contraction, but no effect was found. On the contrary, the bony portions which were compressed by the tendons have but few nerves, while the preceding points are abundantly supplied with nerve terminals, whose compression explains the effect. It is observed that even a slight compression of a nerve considerably increases its power of augmenting the brightness of the screen, but after a time the effect dies away. It is found that it is the nerve centres of the body which have the strongest action in emitting the N-rays. The path of the spinal cord can be traced by the proof-screen. At the upper part the effect is stronger. When the arms are contracted, a corresponding increase is seen in this part of the spinal cord, and if only one arm is contracted the effect is noticed on one side alone, due to the increased activity of this part.

To explore the rays, M. Charpentier uses straight tubes of lead, from two to four inches long, one end being placed against the body and the other containing a small disc of cork or cardboard covered with the phosphorescent sulphide. Large screens cannot be used, as each part is influenced by the others, and the whole gives a uniform brightness when the rays fall upon it.* One of the most interesting experiments is made upon the brain, by localizing the different centres of its surface. For instance, the so-called *psycho-motor* zones of the brain surface should, according to these experiments, show a local emission of N-rays during their special activity. This was found true for some of the best-defined zones. Among the latter is the zone which was found by Broca to be the centre for articulate speech. Its projection upon the skull has been determined with a certain precision by recognized rules. M. Charpentier found that when the subject spoke with a loud voice, or even in less degree, the proof-screen showed a greater activity in this region. He has reason to believe that even the action of thought, attention, and other mental effort gives rise to an increased emission of the N-rays from the brain, and is now making observations on this point. The same effect was found in the case of other centres allotted to the act of writing, movements of the upper members etc. The conclusion is that a nervous centre increases its emission of N-rays when in a state of activity. These rays are trans-

*It may be of interest to give some practical indications as to the method of observing these radiations. A quantity of sulphide of calcium (phosphorescent) is spread upon a piece of black cardboard and fixed by collodion so as to form a thin layer; the spot should be at least 0.8 inch in diameter. It is then solarized moderately. The screen is observed in a dim light, darkening the room according to the brightness of the surface. The screen should be observed by indirect vision without looking at it too strongly. It must be remembered that the variations of brightness are produced gradually, with an inertia which depends upon the thickness of the sulphide; it is therefore of advantage to diminish the thickness of the layer. The proper precautions should be taken for eliminating outside effects.