

Chapter 8Problem 26

$$U(x) = -\frac{a}{x} + \frac{b}{x^2} = -ax^{-1} + bx^{-2}$$

Find the force ~~is~~ corresponding to this potential.

$$F_x = -\frac{dU}{dx}$$

$$= -\frac{d}{dx}[-ax^{-1} + bx^{-2}]$$

$$= -[-a(-x^{-2}) + b(-2x^{-3})]$$

$$F_x(x) = -\frac{a}{x^2} + \frac{2b}{x^3}$$