

of these latter were Miss Gregor (Women's Provident League, Glasgow); Miss Irwin (Champion of girl's in shops); Mrs. and Miss Hicks; Miss Marion Tuckwell (Women's Trade Union League); Miss Whyte (Bookbinders); Miss Addis (Dressmakers); Miss Spooner (Women's Co-operative Guild); and Lady Dilke. Great was the enthusiasm among these when the Chairman, Mr. Delves, declared "we must make women workers our equals, and ensure them equal wages for equal work." Again, "let the children keep their childhood, and let the old of both sexes have rest. . . . But let the adult women work side by side with the adult men as his partner, not as his underselling competitor." Fair play and no favour, was the watchword he offered. This supplied the text to Miss Hicks, who asked if the conditions of appointment of Factory Inspectors did not tend to exclude practical women from these posts. Mr. Fenwick said that personal fitness in the case of both sexes was the final test. The meeting agreed that competent women who had been in a factory would possess advantages over equally competent women who had not had such experience. Miss Hicks also drew attention to the impositions and fines from which women suffer. One part of the members were in favour of extending the restrictions and regulations of the Factory Act. Needless to say, this would make it more and more difficult for women to compete against the men, consequently there is a considerable section who desire to leave well alone. The women delegates seem to have been perfectly satisfied with the result of their communings together.

Science Notes.

FINGER-MARKS AND MEASUREMENTS.

NO reader of the article entitled "Known to the Police," in the current number of the *Nineteenth Century* can fail to agree with Sir William Flower, who, speaking at the recent meeting of the British Association, said that the application of the methods of anthropometry to the recognition of criminals was a striking illustration of the practical utility of labours originally undertaken under the influence of devotion to science pure and simple. Anthropometry, which includes something more than the mere measurement of man, which its etymology suggests, is one department of anthropology, and this is the science which, in the words of Sir William Flower, "treats of mankind as a whole. It investigates his origin and his relations to the rest of the universe. It invokes the aid of the sciences of zoology, comparative anatomy and physiology, in its attempts to estimate the distinctions and resemblances between man and his nearest allies, and in fixing his place in the scale of living beings. In endeavouring to investigate the origin and antiquity of man, geology must lend its assistance to determine the comparative ages of the strata in which the evidences of his existence are found, and researches into his early history soon trench upon totally different branches of knowledge.

Up to the present, the study of anthropology (as a distinct science) has received but little aid from endowments or from the State; its progress has been due

mainly to the unorganised efforts of amateurs on the subject. What is termed anatomical anthropology, that is a study of modifications dependent on race, age, sex, and individual variability, must necessarily be largely based on exact measurements, and it is in this direction that its remarkable utility has been made apparent even to those who attach little importance to the pursuit of science for its own sake.

In 1879 M. Alphonse Bertillon (the son of an eminent anthropologist) obtained permission to make experiments in anthropometry in a Paris prison in his leisure hours, he being at that time already in the service of the Prefecture of Police. His system, in brief, consists of measurements of various parts of the human frame, such as are not subject to change. Of every prisoner passing through his hands, he takes eleven different measurements, and also records the colour of the hair and eyes, and particulars of any scars or moles on the face, arms, and bust. All these details being entered on a card, he can, in the course of a few minutes, determine whether the man has ever been examined by him before, although he has particulars of nearly half-a-million persons.

It is the method which M. Bertillon employs in the classification of his measurements that is responsible for the incredibly short time required in rejecting all but the one sought for. He bases his first classification on the length of the head, because the skull of the adult never grows, and the measurer cannot be deceived, as he might be in taking the stature. By the length of the head 90,000 persons may be divided into three classes, labelled "large," "medium," and "small." These classes will average 30,000 each. The measurement of the width of the head will divide each of these three classes in three sub-classes, according, as the width is large, medium, or small. Each of the nine sub-classes will average 10,000 each. When the length of the middle finger has been obtained, each 10,000 persons fall into three divisions, averaging 3,300 each. Thus, by means of seven measurements and a record of the colour of the eyes (there being seven different colours recognised), 90,000 persons can be divided into groups, each containing, on an average, seven persons. Practically, these groups are found to vary from 3 to 20. At this stage, photographs and various marks on the skin are useful as proofs of identity, although it is stated that by measurements alone the work of identification might be completed, for of the half-a-million of persons registered, no two agree in all their measurements.

A comparison of this system of identification with that practised in London may well cause wonder that the Bertillon system should have been in use in Paris for eleven years before our Home Secretary appointed a committee to enquire into its methods, and into those in use in England, for registering and identifying habitual criminals. It is stated that one identification may necessitate a search of ninety hours, the material at the command of the English police being over 100,000 photographs of habitual criminals, with names and distinctive marks, classified only according to age and stature, and the class of crime effected by each offender. Even more serious than the waste of time, is the occasional occurrence of cases of mistaken identity under our system, a catastrophe unknown in connection with that of M. Bertillon. A tribute is paid to the efficiency of his system by the criminals them-

[previous page](#)

[next page](#)