

ditions as diseased eyelids, for inserting in various body cavities, also for inserting in the tumors themselves after opening them surgically. When passing it into these tumors he usually wraps a little cotton about the tube. He said the most perfect way apart from the tubes is the little vulcanite style with ten milligrams of radium in it. This is pure radium bromide in a little convenient holder. If this is laid on the hand for ten minutes it will cause a burn, or on a wart it will disappear. Another form exhibited was the plaque of square metal having a burnished surface and containing 25 milligrams of radium. Dr. Abbe explained that this little plaque was emitting from it multiple rays, and later during the course of the lecture he showed these on the screen. All the rays are given off from this plaque excepting alpha.

Exhibiting an ordinary barium platino-cyanide screen and holding up a plaque of radium the screen became brilliantly illuminated. The rays had gone in a straight line from this small piece of radium, and, striking the screen, it shone brightly. In radium we have something absolutely new in physics. There is something in it like life itself. From it rays go straight into infinite space with almost the speed of light. They do not deviate from their course till influenced by some magnetic influence. If the rays pass through some magnetic field they are separated instantly. The alpha rays, being positive to electricity, go to the right, and the beta rays, being negative to electricity, go in another direction. The gamma rays are not affected by the magnet and they will still go straight on into space, uninfluenced in their course by electrical force. These gamma rays are like light itself, rapid, vibratory rays going straight into infinite space. Holding the plaque in his hand, Dr. Abbe said, "The rays from this little plaque this instant are now in the universe off to the nearest stars and they are continuing to go. They are discharged instantly. This peculiar quality of radium makes it a very penetrating and very active agent. If you allow these rays to strike the cells of tumors or the cells of the skin or even vegetable cells you will get the same demonstration of its representative action on cell life."

#### THE ACTION OF RADIUM ON SEEDS.

A very interesting experiment which Dr. Abbe had carried out was one showing the action of radium on seeds. Some seeds were put in a box and a piece of radium placed on top of the box. Every few hours some of these seeds were taken