

IDENTIFICATION BY FINGER-PRINTS.

TO THE EDITOR OF THE TIMES.

Sir,—Letters that appeared in your columns on January 6, 7, and 8 upon my share in devising the present system of finger-print identification call for the following remarks:—

It was in or about 1888 that I lectured at the Royal Institution on "Personal Identification," when the Bertillon system, based on the classified measurements of specified parts of the body, was new and very much in vogue. At the same time it seemed to myself and many others that the accounts of what it really could do were deficient in exactness; also that the theory of chances put forward to justify its great claims was obviously faulty. These raised doubts as to the degree of its validity and suggested a search for alternative or, at least, for additional methods. I brought myself of finger-prints, spoke of them in the lecture, and soon learnt that a great deal had already been written about them. More especially did I acquaint myself with the procedure of Sir W. Herschel, when Collector at Hooghly, in Bengal, who required that all documents should be attested by the simultaneous impression of the blackened fore and middle fingers of the right hand, by which he put a stop to the previously prevalent crime of perjury.

But the feasibility of what I now call "lexicographing" finger-prints had not been considered. Lexicographing was the great merit of Bertillonage in respect to measurements. By the help of five specified measures an expert could indicate the particular pigeon-hole or drawer in a cabinet containing 243 of them in which a duplicate set of the measurements of a suspected person would be found, if such existed in the office, it reduced the labour of search 243-fold, barring accidents. It remained for the searcher to rapidly turn over the contents of this one pigeon-hole, looking all the while for noted peculiarities to define the particular card sought for. Finger-prints, as they had thus far been employed, could be used for this final act, but not for the previous one of discovering the pigeon-hole. I set to work to supply this serious need, trying many plans and publishing two memoirs. At length in 1892 I published "Finger-Prints," which gave all I knew up to that date. By 1894-5 I had a collection of the prints of all ten digits of 2,500 persons, provisionally classed and lexicographed. It was my view at that time that a sub-classification by finger-prints of the contents of each of Bertillon's 243 pigeon-holes would give an enormously increased power of indexing, and I was occupying myself in ascertaining as quickly as I could what that power would be, judging by the number of persons whose finger-prints could be dealt with easily, when they were used by themselves.

The Home Office appointed a committee in 1894, who reported in 1895. Your Correspondent says in *The Times* of January 8,

"Mr. Galton certainly constructed a system, but it was rejected in 1894 by a committee appointed by Mr. Asquith, who was then Home Secretary." I am unable to reconcile that statement either with the report of the committee or with the office arrangements to which they led. [The pages attached to the following quotations from the report are those of my book "Finger Print Directory," 1895, which contains long extracts from it.] Thus in page 8:—"We shall then proceed to make a recommendation . . . the system we propose to recommend being one which borrows Mr. Bertillon's admirable method of classification and at the same time embodies the practical results of Mr. Galton's investigations." Again page 14:—

"Though the results of our trials on Mr. Galton's collection of 2,500 cards were eminently satisfactory, it is still a question how far the same method could deal effectively with a much larger collection." Again, page 18:—

"The committee . . . would have been glad if, going beyond Mr. Galton's own suggestion, they could have adopted his system as the sole basis of identification." In page 20:—

"In adapting the Bertillon system to English use we think it would be desirable to shun those [distinguishing marks] and make the final classification dependent on finger-prints." Lastly, page 21:—

"It is recommended that the proposed new method should be supplementary to the existing method at least for a long time to come." The details of my finger-print method were fully described in the report for the guidance of the Office, which was reconstituted with Dr. Garson in charge, who, being a skilled craniologist and writer on human measurement, was perhaps somewhat biased towards Bertillonage.

I was delighted to find that the finger-print system had at length obtained official recognition and might be left to develop itself in official hands. Dr. Garson did much, though hampered by his subordinate position. When Sir E. Henry became Chief Commissioner six years ago, full of zeal for finger-prints, well experienced in their use, and master of the situation, I felt satisfied that their utilization had become finally established, and I ceased to do more than observe its developments from time to time. Of course, all new methods require time for development and growth, and though very much has been done under Sir E. Henry's vigorous administration, I doubt whether finally has even yet been reached; for example, whether the power of lexicographing single prints has been developed to its utmost. Moreover, I doubt much whether the finger-print method as at present established would suffice for all the uses to which it may be hereafter thought desirable to apply it, as for the Army, Navy, pensioners, and so forth, which, if used in combination with Bertillonage as recommended by the committee, it would easily do. I must add that the authorities seem to have brought seriously in question a quite needless prejudice against the use of finger-prints among the Indians in South Africa.

In 1895 I published my "Finger-Print Directory," which contains the results of my endeavours up to that date, to test the system further and to extend its powers. In consequence I proposed, p. 112, to reform the order in which the fingers had previously been read off (see p. 38 also) and to replace the existing system of notation by a sort of pictorial shorthand which I described, adding,—"The relief to eye and brain caused by this change and, so to speak, natural notation and order of writing is extraordinary."

When speaking very briefly of all this in the recently published "Memories of my Life," I used the phrase which Sir George Darwin quoted in his letter to you, January 8, that is, viz., the method described in the "Finger-print Directory"—is in most essential points the same as that in present use in Scotland and "By 'essential points' I mean that it reposes on a primary arch-top-whorl classification of the rolled impressions of all ten digits, on the count of ridges where discrimination is otherwise difficult, on the observance of and reliance upon minutes and on the use of a shorthand notation of the finger-prints in the order in which they are read. I still think myself justified in having used that phrase, though Sir A. Pödder writes to you on January 9, "from this view I entirely dissent."

As regards two other points that have been incidentally raised, I am sure that no one who has read my two books can accuse me either of ignoring the work of Sir W. Herschel or that of Purkinje.

There is a phrase in Sir H. Cotton's letter of January 7 which I should greatly like to be rendered less ambiguous, concerning Sir E. Henry's excellent words—namely, that "he had organized it in India before he visited Mr. Galton's laboratory" (the italics are mine). I would ask what "it" is intended to include? Does it mean more than organizing a system of taking finger-prints and lexicographing them in my old way? Or does it refer to a new departure?

January 4, 1896. FRANCIS GALTON.