

means of obtaining a permanent income from some new source of energy. It seems very doubtful whether the wind and the waves and the sun can ever be so harnessed, or the internal heat of the earth ever be so used, or the growth of vegetation so increased, as to provide sufficient energy to carry on the work necessary to be done to keep in existence the world's teeming millions. Could we, however, tap the greatest source of energy, that residing in the atom, could we learn to cause atoms to disintegrate at will, then we should be placed in a secure position; every physical need humanity could ever have, so far as amount of energy is concerned, could be supplied. Science alone can avert an extraordinary disaster which is pending within the next few centuries. May this University, through the energy of its Physics and Chemistry and Engineering Departments, do great things towards the solution of one of the most important scientific and practical problems which men have ever had to face.

### **Biology.**

In the last few decades, Biology, which includes all the sciences which deal with living organisms, has made quite as much progress as Chemistry and Physics.

Innumerable researches have been made upon the structure and functions of large numbers of living plants and animals. Palaeontologists and Palaeobotanists have brought to light thousands of species of fossil plants and animals, through the study of which it has been possible to reconstruct floras and faunas which existed millions of years ago in remote geological ages. The physiologist has developed the sub-science known as pharmacology which is devoted to the investigation of the action of drugs, and which is now rapidly placing the art of giving medicine upon a truly scientific basis. It has been discovered that many medicines, such for instance, as sarsaparilla and tincture of arnica, which hitherto have been used in enormous quantities, are entirely ineffectual remedies. The whole trend of pharmacology is in the direction of very markedly diminishing the drugging of patients. In the study of the action of drugs there is still an enormously wide field for the researches of the