with extreme rapidity. Individuals without caries produce saliva which hydrolyzes starch very slowly.

In 51 careful case studies at the Forsyth Dental Infirmary and at Radcliffe College no one has been found whose salivary reaction is out of line. Table 1 reflects the data accumulated to date:

TABLE 1

Number of individuals	Number of cavities	Average time
4	0	44.5 min.
6	1 to 3	36.5 "
8	4 to 6	18.5 "
14	7 to 9	8.7 "
13	10 to 12	6.8 "
2	13 or 14	4.0 "
2	20 or 21	1.8 "
2	32 or 33	1.0 "

A more detailed report upon this investigation is in preparation and will appear later with speculations on fluoride and amino acid in relation to the caries problem.

NAOMI C. TURNER
EDWARD M. CRANE

CHEMICAL LABORATORY,
RADCLIFFE COLLEGE

THE USE OF RHODIUM IN BLOOD CHEMISTRY

A YEAR ago I noticed the symbol "Rh" used in a biochemical abstract. Working on the "Bibliography of the Metals of the Platinum Group," I wondered about the use of rhodium in blood chemistry, and following it up I received the following from Dr. Levine: "Although I agree with you in general, it is nevertheless difficult to assign names to substances of biological activity which are not duplicated in another branch. There are a number of agglutinable factors identified by the letters A, B, O, M, N and P. We couldn't use the letter R because this was previously used instead of O. The letters Rh seemed indicated, since it followed the alphabetical arrangement of other blood factors and at the same time shows its relationship to a blood factor in macacus rhesus."

As it seemed probable that this symbol would be used only in biochemical publications, there would be little probability of any confusion, but *Science News Letter* for November 27 has a half page article on a "New Blood Test," in which "Rh" occurs more than a dozen times, in such expressions as "Rh factor," "Rh blood" and even "Rh husbands." As "Rh" has been used as the symbol for the metal rhodium for more than a century, and has at least been seen by every