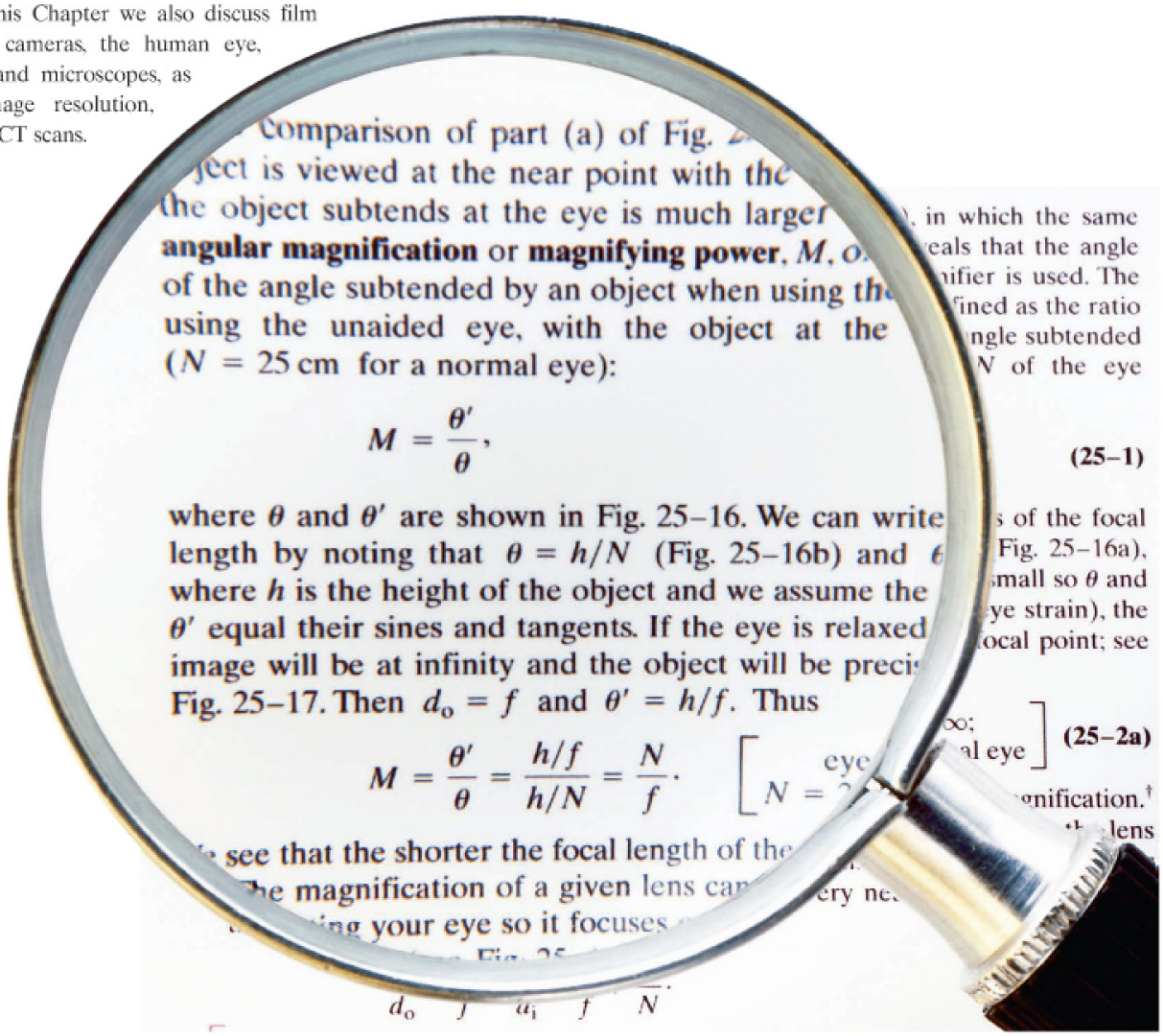
Of the many optical devices we discuss in this Chapter, the magnifying glass is the simplest. Here it is magnifying page 705 of this Chapter, which describes how the magnifying glass works according to the ray model. In this Chapter we also discuss film and digital cameras, the human eye, telescopes, and microscopes, as well as image resolution, X-rays, and CT scans.



CHAPTER 25

Optical Instruments

In our discussion of the behavior of light in the two previous Chapters, we also described a few instruments such as the spectrometer and the Michelson interferometer. In this Chapter, we will discuss some other, more common, instruments, most of which use lenses, such as the camera, telescope, microscope, and the human eye. To describe their operation, we will use ray diagrams. However, we will see that understanding some aspects of their operation will require the wave nature of light.