

this statement, I would say that I know of no such instance. If there are cases of lines showing structure by the ordinary grating, which I do not mention, it is simply that my attention has not been directed to them, and I should venture to guarantee that if observed by either the interferometer or the echelon, they must show the same structure—or a finer.

I should have thought the tripling of the middle green line in the case of the green mercury and cadmium lines a matter of sufficient importance to add to those figured in Mr. Preston's paper.

To illustrate the preceding remarks, as well as to show the performance of the interferometer, I present a figure showing the three types of Zeeman effect, and another showing how these results are confirmed by the echelon.

It will be observed that there is an indication of structure in the outer lines, but at this time they had not actually been resolved. This has since been accomplished, as shown in the following figure :—

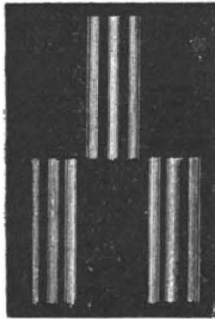


FIG. 3.

The following is a list of the radiations thus far examined, and their classifications according to these types :—

Mercury...	Yellow lines...	Type I.
	Green line ... ..	„ III.
	Violet line ... ..	„ II.
Cadmium ...	Red line ... ..	„ I.
	Green line ... ..	„ III.
	Blue line ... ..	„ II.
Zinc ... ..	Red line ... ..	„ I.
(? Cadmium)...	Green line ... ..	„ III.
	Blue line ... ..	„ II.
Sodium ... ..	Yellow lines...	„ II.
Thallium ...	Green line ... ..	„ II. (doubtful)
Lithium ...	Red line ... ..	Broadened.
<sup>1</sup> Hydrogen ...	Red line ... ..	Broadened.
Helium ... ..	Yellow line ... ..	Broadened.
	Green line ... ..	Type I.
Gold ... ..	Yellow line ... ..	„ II.
	Green line ... ..	„ I.
Silver ... ..	Yellow line ... ..	„ I.
	Green line ... ..	„ I.
<sup>2</sup> Copper ... ..	Yellow line ... ..	„ IV.
	Green lines ... ..	„ I.
Magnesium ...	Green line (5183)...	„ III.
	Green line (5172)...	„ II.
	Green line (5167)...	„ I.
<sup>2</sup> Manganese ...	Green line (5340)...	„ IV.
Argon ... ..	Red line ... ..	„ I.
Tin ... ..	Red line (6450) ...	„ II.
	Yellow line (5798) ...	„ I.
	Yellow line (5587) ...	„ I.
	Yellow line (5564) ...	„ I.
Iron ... ..	Most lines ... ..	„ I.
Carbon .....	Component lines of } Unaffected.	
	banded spectrum }	

The University of Chicago Ryerson Physical Laboratory, Feb. 9. A. A. MICHELSON.

<sup>1</sup> Since this list was first published, decided indications of structure have been noticed, especially in the broadened middle line, which under favourable conditions appears as a group of six or seven very fine lines just resolvable, brightest at the centre, and extending through the entire space between the outer groups. Similar indications, though less distinct, were traced in the outer groups.

<sup>2</sup> Type IV. was added to include cases where a broad or complex line was simplified or narrowed in the magnetic field. This, as regards the copper line and the manganese line, is true of the central line of the triplet, and not (as might be inferred from the original paper) of the whole group.

Attraction in a Spherical Hollow.

THE theorem you published in your number of January 19, under the above head, may easily be deduced from the parallelogram of forces put in this form :

Let  $\sigma a$  be intensity and direction of an attractive force,  $\sigma b$  both for a repulsing force ; then the resultant of the two forces in  $\sigma$  will be parallel and equal to  $ba$ .

LANG.

Vienna, February 18.

THE REPORT OF THE SELECT COMMITTEE ON THE SCIENCE AND ART DEPARTMENT.

IN the course of last year the newspapers contained an account of the doings of the Select Committee of the House of Commons appointed to inquire into, and report upon, the administration of the Museums of the Science and Art Department. It was an open secret that some of the members of that Committee were bitterly opposed to the officials of the Department ; but however this might be, all evidence tending to throw discredit was very widely reported long before the Report was issued.

The Report of the Committee in due time made its appearance, and it has now been considered by the Lords of the Committee on Education. The result has been embodied in the shape of the following Minute, which has just been distributed among the Members of the House of Commons and others.

By the Right Honourable the Lords of the Committee of Her Majesty's most Honourable Privy Council on Education.

Present :—His Grace the Duke of Devonshire, K.G., Lord President of the Council ; the Right Hon. Sir John E. Gorst, M.P., Vice-President of the Committee of Council on Education.

(1) The Lords of the Committee of Council on Education consider the Second Report from the Select Committee of 1898 appointed to inquire into and report upon the administration and cost of the Museums of the Science and Art Department. My Lords have also before them the observations on this Report prepared in accordance with their instructions by the Secretary of the Science and Art Department, a copy of which is appended to this Minute.

(2) A reference to the proceedings of the Committee shows that pp. 1 to 16 of the Report are based upon the Chairman's draft. This part of the Report appears to contain a correct statement of facts, but it is followed by paragraphs, introduced as amendments, which traverse to a great extent the same ground, and contain many inaccuracies and some inconsistencies.

(3) Having regard to passages which appear to reflect on individual officers, My Lords desire to emphasise the fact that they alone are responsible to Parliament for the administration of the Museums, and to declare that their directions have been loyally carried out by the staff, and that they retain the fullest confidence in Sir John Donnelly and his colleagues.

(4) They regret that the Committee should have insinuated in their Report that officers have been appointed because of their relationship to members of the staff, and have been dismissed because of the evidence they gave to the Committee. Such insinuations are devoid of any foundation in fact.

By order of the Committee of Council on Education.

SCIENCE AT LIVERPOOL.

THE Lord Mayor of Liverpool is to be congratulated upon a new departure. The Municipal authorities of one of our most important cities have actually held high festival in honour of a man of science, the occasion being the award of the Rumford Medal to Prof. Lodge. The Lord Mayor in the course of his speech said :