for the sake of third parties or of the general public. A contract between two parties may have an important effect on the rights and interests of persons who are noway concerned with the making of it, and in such cases it has long been the custom for the state to interfere for the protection of those persons. Such cases often arise in relation to common carriers. For instance: if a railway company charges one shipper a higher price for carrying freight than it charges another for the very same service, it does injustice to the party against whom the discrimination is made; hence recent decisions of the federal courts have declared such discrimination to be unlawful.

THE MEETING of the American economic association, held on Saturday last in this city, indicated that the interests of the association are being wisely provided for, and that the plans under preparation are in the interest of true science. It showed itself cautious, and gave no countenance to the establishment of a newer creed with fresh dogmatic utterances. In the deliberations the prominent fact stood out that the purpose of the society must be in method. Scientific method of investigation is the great need of economics at the present time, and it is to this department of work that this new association can unfalteringly commit itself. The patient collection and analysis of facts is a necessity which requires no apology in these days of confusing arguments drawn from insufficient statistical and social data. The council, however, assembled for practical work, and took a step forward in the development of the usefulness of the society by admitting the Connecticut valley economic association into its membership. This force, of about seventy-five members, is located chiefly at Springfield, Mass., and is a local society recently founded, and modelled after the constitution of the larger association. It was also determined to publish at an early date one or two monographs, as well as the secretary's report, which will shortly be in print.

GEOGRAPHY-TEACHING IN GERMANY.

IN the matter of geographical education, Germany may be taken as the model which other European countries are following, so far as their special circumstances will permit. It is true that teachers like Dr. Lehman and Professor Wagner are not satisfied with the position yet attained in German schools. But to the eyes of Mr. Keltie, accustomed as they were to the methods and appliances of English schools, Germany seemed very far ahead. He therefore devoted a considerable portion of his 'report,' recently published by the Royal geographical society, to a description of what we may call the German system of geographical education, According to him, the ideal aimed at, and indeed being rapidly carried out, is to have one continuous course of geographical instruction from the first year in the primary school up to the university.

The preliminary stage, or what is known in Germany as *heimatskunde*, combined with or preceded by actual observation, is met with in nearly all the primary schools and in the preparatory classes of the higher schools. There are no textbooks in this early stage, except for the teacher, the pupil obtaining his ideas from actual observation or practice. The instruction begins with the student's home surroundings, and proceeds outwards from the town to the district, then to the province, Germany, Europe, and, finally, the world in general. At the outset the pupils are given a mastery of the cardinal points, the course of the sun in the heavens, and similar elementary notions. This is done, not by compelling him to commit the compass-card to memory, but by getting him to find the direction of his own house from the schoolroom, and by encouraging him to apply a few simple ideas in his daily walks and games. The next step is to teach him how to read a map. Here, again, his local knowledge is utilized. A map of his own town is procured, and he learns how to trace his own homeward path, and to find out the direction of some well-known buildings. Then he often visits, map in hand, the surrounding country, and thus learns the actual meaning of this or that geographical symbol. Often these excursions are extended to distant points of interest. Many teachers think that students acquire this faculty of map-reading best by learning how to use the geographical symbols themselves, or, in other words, by practice in map-drawing; but, wherever this method is followed, it is insisted on that the drawing is done, not to produce a work of art, but solely to familiarize the pupil with contour lines, mountain-shading, and other similar signs. In some schools the pupils build up the relief of a country with sand; in others the contour lines are reproduced in card-board, and the relief is built up with great exactness. When the maps are well made, as most modern German maps are, no better way to teach the meaning of geographical symbols could be devised. But the conditions must be favorable; and, above all, maps with unusual symbols, such

as water-partings indicated by black lines, should never be used in the schoolroom.

The young German does not leave his geography behind when he leaves the primary school. Far from it, as, in the gymnasia and *realschulen*, geography is taught for two hours a week throughout the whole course, except that, in some gymnasia (classical schools), the last two years are devoted to other subjects. What is actually taught may be gathered from the following summary of the programme of the *realschule* of the first order at Leipzig : —

Sexta (lowest class). — Leading principles of physical geography, general view of the earth, geography of Saxony, exercises in map reading and drawing.
Quinta. — Advanced instruction in the above branches, Germany taking the place of Saxony as the special subject.
Quarta. — Revision of the work of the two previous years, extra-European continents.
Tertia. — Germany, both physical and political, map-drawing.
Unter secunda. — Foreign European countries and their colonies.
Ober secunda. — Extra European continents, especially as to their physical conditions.
Unter prima. — Astronomical geography.
Ober prima. — Revision of the whole field, astronomical geography.

As to methods, Mr. Keltie was impressed by the fact that the teaching of geography was a much more lively operation on the continent than in England. In Germany the teacher counts for a great deal; the text-book, for very little. There is almost no lesson-hearing; the text-book, when used, simply furnishing a text for the teacher's explanations. No attempt is made to crowd the lessons with minute details—no long lists of names; no tables of statistics, of population of cities, lengths of rivers, or heights of mountains. The memorizing is confined to the leading principles, facts, and features. In fine, when a German boy leaves the higher school for business or the university, he carries with him a sound working knowledge of geography.

Of course, there could not be such good teaching without good teachers; and it is a fact to be noted, that, at the present moment, the leading universities of Germany set out to train teachers of geography exactly as they do teachers of history, archeology, or botany. A dozen years ago this was not so, as nearly all the twelve professorships of geography have been founded since 1873. Now, however, geography is on an equal footing with other branches in more than half of the German universities. At Goettingen, for example, a man may take his doctorate, with geography as his special subject. Then, too, there are examinations for the right of teaching (*facultas docendi*) geography in the higher schools. These examinations are of two degrees or stages: 1°, for the right to teach in the lower classes; and, 2°, for the right to give instruction to the highest classes. The course for this last examination extends over two years. The candidate must attend a systematic series of lectures on the facts and principles of geography. At the *übungen*, or exercises for advanced students, practice in the best methods of teaching is afforded. Special investigations are encouraged by some professors, as, for instance, by Rein at Bonn, and Richthofen at Leipzig. Mr. Keltie 'assisted' at one of these practice-courses, and was evidently surprised at the excellence of the work presented. There is no doubt, that, as the supply of well-trained teachers becomes more ample, the teaching of geography will be still further improved. What has already been accomplished is well set forth in the following sentence from the recent 'memorial' of the Royal geographical society : —

"An impartial comparison of the literary results of English and German travel at the present day seems to show that the educational advantages which we ask for in England, and which are attainable in Germany, have there borne their actual fruit in developing and directing the powers of observation in German travellers."

METEOROLOGICAL CONFERENCE.

ON invitation of the chief signal officer, U. S. army, representatives of a number of the state weather services met in Washington on Feb. 23 and 24, to consider the relation of state services to the signal service, matters of observation, display of local weather-signals, and related topics. The meeting was opened by General Hazen, chief signal officer. Prof. T. C. Mendenhall of the signal office was then chosen chairman, and Prof. W. M. Davis was appointed secretary. Four sessions were held in the lecture-room of the national museum, and the following action was taken.

The conference recommends that the volunteer observers of the state weather services should make their regular thermometric observations at 7 A.M., 2 and 9 P.M. When maximum and minimum thermometers are used, they should be read at the latest hour of observation in the day, preferably at 9 P.M. Observers of rainfall are advised to use the new form of rain-gauge adopted by the signal service, or to follow this pattern as nearly as possible. The gauge should, when practicable, be placed with the collecting-edge one foot above the ground, and should stand at least twice as far from adjacent objects, such as trees, buildings, fences, etc., as the height of these objects. The conference disapproves of placing rain-gauges on the roofs of buildings.