



The April Meeting of the Rocky Mountain Section

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Lantern slides were used to illustrate the apparatus and methods. Incidents of historical interest were related and particular attention was called to a persistent occurrence at the last experiments of a small displacement of the fringes, far less than the theory calls for, which has never been satisfactorily explained.

4. This lecture was fully reported in *Science*, March 26, 1920, pp. 301-311.

5. In the round table discussion, Mr. Beatty summarized the replies to questionnaires mailed out to about fifty of the leading high schools of Ohio. These reveal a tendency to minimize the amount of mathematics required for graduation. One unit each of algebra and geometry is required. In most cases one half unit each of advanced algebra and solid geometry is offered as an elective, but in many cases is not elected by the pupil. There is a tendency for more pupils to enter college deficient in a half-unit or more of mathematics. There was a feeling expressed that the same care in selecting teachers of mathematics was not exercised nor the same respect accorded mathematics as was done in former years. The opinion seemed to prevail that there was no more reason for discouragement over results in mathematics than in other subjects.

G. N. ARMSTRONG, *Secretary-Treasurer*.

THE APRIL MEETING OF THE ROCKY MOUNTAIN SECTION.

The fourth regular meeting of the Rocky Mountain Section was held at Colorado College, Colorado Springs, Colorado, April 2, 3. There were two sessions, presided over by Professor C. H. Sisam.

The attendance was twenty-five, including the following fourteen members of the Association: I. M. DeLong, J. C. Fitterer, W. H. Hill, H. A. Howe, Claribel Kendall, G. H. Light, J. Q. McNatt, S. L. Macdonald, O. A. Randolph, H. E. Russell, C. H. Sisam, C. S. Sperry, C. E. Stromquist, J. W. Woodrow.

The officers appointed for the meeting to be held at Denver in 1921 are: Chairman, H. A. HOWE, Denver University; Vice-chairman, W. H. HILL, Greeley High School; Secretary-Treasurer, G. H. LIGHT, Univ. of Colorado.

The following eight papers were read:

- (1) "Some physical correlations in a group of one hundred S. A. T. C. men" by Professor J. C. FITTERER;
- (2) "Families of curves whose evolutes are similar curves" by Professor G. H. LIGHT;
- (3) "Grades for different placings of ears of corn" by Professor W. V. LOVITT;
- (4) "Ionization in the mercury arc" by Professor J. W. WOODROW;
- (5) "Discussion of the cycloidal curve" by Mr. J. Q. MCNATT;
- (6) "Projective differential geometry in a four space" by Professor W. V. LOVITT;
- (7) "The teaching of logarithms and slide rule in the first year of high school" by Professor C. E. STROMQUIST;
- (8) "On ruled surfaces whose asymptotic curves are cubics" by Professor C. H. SISAM.

1. Professor Fitterer presented correlation tables which were computed between stature and stride, stride and weight, weight and stature. The correlation coefficient in the first was 0.29, in the second very nearly zero, and in the third 0.55. The average age was 19.3 years, average weight was 136 pounds, average stature was 5' 8'', average stride was 5.7 ft. A hypsobaric coefficient (weight in pounds per foot of stature) was also found, which averaged 24 pounds per foot.

2. Professor Light's paper appears elsewhere in this issue.

3. Numerical grades were given by Professor Lovitt for different placings of any number of ears. The results are determinate, though arbitrary. The results are in use and are giving satisfaction with competent corn judges.

4. It was assumed by Professor Woodrow that (a) An electron, on the average, loses all of its translatory energy at each impact; (b) The molecules are capable of storing up energy, *i.e.*, after the energy is received, it is radiated by electromagnetic waves at a rate which is proportional to the instantaneous energy, and additional increments of energy can be added by successive impacts of different electrons with the same molecule; (c) The molecule can also receive energy which has been radiated from the surrounding molecules and which is proportional to the fourth power of the temperature of the gas or vapor. From these assumptions, the following equation was obtained

$$X = \frac{H}{I} p^{1/3} (K - p^{2/3}).$$

Where X is the electric force, I is the current, p is the pressure of the gas, and H and K are constants.

5. Mr. McNatt gave methods of constructing the cycloid and its evolute.

6. Given the linear differential equation of order five

$$y^{(5)} + 5p_1y^{(4)} + 10p_2y^{(3)} + 10p_3y^{(2)} + 5p_4y^{(1)} + p_5y = 0,$$

Professor Lovitt found invariants and covariants for the transformation $y = \lambda(x)\bar{y}$, $\xi = \xi(x)$. Some geometric interpretations were given.

7. Professor Stromquist suggested the following course for the first year of high school: (a) Tabulation and graphing of functions; (b) Meaning of positive and negative exponents, applying the four rules; (c) Square root of arithmetical numbers; (d) Logarithms, based on exponents; (e) Slide rule. The course has been successful in the Laramie High School.

8. Professor Sisam classified completely, and discussed the properties of, the ruled surfaces whose asymptotic curves are *gauche cubics*.

G. H. LIGHT, *Secretary-Treasurer*.