

LECTURES ON X-RAY PHENOMENA.

In the College Laboratory.

(Continued.)

**Experiments.**

1. The tube was enclosed in a large wooden box so that all ordinary light was completely excluded. A fluorescent screen was placed outside the box. The current was then passed and the room darkened, when the screen shone out where the X-rays impinged upon it.

This fluorescent screen consists of a piece of paper or cardboard thickly covered with an expensive chemical called Potassio-platinic-cyanide. It has the peculiar and important property of shining out when the X-rays fall upon it.

2. A large Book—in this case Prowse's History—contained a fifty-cent piece. The rays penetrated the book, and threw a shadow of the coin on the fluorescent screen.

3. A parcel was made up for the post, marked "photos only." On subjecting this parcel to the searching X-rays, the black shadow of a watch was distinctly seen. When this parcel was put inside a padded tea-cosy the shadow of the watch seemed as clear as before.

4. At the last demonstration a parcel had opportunely arrived by parcel post. It was a wooden box well wrapped in brown paper, and securely tied. It measured six inches cube. It was subjected, still tied up and sealed, to the X-ray. Immediately, a black shadow, about 3 inches long, by half-an-inch wide, appeared on the screen. By turning the parcel round, the same enclosed parcel again appeared: but this time, though its length was still three inches, its width was two inches. These two experiments combined showed that the small enclosed parcel was metal (probably)—3 inches by 2 by  $\frac{1}{2}$  inch in dimensions. Its exact position also was known. It turned out that the packet contained thin plates of copper placed one on