Physiognomy.—Noses.

It is not only a generally admitted fact, that the human face indicates mental character, but all men act upon it instinctively. We form opinions of persons by reading their character in their faces; and we do so, as it were, by the force of impressions. We take a like or dislike to a person the first time we come in contact with him, and form an opinion of his character, favorable or unfavorable, from some impression—the face being regarded as the index of his mind. It has been attempted to reduce the form and expressions of the human face to a science, which has been named Physiognomy. It certainly has not yet deservedly earned for itself the name of "a science," although there are some general truths recognizable in it. About sixty years ago it was as popular as Phrenology was a few years since; its great apostle then was J. Caspar Lavater, whose writings have been translated into several languages, but his opinions have, for a number of years, almost faded from remembrance. Recent efforts, however, have been made to revive them, thus showing that there are persons who still believe in the reality of physiognomy, and that it may yet be reduced to a science. Mr. Redfield, in this city, has written a work on the subject, in which he advances many new views, and in the last number of the *London Review*, for December, there is an article on the physiognomy of the human form, which shows that in Germany and France, the subject is now engaging considerable attention. In this article the opinions of a great number of eminent men are quoted, as believers in physiognomy,—Aristotle, Bacon, Fielding, Cowper, and others believed that the face was the index of the mind, and that they could read the character of a man by his face, as well as an author by his books. The opinions of great men are not to be credited as authority on any subject as establishing a doubtful question; the best of men are liable to mistakes. A science must be its own best witness—it must contain within itself the evidences of its own truthfulness. Aristotle's opinions of natural philosophy, from the stereotyped deference paid to them by those who pretended to learning—held science in bondage for many ages. What is there in Physiognomy itself that will stand the test of examination? Experience has taught every man that the first impressions of the character, judging from the faces of individuals, are often incorrect; although they may also have been frequently right. All that has yet been written on the subject, is more curious than useful, because of the infinite variety of form and expression in the human countenance, and which never can be reduced to rule nor system. However, some of the rules which have been laid down by the ablest writers on physiognomy, for judging of persons, will be of general interest to all. An abstract of some of them—the latest adopted, we will endeavor to present from the essay in the *Review* heretofore mentioned.

The Hair.—"Long, soft, and light hair will, in a man, betray a feminine or child-like character; dark, coarse hair in a woman will reveal her hard and too masculine nature. In a man, dark coarse hair symbolizes strength and firmness in whatever direction it may be directed. Brown and black hair are chiefly seen in those of active character; red and fair hair are associated with passiveness." The hair of Napoleon is said to have been soft and silky as that of a child; and the conquering Barbarossa was so named from his red beard. We therefore set down the above rules of judging of human character by the hair, like some of the rules of English grammar, in which the exceptions are too numerous to mention. Lavater always distrusted a man the color of whose hair contrasted with his eyebrows. "Natural loss of hair in men often indicates a richly productive power of mind. Its abundance, late in life, betrays poverty and inactivity of mind." These rules have also their exceptions. Men having bushy heads in old age, like Calhoun, have been distinguished in science, art, learning, and eloquence.

The Face.—"In general the upper half of the face has the symbols of the intellectual character and the feelings; the lower half those of the propensities and the will. The nose is symbolical of varieties of intellect; the eyes, of the disposition; the mouth, varieties of sensuous character."

"All noses less than one-third of the face in length, are of the small class. The varieties of these are numerous in the snub, flat, and up-turned or celestial. All such noses indicate defective intellectual power, and do so with a symbolism, which nothing but excellence in the form of the head, as in the case of Socrates, can neutralize." That is, Socrates was an exception to this rule of noses; so was William Pitt, the younger, and the only genuine portrait of Shakspeare, represents him with a rather short, but not pug, nor flat nose.

"The thicker and longer forms of snub nose in either sex commonly indicate the predominance of the material sensuous nature; and a turn-up nose, with wide obvious nostrils, is an open indication of an empty, inflated mind—a spurious imitation of that strength and lofty pride which the wide nostrils in a well-formed nose indicates."

Physiognomists are decidedly hostile to the up-turned nose: a form which we consider decidedly excellent for taking snuff, a plea that we cannot refrain from putting in for their credit.

'Large noses in men are generally good signs, especially they add emphasis to the good indications of a well-formed head, but they must not be too fleshy or too lean. If they are long, but not snout-like, they mark the intelligent, observant, and productive nature of the refined mind. If Roman, arched, high, and strong, they are generally associated with a less developed forehead and a larger hind head; they disclose strength of will and energy, rather than intellectual power; they also show a want of that refinement indicated by the straighter nose. The Jewish or hawk-nose indicates shrewdness in worldly matters; it adds force to the narrow concentrative forehead symbolical of singleness of object; and its usual narrow nostrils wear the unfailing sign of caution and timidity. The Greek straight nose indicates refinement of character, love for the fine arts, astuteness, and craft, rather than direct action. A nose slightly bifed at its end indicates an analytic mind. Such noses, large and broad pointed, are frequent in men with acute practical knowledge of the world. The nose wide-nostrilled, wide at the end, thick, and broad, indicates a mind that has strong powers of thought and is given to close and serious meditation. A nose whose ridge is broad, no matter whether straight or curved, always announces superior faculties. A small nostril is the certain sign of a timid spirit. A thick fleshy nose indicates grossness and sensuality. A lean, sharp nose indicates want of fervor and a selfish adhesion to the formalities of life."

These opinions of physiognomists respecting the characteristics of noses, relate only to those of men; but they hold that those noses of ill-omen in men are really worse in women. These opinions must not be held correct, for universal application, and yet there is much truth contained in them, as common observation will teach any man. They are, however, curiously interesting, as attempts made by some naturalists to reduce to a science, as an index of mind and character, the actual forms of men.

Reform of Weights and Measures.

The following is an extract from the Report of Professor Henry, Secretary of the Smithsonian Institute:—

"I am much interested in the subject of a uniform system of weights and measures. Nothing, except the diversity of language, tends so much to retard the advance of civilization, and to prevent the condition in which man of every clime and every nation will belong to one great brotherhood, as the different units and divisions of the measures of quantity and quality. I directed the attention of the Regents to the subject in my last annual report, and presented the same subject to the President and his Cabinet at the last meeting of the establishment of this institution. I doubt not that Congress, in due time, will take up the matter, and that an international conference will be held in regard to it. Every day renders the importance of a uniform system more apparent; and, since steam and electricity are bringing the most distant parts of the earth into nearer communication, the necessity of removing all barriers to mental intercourse will become more imperative."

Original Recipes for Electro-Plating, Gilding and Brassing.

MESSRS. EDITORS—Enclosed you will find a few practical recipes for the electro-metallurgist. I believe it is the first time that a solution for plating direct on iron, steel, or britannia metal has been published.

In most of my experiments I have used Smees' battery; but for depositing brass, I prefer a battery fitted up as Groves', using artificial graphite—obtained from the inside of broken coal gas retorts—in the place of platinum. With one large cell (the zinc cylinder, being 8 × 3 inches, and excited with a mixture of 1 part sulphuric acid and 12 parts water, the graphite being excited with commercial nitric acid,) I have plated six gross of polished iron buckles per hour with brass. I have also coated type and stereotype plates with brass, and find it more durable than copperfacing. RICHARD WOOD.

Springfield, Mass., January, 1857.

To prepare Cyanide of Silver.—First preparation.—Dissolve one ounce of pure silver in two ounces of nitric acid and two ounces of hot water, after which add one quart of hot water.

Second preparation.—Dissolve five ounces of the cyanide of potassium in one quart of water.

To the first preparation add by degrees a small portion of the second preparation, until the whole of the silver is precipitated, which may be known by stirring the mixture and allowing it to settle. Then drop into the clear liquid a very small quantity of the second preparation, from the end of a glass rod; if the clear liquid is rendered turbid, it is proof that the whole of the silver is not separated; if, on the other hand, the liquid is not altered, it is proof that the silver is separated. The clear liquid is now to be poured off, and the precipitate—which is the cyanide of silver—washed at least four times in hot water. The precipitate may be now dried and bottled for use.

To prepare Cyanide of Gold.—Dissolve one ounce of fine gold in a mixture of 1-4 ounce of nitric acid and two ounces of muriatic acid; after it is dissolved, add one quart of hot water, and precipitate with the second preparation, proceeding the same as for cyanide of silver.

To prepare Cyanides of Copper and Zinc.—For copper, dissolve one ounce of sulphate of copper in one pint of hot water. For zinc dissolve one ounce of the sulphate of zinc in one pint of hot water, and proceed the same as for cyanide of silver.

The electro-plater, to insure success in plating upon all metals and metallic alloys, must have two solutions of silver: the first, to whiten or fix the silver to such metals as iron steel, britannia metal and German silver; the second to finish the work, as any amount of silver can be deposited in a reguline state from the second solution.

First, or Whitening Solution.—Dissolve 2 1-2 lbs. (Troy) cyanide of potassium, 8 ounces carbonate of soda, and 5 ounces cyanide of silver, in 1 gallon of rain or distilled water. This solution should be used with a compound battery of from three to ten pair, according to the size of the work to be plated.

Second or Finishing Solution.—Dissolve 4 1-2 ounces (Troy) of cyanide of potassium, and 1 1-2 ounces of cyanide of silver, in one gallon of rain or distilled water. This solution should be used with one large cell of Smee's battery, observing that the silver plate contains as near the surface of the articles to be plated as possible.

N. B.—By using the first, or whitening solution, you may insure the adhesion of silver to all kinds of brass, bronze, red cock metal, type metal, &c., without the use of mercury, which is so injurious to the human system.

To prepare a Solution of Gold.—Dissolve 4 ounces (Troy) of cyanide of potassium, and 1 ounce of cyanide of gold, in 1 gallon of rain or distilled water. This solution is to be used warm, (about 90° Fah.) with a battery of at least two cells.

To prepare a Solution of Copper or Zinc.—Dissolve 8 ounces (Troy) cyanide of potassium, and 3 ounces of cyanide of copper or zinc in one gallon of rain or distilled water. These solutions to be used at about 160° Fah. with a compound battery of from 3 to 12 cells.

To prepare a Solution of Brass.—Dissolve 1 pound (Troy) cyanide of potassium, 2 ounces of cyanide of copper, and 1 ounce of cyanide of zinc, in 1 gallon of rain or distilled water; then add 2 ounces of muriate of ammonia. This solution to be used at 160° Fah. for smooth work, and from 90° to 120° for ornamental work, with a compound battery of from 3 to 12 cells.

Gold can be deposited of various shades, to suit the artist, by adding to the solution of gold a small quantity of the cyanides of silver, copper or zinc and a few drops of the hydrosulphuret of ammonia.

[Our correspondent—Professor Wood—is a practical chemist and electro-metallurgist.—For the sake of advancing practical useful science, he has given the above receipts to the public.—EDS.

Shot Towers.—Manufacture of Shot.

In our last volume we described the iron shot tower which had been erected by Mr. Bogardus for Mr. McCulough, in Center st., this city, the first of its kind in the world, and which is quite a unique affair in New York as it somewhat resembles one of the ancient war towers so common in the old European countries.

Recently we have perceived another shot tower gradually growing upwards, day after day, in our city, and it is now nearly completed outwardly. It is being built for Messrs. Tatham & Brothers, the great lead pipe manufacturers in Beekman street, next to St. George's Church. Its hight is to be 217 feet from the foundation, its form octagon, and the material brick, inclosed in sections by iron columns. Each of these columns rests upon a massive brick foundation, being anchored to a weight of 30 tuns, each weight connected by inverted arches with its fellows. The columns of each section are joined by iron girders, bolted with 1 3-8 inch bolts. The total weight of iron employed in the construction of this tower is 237,000 lbs.

A few years since we illustrated a new method of making shot without erecting a high tower, by causing the shot to be retarded in their descent by a strong current of air forced up against them. The manufacture of shot has been carried on by this invention in this city, but it seems to have proved more expensive than the old plan, and is, we believe, abandoned.

Aluminium Cheap as Iron.

In an interview we recently had, says a writer in the London *Medical Times*, with one of the firm of Rosseau, who have obtained a patent for the process of obtaining aluminium from clay, this gentleman informed us that he had little doubt of being able to obtain the metal at as low a price as iron; thus in a few years we may be carried across the ocean in ships of aluminium, and our bells and musical instruments, all our cooking utensils, and an immense number of articles of daily use and ornament, will, in all probability, be made of this light, beautiful, indestructible product of clay.

Progress of Australia.

The progress of this island continent is really astonishing—rivalling that of our Western States. On the 25th of August, 1855, the population of Victoria amounted to 150,905 souls, including 100,220 men, 28,843 women, and 27,842 children. Of this number 22,471 were emigrants from China. The cluster of colonies in Australia had scarcely any existence commercially twenty years ago, now import from Great Britain goods to the value of $70,000,000 annually. Its produce of gold now surpasses that of California.

A buried Greek city has been discovered near Cos, in the Levant. A steam frigate has been fitted out by the British government with a *corps* of scientific men, to make excavations in it, and to take photographic pictures of all which they may discover.