

HEINRICH RIES, PH.D. (Columbia), has been appointed instructor in economic geology in Cornell University.

PROFESSOR J. H. WELLS has been appointed professor of mechanical engineering in the University of Montana.

#### DISCUSSION AND CORRESPONDENCE.

##### A 'CENTURY OF GEOGRAPHY IN THE UNITED STATES.'

TO THE EDITOR OF SCIENCE: In the preamble to his address entitled a 'Century of Geography in the United States' (this JOURNAL, April 22, 1898) Mr. Marcus Baker states that he proposes to give 'a general review of the century's progress in the diffusion of geographic knowledge in and as to the United States.' For his material he looks 'not to the repulsive black volumes that have for years been poured out over the country from the government printing office,' which represent the *increase*, but 'to text-books, to public addresses in Congress and out, to newspaper and magazine articles, and to public lectures,' which represent the *diffusion* of geographic knowledge.

While it would thus appear that Mr. Baker had intended his address to be of a popular rather than of a scientific nature, yet this does not justify him in making misleading or incorrect statements in regard to the sources from which his geographic knowledge is derived. Such statements are even more liable to do harm in popular addresses than in scientific ones, for the reason that his hearers are less likely to verify them by reference to the original sources of information.

I beg to call the attention of your readers, therefore, to certain of these inaccuracies and misleading statements that have attracted my notice.

1. Powell's first voyage through the canyons of the Colorado was not made in the same year that Alaska was purchased, but two years after, or in 1869.

2. The statement that, at the time the U. S. Geological Survey undertook the gigantic task of making a topographical map of the entire United States, 'topographic maps did not exist,'

except of 'a fringe of lake and seacoast,' is not only misleading, but does injustice to the work of the earlier organizations, without essentially enhancing that of the present, to which Mr. Baker is now attached. The earlier topographical work which Mr. Baker ignores includes nearly 90,000 square miles in a belt extending entirely across the Cordilleran system mapped both topographically and geologically by the 40th parallel survey and an area of about 70,000 square miles in Colorado and adjoining States mapped in like manner by the Hayden survey. While these maps are on a smaller scale, and hence give less detail than those made by the present organization, they have been proved by long test to possess a substantial accuracy commensurate with their scale, and are not surpassed or even equalled by corresponding maps in any part of the world.

3. Finally, while enumerating in considerable detail all the other organizations which have contributed to our knowledge of the geography of the country, Mr. Baker has studiously avoided all mention of the Fortieth Parallel Survey, the first to introduce modern methods of topographic surveying into American cartography and to whose pioneer work all the subsequent organizations have been more or less indebted, as I showed in my address on the 'Geology of Government Explorations,' published in this JOURNAL in January, 1897.

S. F. EMMONS.

#### COLOR VISION.

My thanks are due Professor Titchener for his appreciative criticism and reply to my recent paper on Color Vision. He confirms some of my most important points in showing that the number of competitors for the credit of new color hypotheses is even greater than I had supposed. It is reassuring to be told that "The psychologist must know them in the sense that he must know his literature at large. He is no more disturbed by them, however, than is the biologist by the thousand and one theories of heredity and transmission that have been formulated since the days of pangenesis."

I am quite willing to be corrected by so competent a psychologist if I was mistaken in thinking that Wundt's hypothesis has a good follow-