

gun the publication of an *Engineering Journal*, which will be issued semi-annually. The first number opens with an article by F. A. C. Perrine, entitled 'A Practical Index of Engineering Literature,' which is followed by several other articles showing the high character of the work in engineering accomplished in Stanford University.

A MONTHLY journal entitled *Deutscher Tierfreund* has been established in Leipzig under the editorship of Dr. R. Klee.

THE first edition of the New York State botanist's report on 'Poisonous and Edible Fungi' has proved insufficient to supply the demand, so that it will be impossible to fill further orders for the work unless a new edition is printed.

DR. HENRY E. ARMSTRONG has prepared an extended article now being published in successive numbers of *Nature* entitled 'The Need of Organizing Scientific Opinion.' The article is a severe arraignment of the lack of scientific principles and research in British manufactures and of English educational methods as compared with those of Germany. Dr. Armstrong writes of the United States as follows: "America is bound, in fact, to develop, and not only on account of the restless energy of her people; her Government departments have attached to them many active men engaged in initiating or conducting scientific inquiries; and when the various departments are organized *inter se* the country will have in its service a highly-trained body of scientific experts guiding all branches of public work and co-operating to minimize the faults of democracy. And universities are arising all over the country, in which German models are being followed, not English. It is safe to predict that, ere many years are past, the United States will suddenly burst into prominence, and probably into predominance, as a nation promoting scientific inquiries of all kinds, so surely is a foundation being laid. Mistakes will frequently be made, perhaps, but they will soon be recognized and remedied in a country instinct with advance."

THE *Engineering News* states that a textile school has been established in Lowell, Mass. The city appropriated \$25,000 for its support,

and the manufacturing establishments contributed \$50,000 in machinery and other facilities. The equipment is said to compare favorably with that of similar schools in England and on the Continent, where they have been maintained for a number of years and are constantly growing in number. It is stated that the competition of Southern mills in the production of ordinary grades of cotton goods has led the Lowell manufacturers to turn their attention to the finer grades, which have hitherto generally been imported from Europe, where the textile schools have been of great aid in training skilled workmen and designers.

SIR DOUGLAS GALTON has issued an appeal for subscriptions to the Childhood Society, which has recently issued a report on the scientific study of the mental and physical conditions of childhood, giving details of 100,000 children, examined individually. It is estimated that the sum of £1,000 would be needed to examine 50,000 children in twenty-five towns.

#### UNIVERSITY AND EDUCATIONAL NEWS.

HAVERFORD COLLEGE has now received the title deeds to the real estate of the late Jacob P. Jones, of Philadelphia, who in 1885 made the College his residuary legatee. The estate is valued at \$900,000. Haverford College, which is located near Philadelphia and is conducted under Quaker auspices, is now one of the best endowed of our colleges. The trustees have wisely decided to maintain a strong college and not to attempt the development of a university.

THE long contested Marett will case has been decided by the Supreme Court of Connecticut, giving, among other public bequests, \$18,000 to Yale University.

It is reported in the daily papers that the late Mr. Deury, said to be a multi-millionaire and the largest landowner in the United States, has left his estate to his widow for life and at her death ninety-one hundredths of it for the establishment of a college in Illinois.

BILLS have been reported favorably in the New York Legislature authorizing New York City to spend \$12,500,000 in school buildings.

DR. JULIAN APRICIO has been appointed Director of the Meteorological and Astronomical

Observatory of San Salvador. Dr. Szymonowicz, of the University of Cracow, has been made associate professor of histology and embryology in the University of Lemberg.

#### DISCUSSION AND CORRESPONDENCE.

##### RELATIONS OF TARSIIUS TO THE LEMURS AND APES.

UNDER this title Mr. Charles Earle, in your issue of February 12, 1897, gives a valuable contribution to our knowledge of the mutual relationship of recent and fossil Lemurs and discusses at the same time a proposal made by myself to remove *Tarsius* from among the Lemurs and to place it with the Primates *s. str.*

Such proposal finds but scanty favor in the eyes of this able paleontologist, who formulates the *a priori* objection that "we shall be little benefited by this change in the classification of the Primates, as it will be exceedingly difficult to discover any characters of the skeleton by which we can separate the Apes from the Lemurs."

Now, I hold that the primary object of classification is not to facilitate or to benefit, but to establish, as closely as possible, the true position which species and genera, both living and fossil, occupy in the actual line of descent, which is slowly but surely revealing itself to the persistent and combined efforts of paleontology, anatomy and embryology.

At the same time, if Mr. Earle finds fault with the embryologist who wishes to transfer *Tarsius* from the Lemurs to the Apes, he is fully entitled to stand by his osteological and dentary characters and to fight for the current classification, that is apparently more convenient to paleontologists. He is, however, bound to state the arguments of his opponent fully and fairly, and this he does not do when he suggests to his readers that my reason for removing *Tarsius* from the Lemurs lies in its different 'type of placenta,' nor is he quite up to date in his valuation of recent placental investigations when he complacently quotes Mivart's and Balfour's warnings against the systematic value of differences in placental arrangements, when not accompanied by other characteristic differences.

It is, indeed, rather hard upon me, who have endeavored, in the past eight years, to clear up some of the confusing views that were being entertained concerning placentation in general, to be now pilloried by Mr. Earle as if I had been making that coarse and indiscriminate use of placental characters in classification against which I have been all the time loudly protesting. Thus, for instance, I have shown that the placenta of the hedgehog, the shrew and the mole is in each case a structure *Sui generis*, all these different Insectivores having placentas of the discoid shape, but which reveal themselves, on close and careful examination, both in their structure and in their genesis, as far more different *inter se* than is the diffuse placentation of the horse from that of the Lemurs or from the cotyledonary placentation of the Ruminants. I have hitherto refrained from proposing changes in the classification of the Insectivores, because I am well aware that to make these fruitful the paleontological and anatomical evidence tending in the same direction will first have to be collected and sifted. Nor would I dream of bringing *Tarsius* in closer connection with the Apes on account of the discoid placenta, for the very same reasons that it is not the external shape, but the histological and the genetic details, which are of importance in any such comparison. Still Mr. Earle would make the readers of SCIENCE believe (see p. 258) that this is my line of argument!

Referring to my paper in the *Gegenbauer Festschrift* (1896)—the abstract of which appeared in an October number of SCIENCE and can hardly have remained unknown to Mr. Earle—it will there be seen that I founded the closer relationship between *Tarsius* and the Apes on something quite different, viz., on the development of the embryo in a vesicle to which it does not become attached by means of an outgrowing allantois, but to which it is fixed from the beginning by a stalk of tissue ('Haftstiel' or 'Bauchstiel' of the Germans), which was up till lately only known as a characteristic feature of the human embryo, but which Selenka also discovered in monkeys (*Cercopithecus a. o.*), and which in *Tarsius* has now for the first time revealed its entire developmental history, in-