

its appearance in American teaching. Precisely why these numbers should lie as they do, I was never able to see, although for many years I have been conscious of this arrangement and have wondered what its origin might be.

The letters of the alphabet arrange themselves for me in a visual way which is easily explainable. This is in three rows of eight each with Y, Z and Ampersand together below. The reason for this, I think, is that I learned to read without the preliminary of learning my letters, and after having been reading for several years, in my eighth year, my teacher made the agonizing discovery that while I was reading pretty much anything I pleased I did not know the order of my letters. I was, accordingly, set to work mastering an order which I will admit I have found most useful for every purpose except reading and writing. I learned the alphabet in this summary fashion out of a primer which had the alphabet disposed on its second page at the top of the page in the order which I have mentioned, and in all the manifold use of the alphabet for purposes of classification with which we are all familiar, but which we are apt to forget as a comparatively modern invention, the alphabet always seems to me to be in the three lines I have mentioned.

TALCOTT WILLIAMS.

#### COLUMBIAN CONGRESSES ON SCIENCE AND PHILOSOPHY.

At least eight congresses were held during the week of August 21-26, and six are announced for Aug. 28-Sept. 2. The International Electrical Congress awakened much general interest, Professor Helmholtz being a prominent figure. An illustrated lecture was given on the evening of Aug. 25, by Mr. Nikola Tesla, on Mechanical and Electrical Oscillators. This took place within the Exposition grounds, where about 70 per cent of the total horsepower of steam engines is used for electrical purposes. The Chamber of Delegates made their report on the special work entrusted to them.

The Congress on Psychical Science, with suggestions of spiritualism and hypnotism, also awaked some popular interest.

The Congress of Chemistry has been carefully worked up by Dr. H. W. Wiley, and 77 papers were announced. These were arranged in sections, as Analytical, Agricultural, Technological, etc.

Among the foreign chemists present, were Prof. Otto N. Witt, of Berlin; Prof. George Thoms, of Riga; Prof. H. R. Proctor, of Leeds; Prof. E. Engler, of Carlsruhe; and Prof. George Lange, of Zurich. X.

#### PALENQUE HIEROGLYPHICS.

It is gratifying to learn that Dr. Valentini, after a long absence from the field of paleographic investigation, is about to return to it. There is one statement, however, in his communication to *Science*, Aug. 18, which needs correction. He says "Mr. Förstemann's theory of reading double columns is untenable." Now if he will refer to my "Study of the Manuscript Troano," printed in 1882, pp. 199-203, he will find this theory there set forth, as I think, for the first time, and, also, evidence of its correctness, which has apparently satisfied most students who are devoting attention to the Central American inscriptions and codices.

His statement that no month symbol appears on the tablets is made in face of evidence to the contrary, which seems to be conclusive.

I may add here that Dr. Brinton's acceptance (*Science*, Aug. 11) of the rendering given by me of the month name *Kayab*, necessarily forbids its derivation from *Kay* "to sing or warble." A compound of *ak* and *yab* cannot be a derivative of *Kay*. The *ak* may be obtained from the symbol on the rebus method of Aubin, which Dr. Brinton has

rechristened by the name "Ikonomatic," but it is difficult to explain the symbol representing the last syllable *yab* by this method. If the name was formed as I suggested, and as admitted, (*Ak-yab*) the signification, with the month determinative added, is "the month when turtles abound."

CYRUS THOMAS.

Frederick, Md., Aug. 31.

#### COLOR VISION.

I AM very much surprised to see that Professor Ebbinghaus, in the last number of the *Zeitschrift für Psychologie*, announces as new a discovery which has a critical bearing upon Hering's theory of color-vision,—the fact, namely, that two greys composed the one of blue and yellow and the other of red and green and made equally bright at one illumination do not continue to be equally bright at a different illumination. If two complementary colors were purely antagonistic, that is, if the color processes simply destroyed each other, as processes of assimilation and dissimulation must do, and if the resulting white was solely due to the residual white which accompanies every color and gives it its brightness, then the relative brightness of two greys composed out of different parts of the spectrum could not change with change of illumination. The fact that they do change is therefore completely subversive of the theory of Hering, or of any other theory in which the complementary color-processes are of a nature to annihilate each other. This consequence of the fact, as well as the fact itself, I stated at the Congress of Psychologists at London in August, 1892, and it was printed in the abstract of my paper which was distributed at the time and also in the Proceedings of the Congress.

Professor Ebbinghaus's discovery is apparently independent of mine, for he supposes that the phenomenon cannot be exhibited upon the color-wheel. This is not the case; with fittingly chosen papers (that is, with a red and green which need no addition of blue or yellow to make a pure grey, and with a corresponding blue and yellow) it is perfectly evident upon the color-wheel. The same paper circles which I used to demonstrate it in Professor König's laboratory, in Berlin, are, at the request of Professor Jastrow now on exhibition at the World's Fair at Chicago. While Professor Ebbinghaus's discovery of the fact is therefore doubtless independent of mine, I allow myself to point out that mine is prior to his in point of time.

CHRISTINE LADD FRANKLIN.

#### MYOLOGY OF THE CAT; OR THE M. FLEXOR ACCESSORIUS OF THE HUMAN AND FELINE FOOT.

THE supposed new muscle in the cat's foot (*Science*, Aug. 18, 1893, p. 97,) is, so far as Mr. Thompson's description allows of identification, probably no other than the

Accessoire du grand flechisseur (Bich.) of the Cat,  
Accessoire du perodactylus (Str.-Dur.) of the Cat,  
Caput plantare flexoris digitorum (Caro quadrata  
Sylvii) of Man,

or the M. flexor accessorius of human and feline anatomy

The flexor accessorius muscle in man originates by means of a muscular (internal and larger) head from the inner border of the calcaneum, which may be entirely absent, and by a tendinous slip which comes from the outer face of the Os calcis, just in front of the external tubercle, and from the long plantar ligament. As it has two quite constant sources of origin, so it has two insertions, one of which, however, is not constant. The usual insertion is that into the external border and upper surface of the M. flexor longus digitorum pedis, just where it divides into the four branches for the toes. (Most of the fibres of this