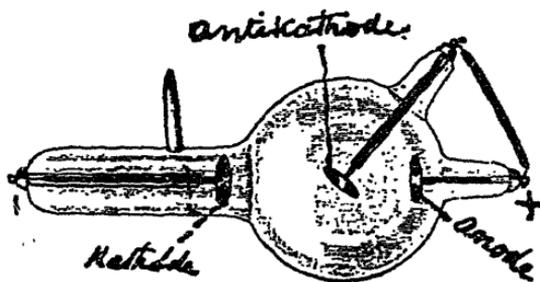


wood and its elements, metallic or otherwise, of low atomic weight, the elements of low atomic weight being pervious or transparent to these rays, whilst the heavier atomic weight elements are opaque, although in very thin layers they also are transparent.

	Hydrogen.. 1		
Non-metallic	Carbon.. 12	Non-metallic	
Transparent	Nitrogen... 14	Opaque	Iodine 127
	Oxygen.. 16 etc.		
	Lithium. 7		
Metallic	Magnesium... 20	Metallic	Mercury. 200
Transparent	Aluminum.. 27	Opaque	Lead.
	Sodium.. 23		Silver.... 108
	Potassium. 39		Gold.. 196
			Platinum... . . . 196

Some of the salts of some of the heavier metals are capable of stopping these rays and converting them into light or luminous rays, notably tungstate of calcium or platinocyanide of barium, hence screens can be coated with such materials. Screens of these materials constitute the screens upon which our shadow pictures are produced. Any object placed between the Crooke's tube throws a shadow according to its opacity to the X-rays, thus the skin and flesh are more easily penetrated than the bones, and they in turn vary in opacity according to their density and so also do the other tissues of the body. And the soft parts as well as the bones differ in transparency inversely as their thickness.



CROOKE'S TUBE.

The rays emanate from the antikathode plate in the Crooke's tube from a point, as light from a candle, and they diverge from that point in straight lines in all directions in front of the antikathode, forming a hemisphere of rays diverging from a point, and to view an object without distortion it is necessary for the screen to be held in a plane which is normal to some of the radii of that luminous hemisphere. This can be judged of by moving the object slightly to right and left or up and down, and observing that point where the distortion is least, or altering the position of the screen or of the patient to obtain a good view. I have a narrow frame of hardwood placed on legs of convenient height to stand by and lean over, 18 inches wide and six feet long, with