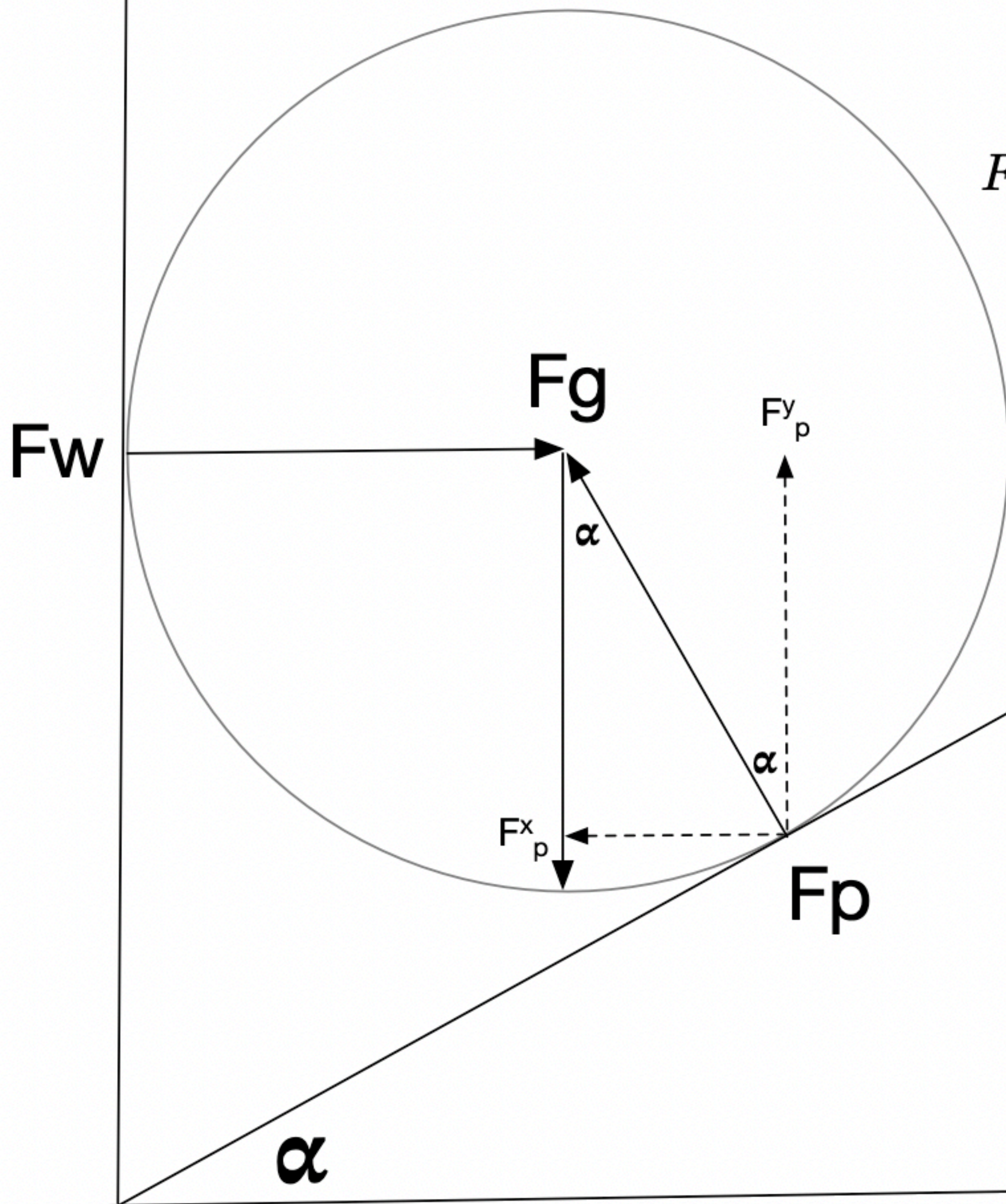


$$0 = F_g + F_w + F_p$$



$$F_p^x = \sin \alpha F_p$$

$$F_p^y = \cos \alpha F_p = mg = 1 \text{ kg-wt}$$

$$F_g^y = 1 \text{ kg-wt}$$

$$0^x = F_g^x + F_w^x + F_p^x$$

$$0^y = F_g^y + F_w^y + F_p^y$$

$$0^x = 0 + F_w^x + \sin \alpha F_p$$

$$0^y = 1 + 0 + \cos \alpha F_p$$

$$F_w^x = -\sin \alpha F_p$$

$$\cos \alpha F_p = -1$$