On Robert's photograph (1859); the circular spots are stars, recognisable in the drawing. Unless this part of the Trouvelot system be the excellence of which is stated by Dr. Robert, and of which Robert himself——be very incorrect, the nebula would seem to have turned about 15° from left to right. The globular nebula (M. 31) to the other side of M. 31, seems also to have slightly shifted its position.

Evidence of the reality of such changes is of course only obtainable by comparing more or more photographs taken at comparatively wide intervals. In the meantime, this short notice in Nature may call the attention of photo-astronomers to this interesting point.

Dordrecht, September 14.

C. EASTON.

On the Identification of Habitual Criminals by Finger-Prints.

A PARLIAMENTARY Blue Book on "The Identification of Habitual Criminals," which has recently been issued, reports on The Finger-Print System, stated to have been "first suggested, and to some extent applied practically, by Sir William Herschel."

The chairman of the committee appointed by Mr. Asquith, whose report contains the above statement, refers me for his evidence on this point to Mr. Galton's work on "Finger-Prints" (Macmillan and Co., 1892).

My "careful study" of the subject is mentioned there, and on an article of mine in Nature, October 25, 1890 (vol. xxii, p. 601), referred to. It is correctly indexed in the "Encyclopaedia Medica" for the year, published in 1881, although Mr. Galton spells and indexes my name incorrectly. That article, I believe, is absolutely the first notice of the subject contained in English literature, and the conclusion I reached therein was that the patterns of the skin-furrows, with their distinctive loops, whorls, and lines, breaking and blending like the junctions in a railway map, were capable of being readily used as a reliable and permanent basis for the "scientific identification of criminals." I conclude my paper with the statement that: "There can be no doubt as to the advantage of having, besides their photographs, a nature-copy of the often-unchangeable finger-furrows of important criminals."

Sir William Herschel wrote in Nature, November 25 of the same year, alleging that he had "been taking sign-manuals by means of finger-marks for now more than twenty years." It does not yet appear that anything had been published on the subject by that gentleman till my contribution called for his letter a month afterwards, the collections made by Sir W. Herschel were recently placed in Mr. Galton's hands, and that writer states that "they refer to one or more fingers, and in a few instances to the whole hand, of fifteen different persons." (["Finger-Prints," p. 9.)

It is not stated how many of these had been impressed prior to my first calling attention to the subject. At present it would seem that Sir W. Herschel had not accumulated the impressions at a more rapid rate than that of one person in two years! As we are informed in the letter to Nature, referred to above, that the identification of pensioners had been secured in this way, that the method was used in all the registration offices of the district, and that "on commitment to gaol, each prisoner had to sign with his finger," I should have expected that a somewhat more extensive collection might have been secured. As priority of publication is generally held to count for something, and as I knew absolutely nothing of Sir W. Herschel's studies, nor ever heard of anyone in India who did, some little evidence on the point of priority would be of interest even now.

Mr. Galton says, of Sir W. Herschel, "He informs me that he submitted, in 1857, a report in semi-official form to the Inspector-General of Gaols, asking to be allowed to extend the process; but no result followed." A copy of this semi-official report would go far to settle the question of priority, as its date is nearly two years previous to my having written the above. An excerpt of which I have seen, but no reference to them was then, I know, found in any anatomical work that I could find access to, and no writer on identification had ever thought of them as a means to that end. My interest, that of Purkenje, arose from a special study of the sense of touch, and I was then lecturing to medical students on the "Physiology of the Senses." Having myopic eyes which enable me to write with ease the Lord's Prayer three times in the space of a sixpence, I soon noticed the unique patterns which the papillary ridges formed. I happened to be studying the prehistoric pottery of Japan at the same time, and became interested in objects of interest. These patterns were similar, but I thought, finer and more slender than those of the present day, which pointed, I conjectured, to the employment of children in early hetic art. However that may be, my knowledge of the subject had not acquired any independent genesis.

The subject of identification by this means has been brought under the notice of the authorities on criminal matters of different countries by me from time to time, and some years before Mr. Galton's work was published, Scotland Yard placed one of its most enlightened officers in communication with me on the subject. Inspector Tompson's letter mentions prints of one finger only as being obtained from prisoners on commitment. On page 79 of the Blue Book mentioned above, "Instructions for taking Finger-Prints," are given for the benefit of prison warders, and the ten fingers are to be printed from, as I have advocated. I may add that I have not the slightest wish to diminish the credit that may be due to Sir W. Herschel. What I wish to point out is that his claim ought to be brought out a little more clearly than has yet been done, either by himself or by Mr. Galton. What precisely did he do, and when?

HENRY FAULDS.

The Tetrahedral Carbon Atom.

Your reviewer, in his notice of my "Elementary Lessons in Organic Chemistry," takes exception to the statement that the carbon atom has been hypothetically regarded as tetrahedral in shape; he is presumably unacquainted with the criticisms of Losson ("Berichte", 20, 581), and with Wuliscineus' reply ("Berichte", 21, p. 581), as well as with the pamphlet of Wunderlich (""Contribution organischer Molekule," Würzburg, 1886); he need not, however, search the whole range of stereo-Talmudic literature, that refuted with me during a forenoon. Even in 1880, I prepared copper-plate outlines of the two hands, accompanied with instructions as to obtaining finger-prints, and some two chief points on the palm, when the range are characteristic. Sir W. Herschel's letter mentions prints of one finger only as being obtained from prisoners on commitment. On page 79 of the Blue Book mentioned above, "Instructions for taking Finger-Prints," are given for the benefit of prison warders, and the ten fingers are to be printed from, as I have advocated. I may add that I have not the slightest wish to diminish the credit that may be due to Sir W. Herschel. What I wish to point out is that his claim ought to be brought out a little more clearly than has yet been done, either by himself or by Mr. Galton. What precisely did he do, and when?

H. FAULDS.