

that both the proton and its satellite electrons are surrounded by an atmosphere of much smaller particles, the impact of which on the protons and electrons causes them to vibrate and send out energy. "Both proton and electron must be regarded as nebular systems," he stated.

Theory indicates that the vibrations or oscillatory movements of protons and electrons should give rise to electrical waves, and Sir Joseph believes that such waves are actually produced, although ordinarily they are unable to escape from the outer confines of the atom, being reflected back into the interior. The so-called "quanta" of light he believes to consist of bundles of electrical waves shot out from the atom at the same time as ordinary electro-magnetic waves.

SCIENTISTS UNDERGO SLOW POISONING FROM MERCURY VAPOR.

X-rays are not the only toys of science to extract a toll of physical suffering at the hands of their intrepid users.

The insidious poisonous effects upon himself of mercury vapor, utilized in a period of research experiments extending over twenty years, have just been described in a scientific paper by the famous chemist, Prof. Alfred Stock of the Kaiser Wilhelm Institute. Chronic troubles of the nose, throat and intestines were rendered more aggravating by increasing nervousness and as time went on his naturally excellent memory and powers of concentration grew weaker and weaker. No course of treatment prescribed by his physicians proved permanently helpful.

Eventually it became evident that collaborators in his own laboratory as well as colleagues in other places were being affected in the same way. In consequence it was decided to readjust laboratory conditions so that as little free mercury would be exposed to the air as possible. And at the same time a thoroughly efficient ventilating system was installed.

In the course of a few months the various ailments fell off gradually and after a period of years health in some cases was restored completely when the experimenter refrained from further contacts with the fatal element.

Medical science, Prof. Stock declares, is not aware of the danger arising from the inhalation of mercury fumes, the chronic poisoning from which, in his opinion, is quite as fatal as the better known poisoning from lead.

Great waste in the paper industry is due to the decay of pulp and pulp wood.

Gas caused over one-fourth of American battle casualties in the European War.
