

SCIENCE.

FRIDAY, JUNE 3, 1887.

COMMENT AND CRITICISM.

PROF. ARTHUR T. HADLEY'S thorough acquaintance with the railway problem puts it in his power to make a popular exposition of it that for clearness and conciseness is unrivalled. In *Harper's magazine* for June he outlines the progress of American railroad legislation. The Clinton league, the Granger movement, and the general railroad laws are touched upon, and their relation to each other shown. Then followed what may be called the period of state railroad commissions, that of Massachusetts being the example for nearly all the others. The state of affairs when the movement for a national railroad law became prominent, is characterized thus: "By the year 1880 it had become a well-established principle that it was impracticable to fix rates directly by law; that the important thing was to secure publicity and equality, and, above all, to have the means of holding the railroads responsible for what they did. On the other hand, the railroads had come to recognize, what ten years before they would have denied, that their business was not a purely private one; that they had public rights and responsibilities, and could not claim immunity from legislative control." Professor Hadley traces rapidly the genesis of the present Interstate commerce law, and in so far as it forbids preferential rates, provides for the publication of rates, and prohibits secret drawbacks, he unreservedly commends it. In its provisions as to local discrimination, however, and in its prohibition of pools, it is regarded as open to serious objection. But it is best regarded as a step to something wiser and better, as an experiment from whose failures a more perfect measure will be suggested. When this more perfect measure comes, it will doubtless, as Professor Hadley says, recognize the fact that railroad history plainly teaches that what we need is not so much a set of laws or regulations, but publicity and responsibility in railroad administration.

THE TRUSTEES of the Elizabeth Thompson science fund have made the following grants, of
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which we have the pleasure of making the first public announcement: 1°. To the Natural history society of Montreal, \$200, for the investigation of underground temperatures by a committee of that society; 2°. To Dr. T. Elster and H. Geitel, instructors at the gymnasium of Wolfenbüttel in Germany, \$210, for researches on the electrization of gases by glowing bodies; 3°. To Prof. E. D. Cope of Philadelphia, \$500, for researches on American fossil vertebrates, the sum to be expended to secure the services of a skilled preparateur to assist in working out the material already accumulated for the continuation of Professor Cope's great work; 4°. To W. H. Perkin, jun., of Manchester, England, privat-docent at the University of Munich, Germany, \$250, for investigations on the synthesis of urea from its decomposition products; 5°. To Edward E. Prince of St. Andrews, Scotland, \$125, for the investigation of the development and morphology of the limbs of teleosts. It may be worth while to add, that these appropriations indicate that the trustees are inclined to make several appropriations of moderate amount rather than a single large one. It will be noted that no grant over \$500 has been made. This point may be of interest to intending future applicants.

SEA-SICKNESS.

THE sensation of sea-sickness is one which has in one form or another been experienced by most persons, if not on the sea itself, at least while riding backward or in swinging. It is the dread of this rather than the fear of accident which deters many from undertaking a European tour, and it is therefore a question of great interest whether or not this experience may be avoided, and thus the principal obstacle to an ocean voyage be removed.

Although in most instances sea-sickness is but temporary, disappearing as soon as the affected individual places his foot on shore, still this is not always the case. In rare instances it has been the cause of death, and even when this has not been the case, the individual has been permanently affected. In many cases what is usually but an inconvenience and a disagreeable sensation becomes a disease which demands medical treatment on account of the violence of its symptoms. It is for