teachers of schools of every grade throughout the country, urging adoption of measures in their several spheres for diffusing information as to the present state of the world's metrology and recent progress in its reform, and specially for instructing the rising generation in these matters, to the end that our people may be early and fully prepared to act intelligently on the important questions connected with weights and measures.

2. By invoking the aid and coöperation of bodies organized to consider questions of scientific or social interest, boards of trade, chambers of commerce, societies of engineers, industrial associations, professions and trades, in this country and elsewhere.

3. By specially urging scientific bodies to open communications with similar bodies in other countries, with a view to general agreement on values to be henceforth uniformly given to units of measure and points of reference which particularly concern them. *i. e.*, to the so-called constants of science.

4. By memorializing Congress in favor of laws requiring the use, in certain departments of the public service, of metric weights and measures, wherever such legislation may tend to relieve commerce of some of its burdens, to facilitate international communication, to promote international jurisprudence, and to familiarize our own people with the benefits of that system of metrology, with the least interference with their ordinary habits of thought or daily business.

5. By direct appeals to the people through the public press, and by circulating, so far as means allow, books and documents informing the public of the defects of the common system of weights and measures, the means most proper for its amendment, and the great advantages which the acceptance of a universal system would insure to all mankind. J. K. R.

THE INTERNATIONAL MATHEMATICAL CONGRESS.

Professor A. Vasiliev, President of the Physico-mathematical Society of Kasan, Russia, has sent me a document prepared by him for the Minister of Public Instruction, with a request that I translate such part of it from the Russian as bears on the founding of an International Mathematical Congress, and make it known in America.

This is in substance as follows:

After recapitulating the action of the French Association for the Advancement of Science at Caen (August 14, 1894) [already translated by me and published on pp. 21–22 of the Bulletin of the American Mathematical Society, October, 1894], he gives the resolution offered by me that very same day, August 14, 1894, for their signatures to all the members of the American Mathematical Society present at the Brooklyn meeting, and signed unanimously, which was as follows: "The undersigned members of the American Mathematical Society present at its summer meeting, 1894, take this method of expressing their cordial approval of a series of International Congresses of Mathematicians to take place from time to time, as suggested by A. Vasiliev and C. A. Laisant." The names of the signers may be found on page 290 of Vol. I., of the American Mathematical Monthly. I explained the plan as contemplating a *réunion préparatoire* at Kasan in 1896, a *congrès constituant* in Belgium or Switzerland in 1897, which perhaps might fix the First International Congress at Paris in 1900.

Professor Vasiliev then goes on to state the decisive step taken by the *deutsche Mathematiker-Vereinigung* in a reunion at Vienna, September, 1894. It was there unanimously resolved to take part in the organizing Congress. The action was as follows:

"Concerning future International Congresses, the Mathematiker-Vereinigung decides in principle to participate, and charges

its bureau to take in regard to this subject the measures that appear necessary. In particular, it leaves to each of its members entire freedom, considering alone as essential that the Society, on this important occasion, may be assured of having the place due it."

Professor Vasiliev expects that the inauguration of the Lobachèvsky monument at Kasan will take place in August or September, 1896, and counts on having there a large number of eminent mathematicians, and will profit by the occasion to propose definitely the organization of the International Congress, and then official calls will be issued to meet for the purpose of final organization in 1897 at a city of Belgium or Switzerland.

GEORGE BRUCE HALSTED.

AUSTIN, TEXAS.

CURRENT NOTES ON PHYSIOGRAPHY (V.).

THE EXTINCT LAKE PASSAIC.

THE annual report of the Geological Survey of New Jersey for 1893 contains a long report on surface geology, in which there is an interesting chapter on Lake Passaic, an extinct glacial lake, by R. D. Salisbury and H. B. Kümmel. First mentioned by Professor Cook in his annual report for 1880, Lake Passaic is now carefully traced by its shore lines and the deltas built in it by streams. Its basin was limited on the west by the slope of the crystalline highlands; on the south and east by one of the curved trap ridges of the Watchung or Orange mountains; while on the north it was enclosed by ice. Most remarkable of all the shore deposits in the lake waters is the great morainic embankment that was built across the basin from Morristown to Madison during the furthest advance of the ice sheet into the lake waters; the lobate front of this bank standing up with great distinctness north of a marshy plain, which now represents part of the lake bottom.

The outlet of the lake was, for a time at least, by a notch in the trap ridge near its southern end, at a height of 331 feet above sea level. Twenty-five miles to the north, the records of the lake level now stand sixty-seven feet above the lowest shore line at the southern end of the basin. Many details of interest are considered in the report; none more surprising than the depth of the drift-filling in the notch of one of the trap ridges at Summit (where the Morris and Essex Railroad crosses the ridge), from which a preglacial discharge of the inner valley at this point is fairly inferred. An excellent map accompanies the report.

LOCAL DISPLACEMENT OF THE MISSISSIPPI.

THE annual report of the Iowa geological survey for 1893, just issued, contains a chapter by C. H. Gordon on a former channel of the Mississippi, now filled with drift. The modern river has cut a narrow rock-bound gorge, five miles to the east of the former valley, and about ten miles long; its lower end being at Keokuk, where the Des Moines river comes in from the west. A general study of the surface and the records of a deep well indicate that the earlier valley was about three times as broad and twice as deep as the new gorge. The gorge being hardly more than in its youth, the earlier valley was certainly not advanced beyond its early adolescence. It therefore clearly indicates that during only a comparatively short preglacial time did the region stand as high as or a little higher than now; most of its preglacial history must have been passed at a less elevation above baselevel. To speak of the preglacial channel as a 'measure of vast denudation' (p. 250) therefore seems somewhat inappropriate; it was only the beginning of a denudation that could in a geographical sense be called vast. The vast denudation is more really shown in the stripping of an unknown thickness of strata