BRAIN GROWTH.

The question is often asked: "How long does the brain of an individual continue to grow?" Some have an idea that it attains its full growth at the age of 20 years; and we have seen assertions, professing to be from medical authority, that the brain attains its growth at about 14 years; but no close observer, no phrenologist who has had opportunity to measure thousands of heads, and to measure not a few of them, say once in five years for twenty-five years, will believe a word of it.

In many cases the brain will increase in size till a man is 60 years of age, provided he have a healthy, vigorous body, and live correctly, so far as diet and labor are concerned, and the mind be kept in an active, but not over-excited state.

Any sharp observer may enter 50 churches in succession, when the congregations are full, and he will readily see that the grey-headed father, sitting at the head of his family with his son 25 years of age by his side, will have a considerably larger head than his son. In numerous cases this can be remarked in looking up and down the aisles. The old gentlemen's heads are the largest. If we revisit the same church 30 years afterwards, we will find the energetic son with grey hair sitting at the top of the pew, and his son at his side; and the older man will have a head larger than the hopeful son—showing that it had been growing up to 50 years of age or beyond. We have just received a letter from Mr. L. N. Fowler, of London, which contains one remarkable passage. Mr. Fowler says: "I shall send you soon the phrenological character of Sir Josiah Mason, of Birmingham, England. In 1864 I measured his head, which was 23½ inches; in 1869 it measured 24 inches; and now, in 1879, it measures 24¾ inches, plump; and he is now in his 85th year.

The law of growth, in respect to the brain, is the same as that relating to growth of body. If a muscle, or set of muscles, be called into frequent and efficient exercise, they become thereby hungry for nutrition; and when the blood is passing those parts, the nutriment carried in the blood is absorbed by the parts needing it, and they become enlarged. A broken bone needs at the point of fracture bone-making material, and the blood which carries nutrition for every part, as it passes the region of the fracture, loses by affinity the material which the bone wants to repair the fracture. As the blood passes a flesh-wound, that part of the blood adapted to heal the wound is taken up and used where it is required. Let a person exercise the brain in the intellectual or thinking region and the forehead will grow, while other parts remain stationary. Persons engaged in rough, laborious business need the exercise of the base of the brain, and that part of the head will grow; but if the labor require also the active exercise of the intellectual organs, the two regions will become enlarged considerably. Those who devote themselves mainly to moral and esthetical subjects will be found with a larger top-head; and those who have body enough to give adequate support to the whole system, including the brain, will be able to increase the size of the brain year by year by the general exercise of all the faculties until old age. The body increases in size in old age, why not the brain? Generally there is not vigour enough in the vital system to sustain the body and push the development of brain beyond the age of 50; but there are cases which we happen to know, proving brain growth until after 60 years of age.

Some persons think it impossible for the brain to increase in size after the bones of the skull have become hard and strong. When the brain requires more room in any part, the bone material of the skull is gradually absorbed or dissolved, and, like lime-water, is taken up by the circulation to be reorganized into new adjustments of the skull, large enough for the brain. The clam shell is as thick as a human skull and much harder, yet a clam will double his size in two or three years, during which time the entire shell will have been reconstructed on a larger pattern in every direction. The clam is never imprisoned or cramped by his shell; he is, like the brain, simply protected and shielded as by a friend. The shell is alive, and so is the human skull, like the finger nails, or the hoofs of animals, and capable of rapid growth, though the process be to us imperceptible.—*Phrenological Journal.*

A PLASTIC CEMENT is a recently patented French product, which is called after its inventor, "Jannin's Cement." It is simply composed of a mixture, in suitable proportions, of yellow oxide of lead—that known in trade as "Massicot" is preferred—and glycerine; other metallic oxides and coloring matters may be added to the above mixture, according to the character or color that may be desired. The cement may be made to possess more or less stiffness by varying the proportions of glycerine—the larger the percentage of the latter, the softer the cement, and *vice versa*. This cement is represented to be especially adapted for molding objects which demand an extreme delicacy in the lines of the cast, such as engraved blocks and plates, forms of printing type, photoglyptic plates, etc. It is affirmed that it sets in a few minutes under the influence of a gentle heat, and then admirably resists heat and pressure. When set, it is said to make a good substitute for lithographic stone. It is also recommended for artistic reproductions such as fac-similes of terra-cotta, the colour and sonorousness of which it closely imitates. It does not shrink in setting. Our authority for the above is the *English Mechanic.*

THE DURABILITY OF TIMBER.—As showing the durability of timber the fact is cited that the piles of a bridge built by Trajan were found, after having been driven some sixteen hundred years, to be petrified four inches, the rest of the wood being in its ordinary condition. The elm piles under the piers of London bridge have been in use more than seven hundred years, and are not yet materially decayed, and, beneath the foundation of Savoy Place, London, oak, elm, beach, and chestnut piles and planks were found in a state of perfect preservation, after having been there for six hundred and fifty years. Again, while taking the old walls of Tunbridge Castle, Kent, England, there was found in the middle of a thick stone wall a timber curb which had been enclosed for seven hundred years; and some timber of an old bridge was discovered while digging for the foundations of a house at Windsor which must have been placed there prior to the year 1396.—*New York Su.n*

SILVERING MIRRORS.—Some time since the Academie des Sciences offered a prize of 2,500 francs for a method of satisfactorily and permanently silvering mirrors, and which should save the workmen the danger of exposure to the effects of mercurial vapors. The prize has been awarded to M. Lenoir whose process is substantially as follows: The glass is first silvered by means of tartaric acid and ammoniacal nitrate of silver, and then exposed to the action of a weak solution of double cyanide of mercury and potassium. When the mercurial solution has spread uniformly over the surface, fine zinc dust is powdered over it, which promptly reduces the quicksilver and permits it to form a white and brilliant silver amalgam, adhering strongly to the glass, and which is affirmed to be free from the yellowish tint of ordinary silvered glass, and not easily affected by sulphurous emanations.

PHOTO DECORATION OF METALS.—Herr Falk's photographic method consists in coating the metallic surface with a photographic film, which is then exposed under a transparent positive; by this arrangement the parts lying beneath the dark places of the positive are not affected by the light, and are consequently capable of being etched. With curved surfaces a print taken in fatty ink on paper by a photographic method is transferred to the metal, and all the parts covered with the ink are by this means protected from the etching. It is a peculiarity of this process that the etching fluid colors all the etched places black, and this adds considerably to the effect of the whole.

EYE-DYEING.—"A learned German doctor," says a Paris paper, "has discovered a means of dyeing the eyes of animals in general, and of man in particular, any color that he pleases. He is accompanied on his travels of propagation by a dog with a rose-colored eye, a cat with an orange-red eye, and a monkey with a chrome-yellow eye. But the most curious specimens of his art are a negro with one eye black and the other blue, and a negress with one eye gold-colored and the other silver-white. The doctor says the process of transformation, far from injuring the sight, strengthens and improves it."

NEW COLORING MATTER.—Mr. T. L. Phipson reports to the French Academy of Sciences the discovery of a new rose-red coloring matter, which he has succeeded in extracting from the little blood-red alga, found at the base of damp walls. It resembles no other known color, and exhibits considerable analogy with the hæmoglobine of the blood. It is the first time that a substance of this kind has been met with in the vegetable kingdom.

APPEARANCE OF THE TONGUE IN GASTRIC DISORDERS.—Dr. Wilson Fox gives, as valuable aids in the diagnosis of gastric disorders, the following conditions of the tongue:

1st. Dyspepsia, with strict atony of the stomach. The tongue broad, pale and flabby, the papillæ generally enlarged, more especially at the tip and edges.