allowed to pass between a brass ball as anode, and the cleaned surface of an amalgamated zinc disc as cathode, they *disappear* in the presence of magnesium light. And if the distance between ball and plate be enlarged, the magnesium light will also hinder the formation of positive electrical brushes.

[*Cf. Wiedemann's Annalen*, Bd. 38, p. 40; 38, p. 497; 39, p. 332; 41, p. 161; 41, p. 166; 42, p. 564; 43, p. 225; 44, p. 722; 46, p. 281; 48, p. 625; 52, p. 433; and *Wiener Berichte*, Bd. 101, p. 703. March 1892.]

J. ELSTER.
Wolfenbüttel, August 12. H. GEITEL.

A Remarkable Meteor.

ON the evening of August 26 (Sunday) I saw what was to me an unprecedented sight: a brilliant and curious "meteor" fell near Gloucester. Starting from a point a little to the west of κ "Draco," at 10h. 19m., falling in the direction shown in Fig. 1, through about an angle of 40°; when it reached point X,

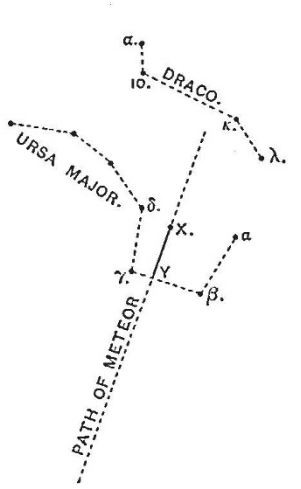

FIG. 1.

it appeared to melt, and its path from X to Y was marked by a most brilliant stream of light, equalling in intensity a magnesium flame.

This luminous streak from X to Y remained stationary and brilliant for nearly two minutes; then the lower extremity gradually curled around, forming the letter J, as shown in Fig. 2; the ends gradually converged until they met, forming a somewhat irregular band, and travelling in the path indicated by the arrow in Fig. 2.

As it traversed the heavens it seemed like a phosphorescent or nebulous cloud, finally assuming the shape shown in Fig. 2;

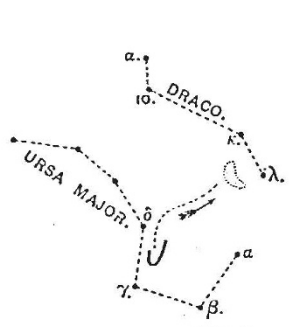

FIG. 2.

between κ and λ "Draco," then gradually becoming fainter and fainter, until at 10h. 41m. (just twenty-two minutes after the "meteor" fell) it became invisible, at a point as much to the eastward of κ "Draco" as the "meteor" had started from the westward of it. I should like to know if any of your readers have seen a similar phenomenon, or if it is of common occurrence. JOHN W. EARLE.

Gloucester, August 27.

A New Rhynchobdellid.

IT seems hard to believe that a leech, common and abundant and possessing a chitinous dorsal scute, should have hitherto escaped notice. But Jackson, in his edition of the "Forms of Animal Life," does not refer to such a structure, nor does Lang, and I do not find notice of it in more recent literature. In the hope that I am not adding a needless synonym, I give a short description of the animal, of which a detailed account is in preparation.

(*Glossiphonia?*) *scutifera*, n. sp. Sub-cartilaginous, semi-transparent, greenish grey above, paler beneath; obscurely striated above, with a row of dark spots on either side of the middle line. Body widest about 40th annulus, tapering thence abruptly to the disc and gradually to the head, which is narrowest, and not marked off from the succeeding annuli. Annuli 64, ganglia 22. Length in full extension about 1 inch, at rest 3-8ths of an inch. Eyes two in centre of head. Genital apertures behind 21st and 23rd annuli. The 9th annulus is broader than its neighbours, and carries on the hinder part of its richly glandular dorsum a chitinous plate slightly elongated transversely, covering about an eighth of the width of the annulus; in young specimens the margins are overlapped by the integument. Anus dorsal.

This species is meanwhile referred to Glossiphonia, to which it bears a general resemblance. JOHN YOUNG.

Glasgow University, August 28.

The Bleaching of Beeswax.

CAN any of your correspondents inform me how to bleach beeswax chemically, satisfactorily, and at a moderate cost?

August 28. J. S. D.

SUNSHINE AND WATER-MICROBES.

THE bactericidal action of light is perhaps of most general hygienic significance in connection with the fate of micro-organisms in water, and there is ample field open for investigation in this direction, which so far has been but little explored. It is, therefore, with especial interest that we note Prof. Buchner's important contribution to this subject in the *Archiv für Hygiene*. The title of the paper ("Ueber den Einfluss des Lichtes auf Bacterien und über die Selbstreinigung der Flüsse") already indicates that the practical aspect of the question has been considered, and indeed several experiments have been planned and carried out with the object of ascertaining what is the part played by sunshine in the alleged bacterial purification which takes place in river-water during its flow.

In the first series of experiments samples of boiled tap-water were inoculated with three drops of broth-cultures of the typhoid bacillus, *B. coli communis* and *B. pyocyaneus* respectively. The typhoid bacilli, even in diffused daylight, were reduced in numbers from 7400 per c.c. to start with, to 5000 at the end of one day, whilst on the second day none whatever were found. The *B. coli communis* sample had only 220 left on the third day, out of 22,600 at the commencement of the experiment, and was sterile on the fourth day; the *B. pyocyaneus* was, however, hardly affected at all during four days' exposure to diffused light.

The direct rays of the sun, however, were far more destructive. Thus about 30 c.c. of a sample of typhoid-infected water, placed in glass dishes and exposed to sunshine, contained no typhoid organisms at the end of six hours, and similar results were obtained with the *B. pyocyaneus*.

In all these experiments the perfectly admissible objection could be urged that the diminution in the numbers present might, at any rate in part, be attributed to a process of starvation in consequence of the absence of food-