SCIENCE.

FRIDAY, JULY 30, 1886.

COMMENT AND CRITICISM.

THE ANNUAL REPORT for 1885, of Prof. J. P. Lesley, state geologist of Pennsylvania, contains a review of the conditions of the survey since its re-establishment in 1874 that does not show a highly enlightened policy on the part of the Pennsylvania legislature. The total appropriations for the thirteen years from 1874 to 1886 were $545,000, averaging $42,000 a year; but for 1885 a total expenditure of under $24,000 was allowed, and at the beginning of this year there was a balance of less than $36,000 on hand for the expenses of all of 1886 and the first part of 1887. So small a sum is entirely insufficient to insure proper official care of the enormous mineral interests of the state. The reduction of the appropriation for last year and this is the more embarrassing on account of the requirement that the work done shall include a greater variety of investigation than had been planned by the survey. The more important subjects reported upon for 1885 are the oil and rock gas about Pittsburgh, by Carll; the structure of the Pittsburgh coal-region, by d'Invilliers; the origin of coal-beds, by Lesquereux; and the anthracite survey and the kaolin deposits of Delaware county, by Ashburner. The anthracite survey, of the greatest technical and practical value, has been seriously hampered for want of funds. The same report gives an account of the method of distribution of the survey publications followed until lately, which, to put it mildly, does not reflect credit on the legislators at Harrisburg. The original regulation in 1874 ordered, that, after supplying a very moderate number of persons and institutions at the cost of the state, all others should obtain the desired volumes only by purchase at cost. But there was little or no sale, because citizens of the state were well accustomed to obtaining state documents free of cost from their representatives: consequently, when the first volumes appeared in 1875, and a demand for them was made on the members of the legislature, an act was at once passed providing for *a special edition* of 5,000 copies of every report, for the use of the senate and house. In this way, 425,931 copies have been distributed by the legislators; and it is safe to say that a good part of this distribution has been made indiscriminately, while the survey has had practically no copies to dispose of; and of the editions published for sale, counting up to 110,569 copies, there remained unsold 43,118 copies in 1885. In view of this, an act was passed last year disposing of reports as follows: 500 copies to the senate, 2,000 to the house, 150 to the state geologist, 600 to the board of commissioners, for local institutions and general exchanges, 250 to certain state officials. This will greatly reduce the careless distribution by the legislature, and will allow the board of commissioners an authority that should have been theirs from the first. The attempt to establish a topographical survey of the state has been unfortunately a failure. The coast survey is proceeding with the triangulation of the state, and has covered about one-third of its area; but the legislature would not accept the offer of the U. S. geological survey to assist in carrying on the topographic work, even though the survey agreed to expend $30,000 a year while the state should expend only $10,000. The proper mapping of the state will cost, it is estimated, half a million dollars, and, if supported only by state appropriations of ten thousand dollars a year, would require half a century for its completion. That is too long for an intelligent state to wait.

COMPOSITE PORTRAITURE.

THE composite portraits which are published to-day were made from groups of undergraduates of Smith college. Figs. 1 and 2 each contains forty-nine members of the last senior class; fig. 4 is a composite of a selected group of the same class, containing twenty individuals; while fig. 3 was made from ten members of the class of '85, who formed an elective division in physics. The average age of all the groups is about twenty-two years.

These portraits may serve as text and illustration for a few remarks on some points of interest in this method of obtaining 'pictorial averages.'

The great difference between figs. 1 and 2 strikes one at once, and yet they were both made from exactly the same negatives and under the same conditions, except that in fig. 2 the nega-