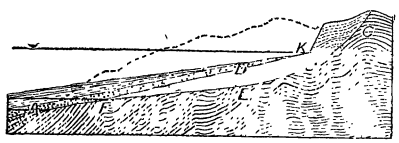
highland or mountain region, for its rocks are of deformed structure or of deep-seated habit over large areas. During the long period of combined sub-aerial and marine attack upon the highland, large rivers must have cut down deep valleys, while sea waves abraded a plane around its litoral margin; that is, the valley, *CEF*, would have been eroded, while the marginal plane, *AF*, was abraded. In the time needed to give *AF* a breadth of several miles, the main valley, *EF*, would be reduced to very



gentle slope. Under the supposition that the surface attacked by the encroaching sea was of such a relief that a considerable subsidence might occur during its submergence, the valley, *FE*, would in time be buried by the sediments, *ADK*. No buried valleys are known in the even sub-Cambrian floor. Their absence can be explained only under the supposition that the sea abraded the land to a greater depth than the valleys had been cut in it, and hence that but moderate subsidence occurred during abrasion. Under this limiting condition, extensive peneplanation must have occurred before great marine encroachment by abrasion could have been accomplished.

THE URAL MOUNTAINS.

THE excursion of the International Geological Congress to the Ural Mountains in 1897 gave Dr. F. P. Gulliver opportunity for reaching the following conclusions regarding the evolution of their existing form. A long period of sub-aerial planation, probably aided by marginal marine action, reduced the region to a lowland surmounted by a few monadnocks. The lowland was then arched by successive uplifts, the axes of greatest elevation being east of the middle of the range; and benched valleys were eroded beneath the general upland level.

Approaching the range from the west, there is a gradual transition from the great Russian planes of nearly horizontal structure to the dissected peneplain of deformed structures. Approaching from the east, a part of the old mountain peneplain remains at moderate altitude adjoining the Siberian Tertiary plains; unexplained lakes occur in this part of the peneplain, which is generally separated from the revived mountains on the west by an abrupt ascent, thought to be a weathered fault scarp (*Bull. Geol. Soc. Amer.*, X., 1899, 69–82).

W. M. DAVIS.

*NOTES ON TERRESTRIAL MAGNETISM.**

CAPTAIN DENHOLM FRASER, R.E., is at present engaged in making the necessary arrangements for inaugurating a magnetic survey of India and Burma.

CAPTAIN LYONS, R.E., in charge of Geological Survey of Egypt, has for some years been making magnetic observations during his journeys in various parts of Egypt. It is hoped that before long a systematic magnetic survey of Egypt can be undertaken.

TWO proposed sites for the Standard Magnetic Observatory in the vicinity of Washington have been examined during the past month by magnetic parties under Dr. Bauer's direction, in order to determine the most suitable place. One of these sites, situated twenty-two miles to the northwest of Washington, has revealed pronounced magnetic anomalies, while the other site, sixteen miles to the southeast of Washington, has thus far shown no abnormal values. The latter site appears to be also a favorable one as far as freedom from electric tramway influence is concerned.

THERE are at present four observatories at mining stations in Germany, at which the variations of the magnetic declination are being continuously recorded by photographic means, viz.:

1. Clausthal, Harz. This observatory has been in existence since the days of Gauss. It is provided with a Gaussian declinometer for eye-readings, and a more modern instrument for self-registering purposes. Copies of the daily records can be had upon application.
2. Beuthen, Upper Silesia.
3. Bochum, Westphalia.
4. Hermsdorf, bei Waldenburg.

The last three-named stations were started at

* From advanced sheets of *Terrestrial* Magnetism.

the suggestion of Professor Eschanhagen. They publish their declination traces regularly in the interests of the mining engineers.

WHILE residing in Cincinnati, Dr. Baur made magnetic observations about 100 meters west of an electric tramway (double trolley overhead system) running north and south. During the passage of a car, the declination needle was defected 1′—2′.

DR. L. A. BAUER returned to Washington on December 18th, having compared a set of the United States Coast and Geodetic Survey instruments with the standard instruments at the following observatories, viz.: Kew (before and after visiting the succeeding observatories), Potsdam, Pawlousk, and Parc St. Maur. He has also compared his dip circle with three earth-inductors of different construction. At Potsdam (Leonard Weter's inductor), at Pawlousk (Wild's portable inductor), and at Darmstadt (Karl Shering's inductor). The results will be published as soon as the various instruments of the Coast and Geodetic Survey have been intercompared, and when the comparisons at the Toronto Observatory have been made. Owing to the limited time at Dr. Bauer's disposal, it was necessary for him to restrict himself to the above-named observatories.

PROFESSOR E. LEYST, director of the Physico-Geographical Institute of the University of Moscow, includes in his department a systematic course on the theory and practice of measurements in terrestrial magnetism. His students are obliged to determine the magnetic elements, and to set up and operate a set of variation instruments and to determine the constants. The new institute, which will be a model building of its kind, is rapidly approaching completion. Professor Leyst has provided in this building for the installation of a set of variation instruments. The accompanying absolute observations will be made at a point outside of Moscow, far removed from any disturbing influence.

SCIENTIFIC NOTES AND NEWS.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE fifth Congress of American Physicians and Surgeons will be held at Washington on May 1st, 2d and 3rd, under the presidency of Professor Henry P. Bowditch. The following fourteen societies join in the triennial Congress:

The American Neurological Association.
The American Gynecological Society.
The American Dermatological Association.
The American Laryngological Association.
The American Surgical Association.
The American Climatological Association.
The Association of American Physicians.
The American Association of Genito-Urinary Surgeons.
The American Orthopedic Association.
The American Physiological Society.
The Association of American Anatomists.
The American Pediatric Society.
The American Ophthalmological Society.
The American Otological Society.

There will be two general sessions of the Congress. The subject at the first of these to be held on Tuesday afternoon, will be 'Bacteriology in Health and Disease,' and papers will be presented by Professor Theobald Smith, Dr. S. J. Meltzer, Professor Harold C. Ernst, Dr. Richard C. Cabot, Dr. Edward R. Baldwin, Professor William S. Thayer, Professor George Dock and Professor Simon Flexner. At the second session, on Wednesday afternoon, the program will be as follows:

'On Modern Therapeutics,' by Prof. William Osler, M.D., LL.D., of Baltimore, Md.

Essay, 'Sociological Status of the Physician,' by Dr. Clarence J. Blake, of Boston, Mass.

Poem 'The Evolution of the Physician,' by Dr. S. Weir Mitchell, M.D., LL.D., of Philadelphia, Pa.

Professor Bowditch will give his address as president on Wednesday evening, the subject being, 'The Medical School of the Future.' This will be followed by a reception and there will be a banquet on Thursday evening. The separate societies will hold their meetings on Tuesday and Wednesday mornings and on Thursday.

The Secretary of the Congress is Dr. W. H. Carmalt, New Haven, Conn.

THE SOCIETY OF AMERICAN BACTERIOLOGISTS.

AT the New Haven meeting of the American Naturalists during the Christmas holidays, a number of the leading bacteriologists of the