PUBLICATIONS.

Prof. Silvanus Thomson's series of lectures on "The Electromagnet, delivered in February, 1890, before the Society of Arts, London, have been reprinted in book form by the W. J. Johnston Co., N. Y., to whom we are indebted for a copy.

The April issue of *The Arena* is at once rich in variety and strong in its presentation of great fundamental problems, which are agitating the popular mind at the present time. No magazine of the present age is in such perfect touch with progressive and reformative thought as this review

We are in receipt of a copy of *The Electrician* Electrical Trades Directory and Hand-Book for 1891. The book shows an increase of 100 pages as compared with last year, and contains a vast amount of carefully compiled information relating to the electrical industries throughout the world. Among the many features of interest to the electrical and allied professions are a Digest of the Law of electric lighting, a list of central stations in the United Kingdom for the distribution of electricity, a list of electrical railways and tramways, a summary of the leading events of the past year: a complete list of the local authorities of England; information relating to the obtaining of letters patent; and a reliable biographical section, containing interesting sketches of the careers of the leading living electrical notabilities. Price 5 shillings (postage extra). *The Electrician* Publishing Co., 1, 2 and 3 Salisbury Court, Fleet street, London, E. C.

ENGINE FOUNDATIONS.

THE question of brick versus stone foundations for engines is being discussed. The advantages of brick foundations are given by one correspondent in citing a case. The foundations were of hard-burned vitrified brick, laid in Portland cement. The gentleman in charge of the work stated that stone, unless dressed with extreme nicety, never gets a perfect bearing on its bed, as perpendicular joints can very seldom be filled solid, hence stone foundations, no matter how heavy, are full of vacant spaces that allow vibration. On the other hand, with brick a perfect joint can always be made, thus obtaining a foundation practically one immense block, all of which has to be shaken before vibration can occur.

A few days later, in conversation with a well-known mechanical engineer, I was given another explanation of the matter. This gentleman stated that in such structures all the vibration has its origin in the machine, which is the centre of the foundation, and being at the top is at the most distant point from the earth. Vibration loses much of its force in passing from one distinctly defined body to another, and the more frequently the vibration is transmitted from one body to another in a given space, the more nearly it is overcome. In a stone foundation while the large blocks possess weight, and lying together, have great frictional resistance, a vibration will only be transmitted once or twice before the same is reached. In a brick foundation the same gross weight may be attained, and at the same time the vibration must pass from one body to another infinitely more frequently than in the stone foundation.

A LEVEL-HEADED BOY

A BOY about fifteen years of age applied to a factory on Atwater street for the job of running a small engine in the place of a boy who had quit.

"Have you run an engine?" was asked.

"Yes, sir."

"You understand how steam works, do you?"

"I do."

"You know that water makes steam?"

"Of course."

"How is water got into a boiler?"

"By an injector."

"Suppose you have too much water?"

"Then I can't get steam enough until I draw it down."

"Correct. Suppose you haven't enough?"

"Then look out for an explosion."

"Correct again. Suppose you found the water almost gone and couldn't start the injector—what would you do?"

"Come upstairs and notify you to get your insurance policies out of the safe and make a sneak before she busted."

"You seem to be all right, young man; you can come on in the morning."—Detroit *Free Press.*

Mr. John Paynter, a widely known and highly esteemed engineer of Kingston, Ont., died in that city during the last month.