

College is too often bound down by the exigencies of examinations to the delivery of certain set lecture courses, and these, together with his own researches and the performance of the many administrative duties that fall to his lot, occupy almost the whole of his time. Let him possess the master-mind of a Hofmann, his hurried visits to his laboratory afford comparatively slight opportunity for the exercise of its full effect on the student. The demonstrator, on the contrary, bears the brunt of the difficult and harassing tutorial work in his close contact with the student in the laboratory, and upon the demonstrator's ability and manner of teaching will depend, in great measure, the student's future style of work. For this a grateful University College gives him rather less than it pays to its janitor, and much less than half the amount received by its travelling dairy-maid!

I am afraid that the cause of this very real injustice will be found, in part, in the influence of our older universities, where until recently lectures were everything and practical work was naught. Members of these universities on college councils still seem to cling to the old idea, and the majority of the remaining members, probably excellent men of business or affairs, have somewhat hazy notions of scientific educational work; the Professors, who alone of the teaching staff obtain representation on the governing body, are, after all, but human, and can scarcely be expected to labour to disabuse them.

I fear that, as a body, demonstrators and lecturers are scarcely influential enough to approach the Chancellor of the Exchequer with a view to his imposing such conditions that the renewal of the Treasury grant shall be made to depend upon the redress of their wrongs; still the injustice of their treatment is undeniable, and perhaps some of your readers can suggest a remedy.

SAVILLE SHAW.

#### A Solar Halo.

SHORTLY after 7 o'clock in the evening of July 2, a solar halo was observed from Putney Bridge, West London.

The appearance consisted of portions of the inner halo ( $22^\circ$  from the sun) situated just at the same height above the horizon as the sun. The halo was of a distinct red on the inside of the circle, followed by yellow and by a faintly bluish white light on the outside. There was also a faint parhelion on the right side, just outside of the halo.

Above the sun, at a point where the vertical through the sun would have cut the circular halo, there was, instead of the latter, an inverted arch of somewhat hyperbolic shape, the arms of the hyperbola extending upwards and enclosing an angle greater than a right angle. The faint prismatic colours of this arch were placed so that the red was nearest to the sun, and the apex of the inverted arch must have been  $22^\circ$  distant from the sun. The height of the sun above the horizon was estimated to be about  $14'$ , and the phenomenon lasted ten minutes after it had been first observed. The sky was somewhat cloudy.

West Kensington.

H. WARTH.

#### An Optical Illusion.

WHILE doing some photographic work with a light from a Welsbach burner, which shone through a small ground glass window in a dark-room, I noticed that when a lamp emitting red rays from its vertical sides was placed in a position so that its top was illuminated by the white light from the window, and while in this light it was then moved by hand to and fro in a horizontal plane, the top appeared to be loose, or displaced in opposite directions to the red sides. The top was of bright tin and its surface sufficiently irregular to cast slight shadows, which rendered the effect very marked.

This illusion is no doubt due to a physiological action at the retina, in which the impression produced by the white or grey light persists longer than that from the red, causing an apparent lag of the top. The persistency may be still further accounted for when the fact is borne in mind that the lag could only be obtained with weak lights in a dark-room, and therefore with the pupil of the eye largely expanded, and in consequence a relative increase of intensity of the white over the red light upon retinal areas of different sensibility.

Lamplight or daylight can be used instead of a Welsbach. I found it convenient to vary the intensity and colour of the lights by superposing sheets of coloured tissue-papers.

New Rochelle, N.Y.

F. H. LORING.

NO. 1394, VOL. 54]

#### Food of Chameleons.

I DO not know whether you care to insert a modest natural history communication, for I apprehend but few of your readers are country naturalists. If you do, it is to this effect.

It is not easy to keep chameleons alive long in this country, owing to the difficulty of procuring their proper diet.

I am keeping a Madagascar one, and he thrives very well. The food he seems to prefer to all other is the common green fly with a metallic lustre; these he takes at once in preference to the finest bluebottles, and when he protrudes his curious long tongue, armed with some glutinous matter, the direction is unerring, and woe to the fly. The chameleonic colour changes are most interesting.

E. L. J. RIDSDALE.

Rottingdean.

#### Röntgen Rays.

MANY tubes for Röntgen ray researches have the edge of the kathode mirror opposite the short neck, and in such cases the expedient described by Mr. Porter in your issue of the 18th ultimo, can very easily be carried out by fitting an india-rubber ring on this neck, winding two coils of copper wire round it, and leaving two or three inches free at one end, which is then bent so as to bring the point sufficiently near to the kathode loop.

An application of the Röntgen rays has been made in the small local museum here, which promises to make it more generally attractive and useful. Skiagrams of suitable specimens have been taken, and prints from these placed alongside the specimens, so that their external form and the bony structure which supports it may be compared at a glance.

Keith, N.B., July 3.

ALEX. THURBURN.

#### A Curious Connection.

IF new, perhaps the following fact, observed by me, may be worth publishing. In my kitchen I have a mantle on the gas-burner. At present the mantle is in a dilapidated state, and the light defective. I find, however, that, when the water-tap over the kitchen sink is running, the light greatly increases in brilliancy, maintaining that brilliancy as long as the water is running.

MARGARET MCEVOY.

#### THE INTERNATIONAL CATALOGUE CONFERENCE.

THE International Conference organised by the Royal Society to consider the preparation and publication of an International Catalogue of Scientific Literature was opened in the apartments of the Society at Burlington House on Tuesday. Upon the importance of such a catalogue it is unnecessary to comment here. The Royal Society has steadily attacked the problem of recording and indexing scientific literature, since the middle of this century, when the great author-index was commenced. More than thirty years ago the Council of the Society resolved that the catalogue according to authors should be followed by an index according to subjects, and a start was made in 1893. But, as Lord Kelvin pointed out in his last anniversary address, "the continuation of such a work was almost beyond the resources of the Royal Society, and therefore about two years ago a Committee was appointed to take into consideration a suggestion that the preparation of complete indexes should be effected by international co-operation." The conference now being held is the outcome of this conclusion. Only by securing international co-operation could such a work as that contemplated by the Royal Society be satisfactorily carried out. It is therefore a matter of extreme congratulation that the proposal has been so warmly supported by Governments and Scientific Societies in all parts of the world, as shown by the distinguished men who have been delegated to take part in the conference. The enterprise is one in which all men of science are interested, but of the magnitude of which it is only possible to have a faint conception. To develop a comprehensive and practicable scheme will be a difficult task, but with a conference constituted like that now