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METHOD OF FINGERPRINTING

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This invention relates to a method of fingerprinting especially adapted for use in connection with toy fingerprinting sets, and has for one of its objects the provision of such a method of fingerprinting which will produce a clear and lasting impression.

Another object of the invention is the provision of such a fingerprinting process, in which the ingredients used are non-toxic, non-caustic and non-staining.

A further object of the invention is the provision of a method of fingerprinting which consists in the use of ferric oleate or iron soap as a transfer medium for the fingerprint in lieu of ink and then develop the print with a suitable developer.

Other objects and advantages of my improved method of fingerprinting will become more apparent as the description progresses.

Inasmuch as the present invention may be incorporated in fingerprint sets largely used by children, it is essential that the materials used be non-toxic, non-caustic as children are apt to put their hands or fingers into their mouths during the fingerprinting process. Furthermore, it is highly desirable that such materials be non-staining so that they will not soil or smudge the children's clothing as is the case when ordinary inks are used in making fingerprint impressions.

In view of the foregoing, I have perfected a method of fingerprinting wherein I employ an iron soap preparation (such as ferric oleate) for the transfer medium of the fingerprint impression, the said impression being later developed by a tannic acid solution.

To obtain, for instance, 10 pounds of iron soap, 10 pounds of sodium oleate (or soda soap, castile soap, olive oil soap or foots) is dissolved in 20 gallons of hot water. When the soap is in solution, a solution of iron chloride, (comprising 3 lbs. of ferric chloride, $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$) in 6 quarts of water is added to the soap solution while rapidly stirring. Red flakes of iron soap now commence to form and the solution is again heated, said heating causing the red mass to coalesce and separate from the water solution. After cooling the iron soap is removed from the solution and may be kneaded to expel the occluded water. If it is desirable to modify the consistency and odor of the iron soap, a small amount of oleic acid or an oil together with a suitable amount of an aromatic is added thereto before or during the kneading operation.

It is to be understood that I do not limit myself to the use of an iron soap made in precisely the manner and proportions above described, as the

process of making same and proportions of ingredients may be varied.

The tannic acid developer used may be made by adding, for instance, 6 oz. of commercial tannic acid to 1 gallon of denatured alcohol. The mixture is well shaken or stirred, and allowed to settle and clear. The supernatant solution is then racked or filtered off and the insoluble sludge is discarded.

In practice, when making fingerprints, a small amount of the iron soap which is preferably in a soft state, is placed on a glass, metal or celluloid plate and rolled to a thin film with a roller provided for this purpose. The finger is then placed on this film and subsequently pressed against the surface of the record sheet, which should preferably be made of a somewhat porous paper. The impression thus obtained is practically invisible and may be developed by applying the tannic acid developer with a brush or sponge at the back or underside of the paper where the impression is located. If desirable the drying of the developer may be hastened by the application of heat. A clear permanent print is thus obtained by my improved method.

The reason for preferably applying the developer to the rear surface of the paper is, that iron soap is somewhat soluble in alcohol and brushing same with the alcohol containing developer may smear or smudge the print. However, with special care the developer may be applied directly to the surface of the impression and a satisfactory print may thus be obtained.

While I have described the record sheet as being made of somewhat porous paper, I do not limit myself to this exact disclosure, as other porous materials may be used for this purpose. It will also be understood that the record sheet may be provided with a film of iron soap by any suitable means and the finger may be directly pressed against the said film to impress the fingerprint thereon.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A method of fingerprinting which consists in applying to a sheet of porous paper or the like an invisible ferric salt imprint, the ferric salt being capable of development into a visible compound, and then applying a developing solution to the underside of the paper where the impression is located.

2. A method of fingerprinting which consists in applying to a sheet of porous paper or the like an invisible film of iron soap by a finger impression, the iron soap being capable of development

into a visible compound and then applying a developing solution to the underside of the paper where the impression is located.

3. A method of fingerprinting which consists in
5 applying to a sheet of porous paper or the like an invisible film of iron soap by a finger impres-

sion, the iron soap being capable of development into a visible compound and then applying a tannic acid developing solution to the underside of the paper where the impression is located.

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