## THE RESOLUTIONS CONCERNING THE COAST-SURVEY.

THE following are the resolutions referred to in our leading article, and unanimously passed by the association at its general session of Aug. 28:—

WHEREAS, The attention of this association has been called to articles in the public press, purporting to give — and presumably by authority — an official report of a commission appointed by the Treasury department to investigate the condition of the U. S. coast-survey office, in which report the value of a certain scientific work is designated as 'meagre;'

AND WHEREAS, This association desires to express a hope that the decision, as to the utility of such scientific work, may be referred to scientific men, —

*Resolved*, That the American association for the advancement of science is in earnest sympathy with the government in its every intent to secure the greatest possible efficiency of the public service.

*Resolved*, That the value of the scientific work performed in the various departments of the government can be best judged by scientific men.

*Resolved*, That this association desires to express its earnest approval of the extent and high character of the work performed by the U. S. coast-survey, — especially as illustrated by the gravity determinations now in progress, — and to express the hope that such valuable work may not be interrupted.

*Resolved*, That this association expresses, also, the hope that the government will not allow any technical rule to be established that shall necessarily confine its scientific work to its own employees.

*Resolved*, That in the opinion of the American association for the advancement of science, the head of the coast-survey should be appointed by the president, by and with the advice and consent of the senate, should have the highest possible standing among scientific men, and should command their entire confidence.

*Resolved*, That copies of these resolutions shall be prepared by the general secretary, and certified by the president of the association and by the permanent secretary, and shall be forwarded to the president of the United States, and the secretary of the treasury, and given to the press.

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## PROCEEDINGS OF THE SECTION OF ASTRONOMY AND MATHEMATICS.

PERHAPS the small number of members in attendance, especially in section A, and the consequent dearth of papers, may have been, in the minds of the sectional committee, a sufficient excuse for the appearance of the first two numbers upon the programme; but it would certainly be far better to reduce the number of meetings of the section in such a case, and thus grant its members more opportunity for hearing valuable papers in others, than to occupy its time, and detract from its dignity, by the serious consideration of such material as that first offered to the section of mathematics and astronomy. The first of these choice contributions was by Mr. Thomas Bassnett of Jacksonville, Fla., entitled 'Intimate connection between gravitation and the solar parallax.' The only important truth stated in the paper, the one set forth as a new and important discovery, and the principal feature of the matter, was simply another way of stating Kepler's third law, and offers no method whatever of determining the solar parallax. The rest of the paper was principally nonsense. The next paper by Mr. S. S. Haight upon 'Rapidity of calculation,' etc., was only a *résumé* of some short cuts, principally in cross-multiplication, which are given in many elementary arithmetics, and are familiar, or would suggest themselves, to any one having occasion to make any extended computations in that manner; while the speaker's remarks about the use of logarithms only served to show his ignorance of the whole matter.

The section then settled down to the consideration of serious business in listening to a paper by Prof. H. A. Newton of Yale college, upon 'The effect of small bodies passing near a planet upon the planet's velocity.' The former researches of Professor Newton, upon meteors, are recognized among astronomers as our principal source of knowledge about the character, distribution, and motion of these minute bodies with which the solar system is filled, especially those which strike our atmosphere, and are burned up as meteors. The possible effect of these upon the rotation of the earth, and the revolution of the earth and moon in their orbits, has been subjected to elaborate investigation at the hands of several mathematical astronomers. The recent publications of Mr. Denning of Bristol, Eng., claiming the fixity of long-continuing radiant points of meteor streams, have raised the question of the existence of broad streams of meteoroids moving swiftly through stellar space outside of solar attraction; and any new investigation bearing upon any of these points is more than usually timely. In this paper Professor Newton has discussed the effect upon the earth's motion of those bodies which do not pass near enough to the earth to be drawn into its atmosphere, but still near enough to be drawn out of their course, and swung for a time in hyperbolic orbits round it. He began by saying that the results of the investigation might perhaps be considered negative as far as measurable quantities in the solar system are concerned, but that they had a mathematical interest, and might possibly have a bearing upon somewhat similar questions in molecular physics, like the kinetic theory of gases. The mathematician and astronomer must be referred to the paper itself, but the results of popular interest may be briefly summarized as follows: Considering, first, the case of a cylindrical stream of small bodies evenly distributed, and all moving in the same direction with a common velocity past the earth supposed to be in the axis of the cylinder, it is shown that they will communicate to the earth in each unit of time a velocity along the axis: 1°, that is proportional to the density of the group; 2°, that decreases as the