CERTAIN ASPECTS OF GEOLOGIC CLASSIFICATIONS AND CORRELATIONS

By Professor ROLLIN T. CHAMBERLIN
THE UNIVERSITY OF CHICAGO

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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by THE SCIENCE PRESS
New York City: Grand Central Terminal
Lancaster, Pa. Garrison, N. Y.
Annual Subscription, $6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

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General Concepts

Our knowledge of the history of the earth has been developed gradually by fitting together the histories of small areas studied in detail. As the early geologists gradually became familiar with the rock formations of their own districts, they began to classify the strata in groups. Comparison of individual findings with those of geologists in other areas was particularly stimulating and led to more searching and critical study; correlations between different regions were attempted, and historical geology began to overlap political boundaries. In the course of time the full succession of rock systems came to be recognized and the broader outlines of the geologic history of Europe and North America became established.

Rather notable it was that the rock systems built up from the stratigraphic sequences and fossil peculiarities of Europe were found to be applicable and useful also in North America, though three thousand miles of Atlantic Ocean lay between. Now the same rock systems and corresponding geologic periods do service the world over. Though great variation in local details is manifest, distant regions seem to have enough in common to make possible a general history of the earth in world-terms. Why this is possible, we can now understand.

We know that for long stretches of time the continental land masses have remained relatively free from diastrophic movements of the more declared sort, during which times erosion has lowered the lands and shallow epicontinental seas have spread widely over their reduced surfaces. Part of this spread of the seas has resulted directly from cutting down the lands