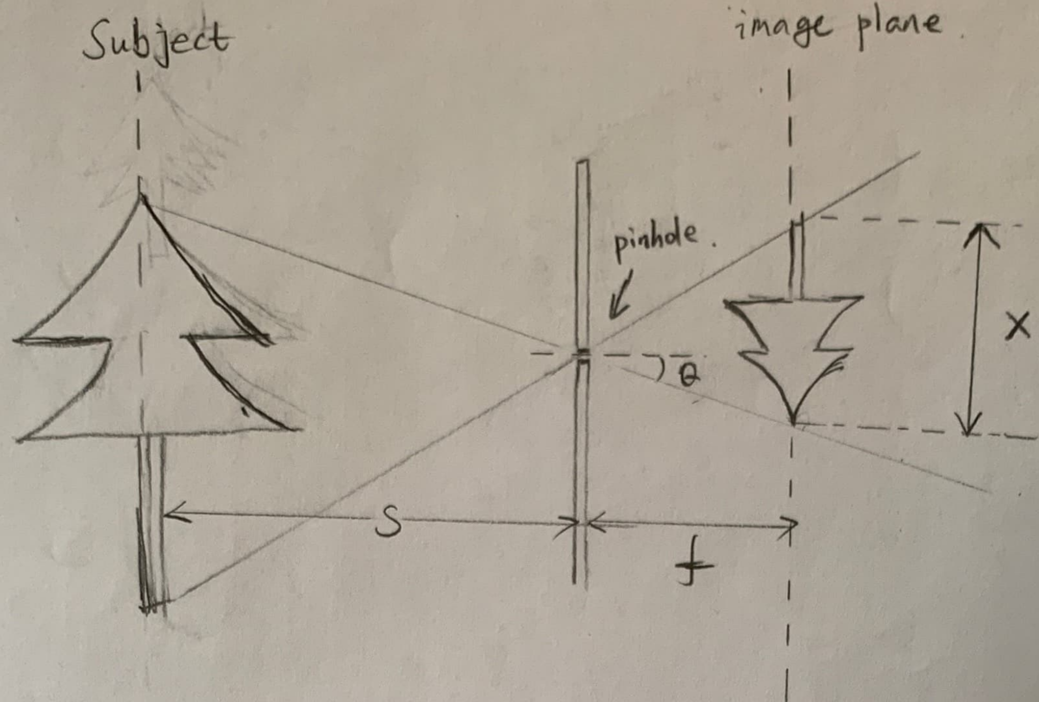


modern optics (diffraction effects)

$$d = c\sqrt{f\lambda}$$

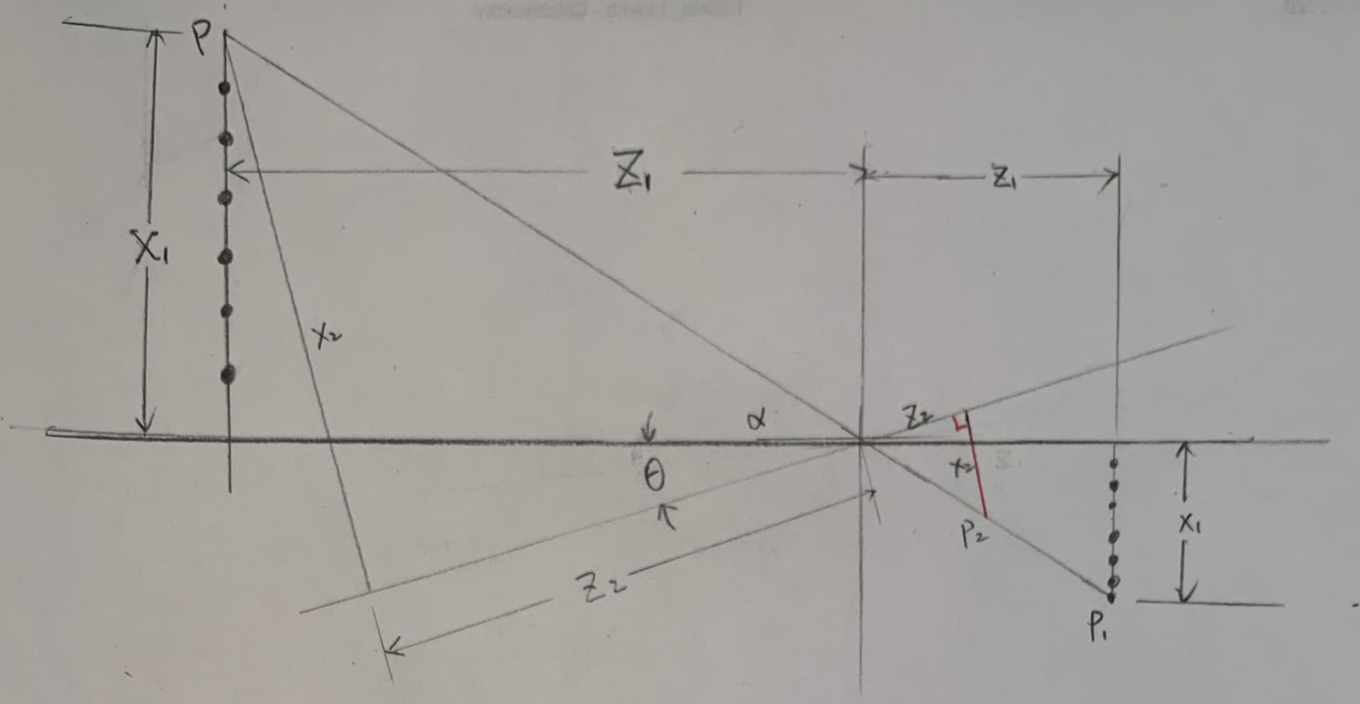
$$\tan\theta = \frac{X/2}{f} = c = 1.22\frac{\lambda}{d}$$

$$X = 2.44\frac{\lambda}{d}f$$ ⇐ referse effect

classical optics:

$$\tan\theta = \frac{d/2}{S} = \frac{X/2}{S+f}$$

$$X = \frac{d(S+f)}{S}$$



$$\tan\alpha = \frac{X_1}{Z_1} = \frac{x_1}{z_1}$$

$$\alpha = \arctan\left(\frac{x_1}{z_1}\right)$$

$$\tan(\alpha+\theta) = \frac{x_2'}{Z_2} = \frac{x_2}{z_2}$$

$$x_2 = z_2 \tan(\alpha+\theta)$$

$$= z_2 \tan\left(\arctan\left(\frac{x_1}{z_1}\right) + \theta\right) \; \forall x_1 \neq Q_1$$

$$= z_2 \tan(\alpha+\theta)$$

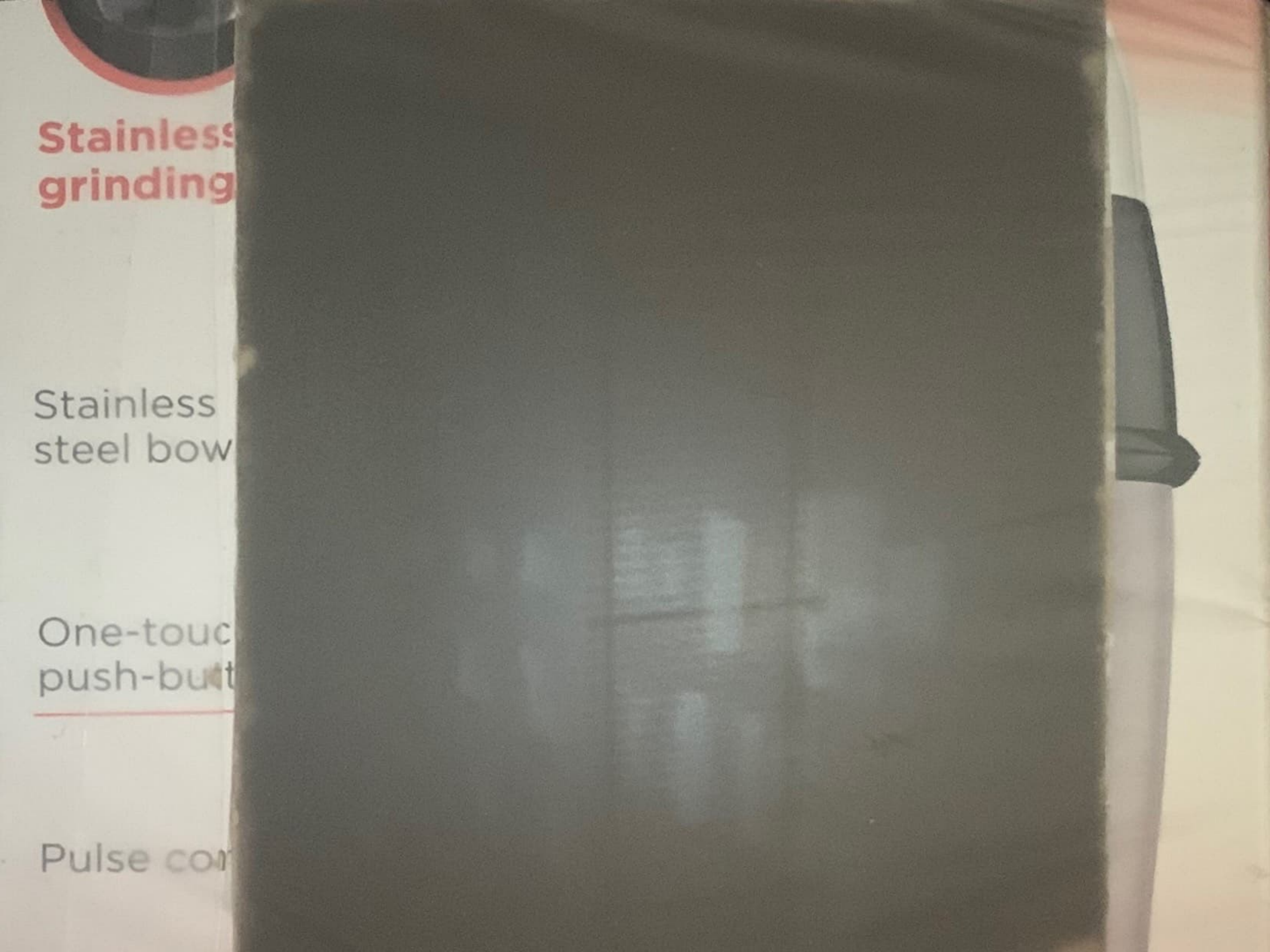
$$x_2 = z_2 \frac{x_1/z_1 + \tan\theta}{1 - \frac{x_1}{z}\tan\theta}$$

$$= \frac{a x_1 + b}{c x_1 + 1}$$

a: scale

b: bias

c: chirp.


Stainless
grinding
Stainless
steel bow
One-touc
push-but
Pulse con