

Science Notes.

THINGS THAT SCIENCE CANNOT EXPLAIN.

When the number and violence of magnetic storms are recorded and compared, it is found that they correspond to the spots on the sun, and go through the same period of eleven years. The conclusion seems almost inevitable; magnetic storms are due to some emanation sent out by the sun, which arises from the same cause that produces the spots. This emanation does not go on incessantly, but only in an occasional way, as storms follow each other on the earth. What is it? Every attempt to detect it has been in vain. Professor Hale, at the Yerkes Observatory, has had in operation from time to time, for several years, his ingenious spectroheliograph, which photographs the sun by a single ray of the spectrum. This instrument shows that violent actions are going on in the sun, which ordinary observation would never lead us to suspect. But it has failed to show with certainty any peculiar emanation at the time of a magnetic storm or anything connected with such a storm.

A mystery which seems yet more impenetrable is associated with the so-called new stars which blaze forth from time to time. These offer to our sight the most astounding phenomena ever presented to the physical philosopher. One hundred years ago such objects offered no mystery. There was no reason to suppose that the Creator of the universe had ceased His functions; and, continuing them, it was perfectly natural that He should be making continual additions to the universe of stars. But the idea that these objects are really new creations, made out of nothing, is contrary to all our modern ideas, and not in accord with the observed facts. Granting the possibility of a really new star—if such an object were created, it would be destined to take its place among the other stars as a permanent member of the universe. Instead of this, such objects invariably fade away, after a few months, and are changed into something very like an ordinary nebula.

A question of transcendent interest is that of the cause of these outbursts. It cannot be said that science has, up to the present time, been able to offer

any suggestion not open to question.—Professor Simon Newcombe, in *Harper's Magazine* for November.

PUT TO EVERY-DAY USE.

The miracle of wireless telegraphy is settling down to every-day work in the world. A passenger on a steamer, still two hundred miles out at sea, engaged a room in a New York hotel recently, by wireless despatch, also a cab to meet him at the pier. The despatch consisted of about sixteen words, and cost \$4.50.

The largest station for wireless telegraphy yet erected has just been completed at Pisa. From there it is designed to establish wireless telegraph communication with Great Britain, Holland, the United States, Canada, and also with vessels in the Mediterranean, the Baltic Sea, the Red Sea, and the Atlantic and Indian Oceans.

In Newfoundland and Labrador the "wireless" is used to convey to the fishermen intelligence of the arrival of the schools of fish along the coast.

EIGHTY THOUSAND DOLLARS FOR DOMESTIC SCIENCE DEPARTMENT.

We are indebted as a country to Mrs. Massey-Treble for the zealous and never-failing interest she has taken in the development of the study of Household Science and Art in connection with Toronto and Victoria Universities. Her recent gift of \$80,000 to the University for the erection of a handsome new building for this purpose marks a new era in the history of the work. The site chosen for the building is at the corner of Hoskin Avenue and Queen's Park, adjoining Wycliffe College. Building operations will probably not commence until spring, owing to the present high cost of building and unfavourable conditions of the labour market.

The splendid equipment of the Lillian Massey School of Household Science and Art, as it now is in Fred Victor Mission, will be moved to the new building. The school will be in complete affiliation with Toronto University. The scope of the curriculum will be the same as that of the present Lillian Massey School.