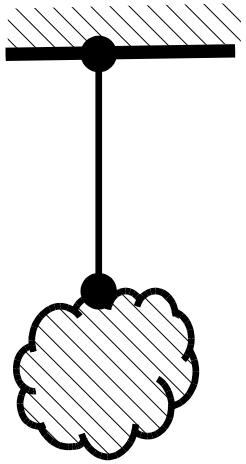
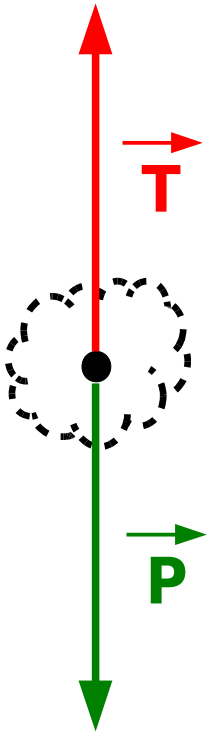
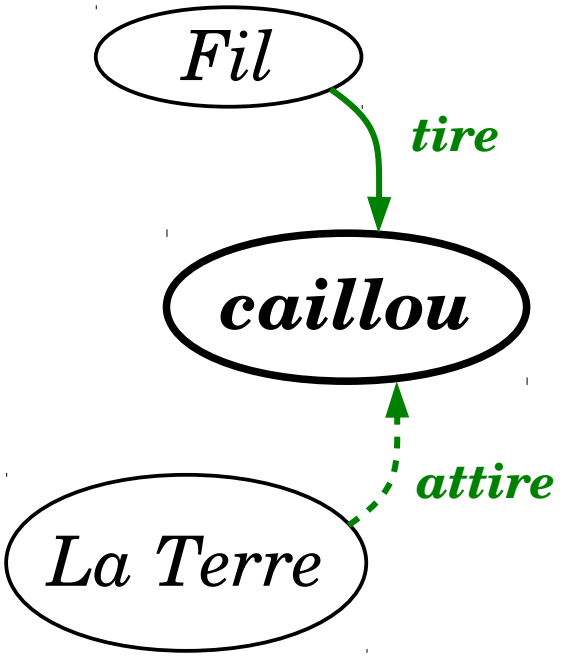
Principe d'inertie

Immobile.



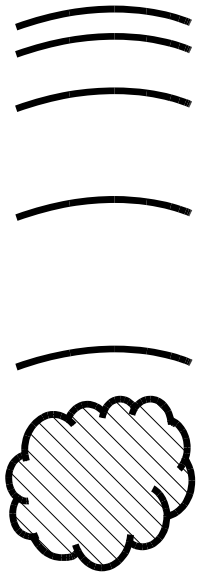


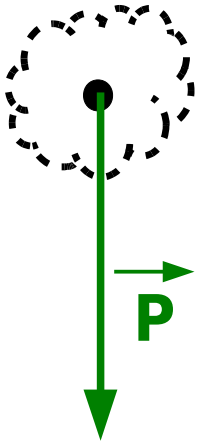


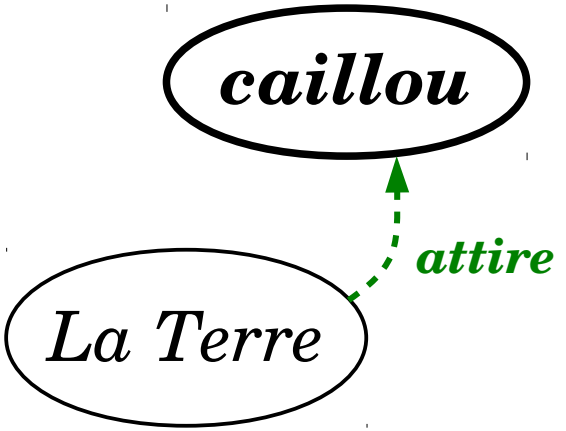
Immobile

La somme des forces est nulle

La pierre tombe, pas de frottements..

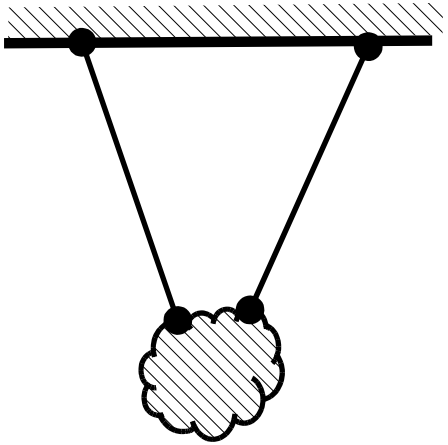


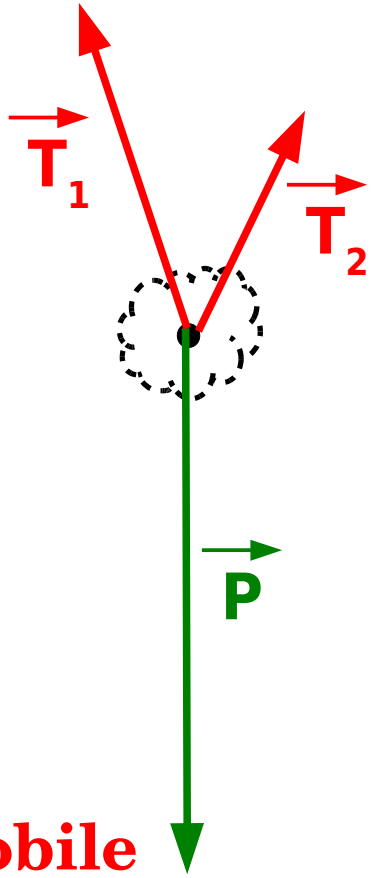


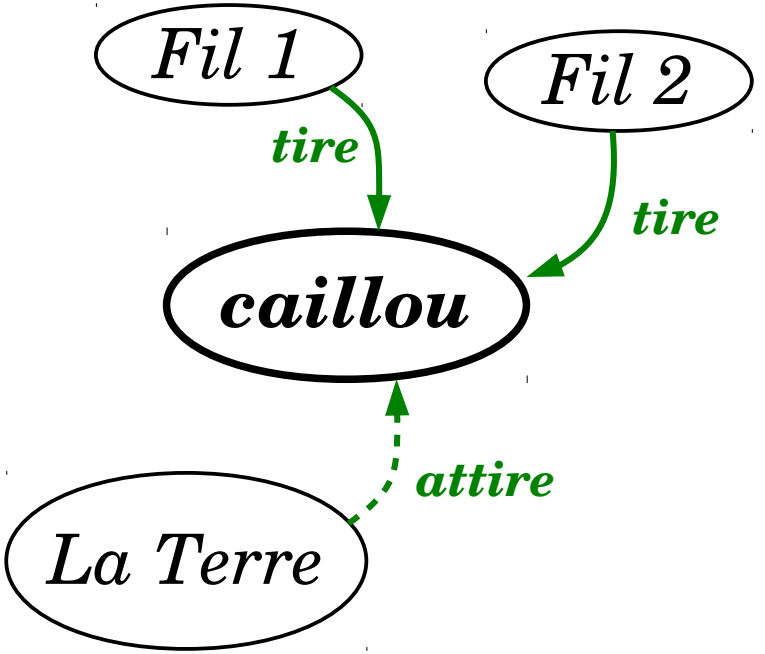


La pierre n'est soumise qu'à son poids

Immobile.



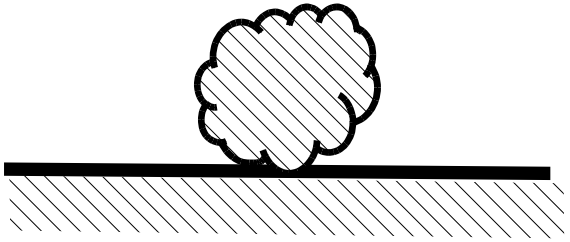


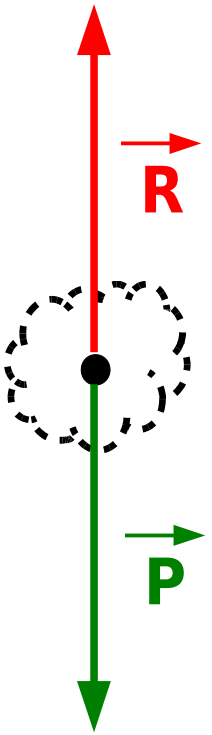


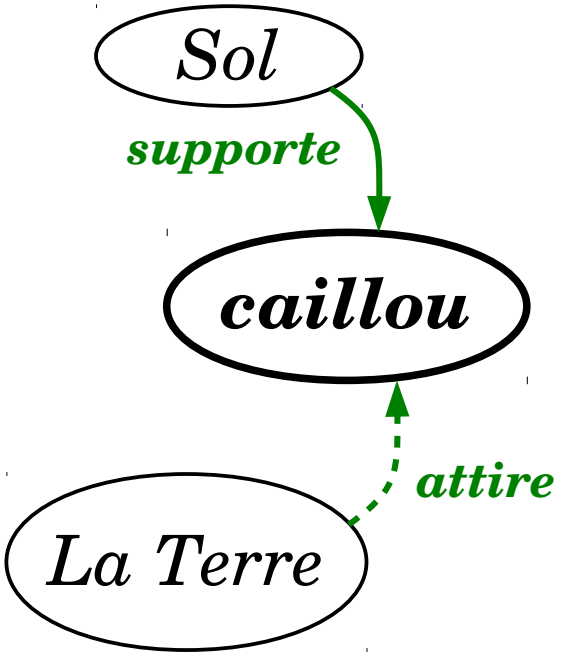
Immobile

La somme des forces est nulle

Immobile.



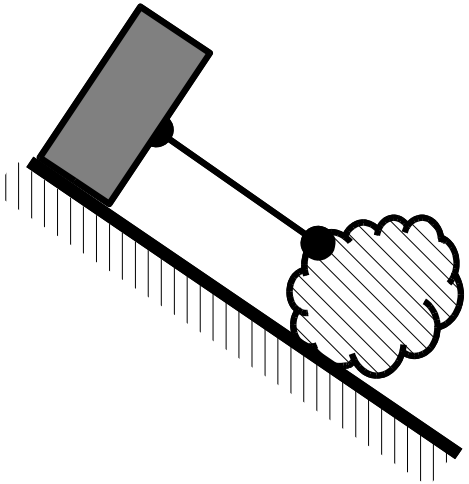


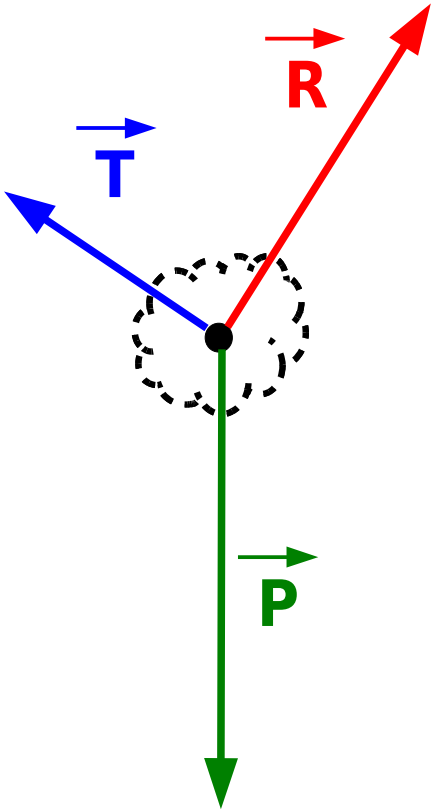


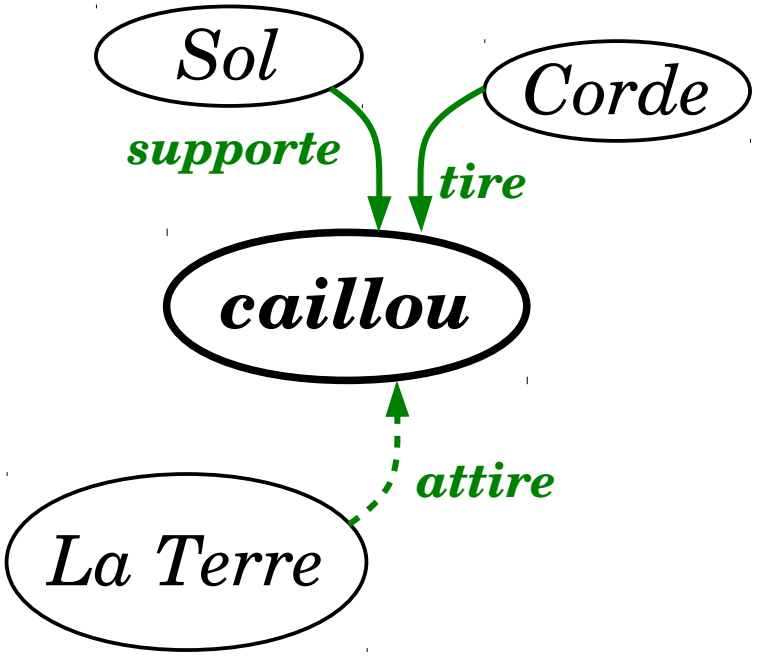
Immobile

La somme des forces est nulle

Immobile.



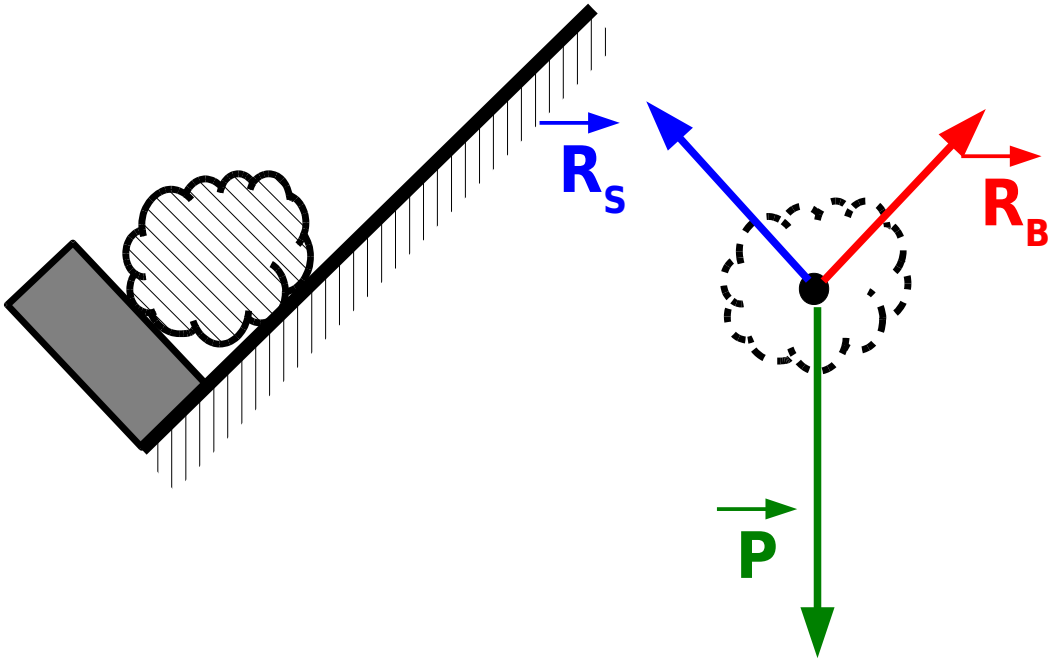


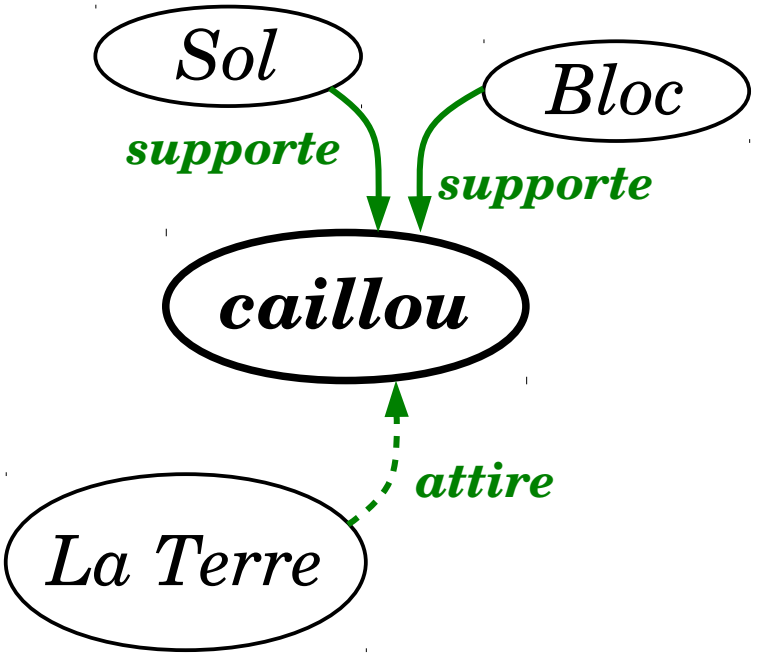


Immobile

La somme des forces est nulle

Immobile.

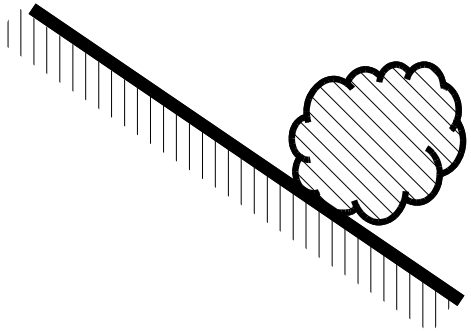


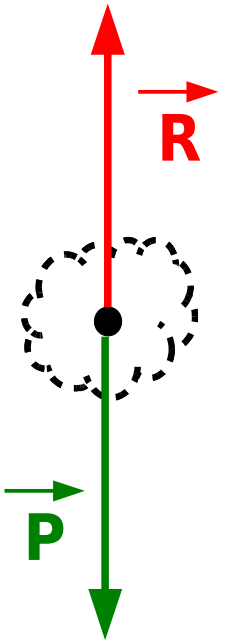


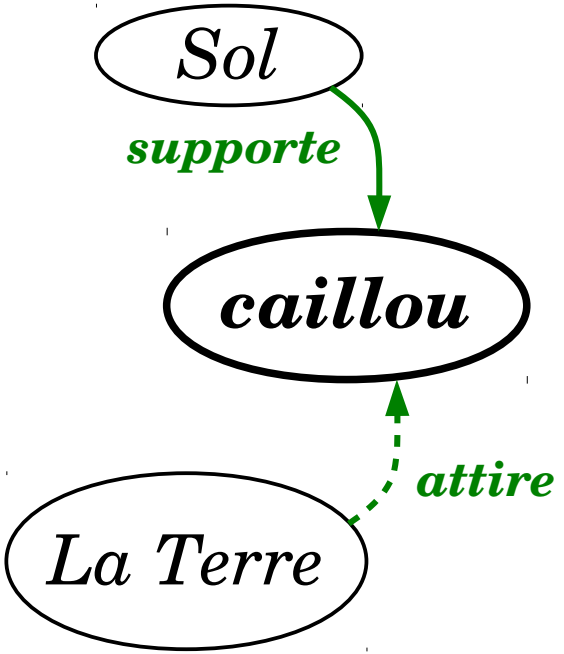
Immobile

La somme des forces est nulle

Immobile.



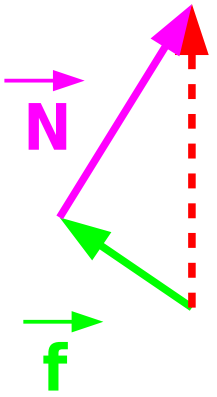




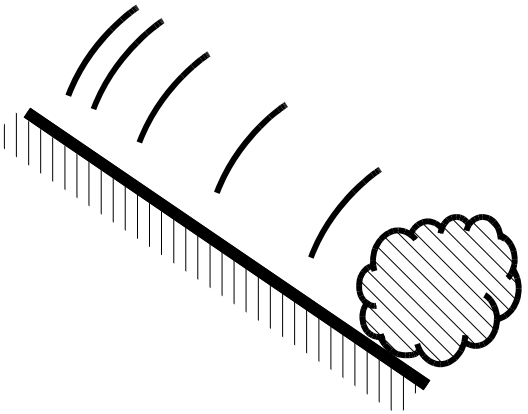
Remarque : la réaction du sol se décompose en frottement et réaction normale

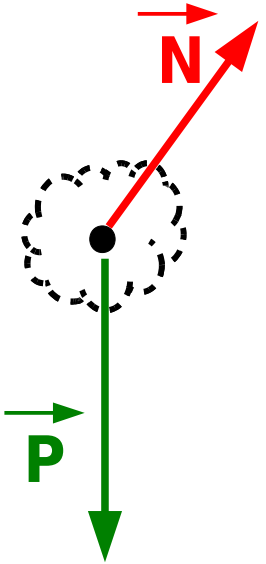
Immobile

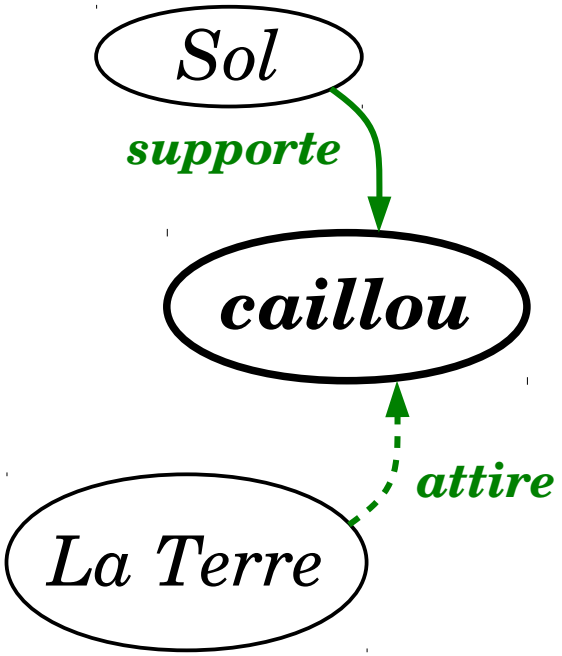
La somme des forces est nulle



Glissement sans frottements.



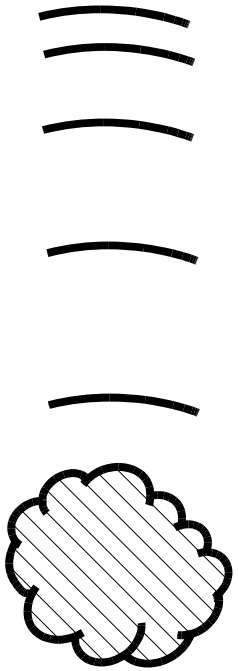


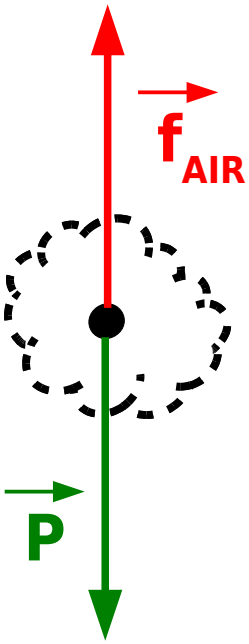


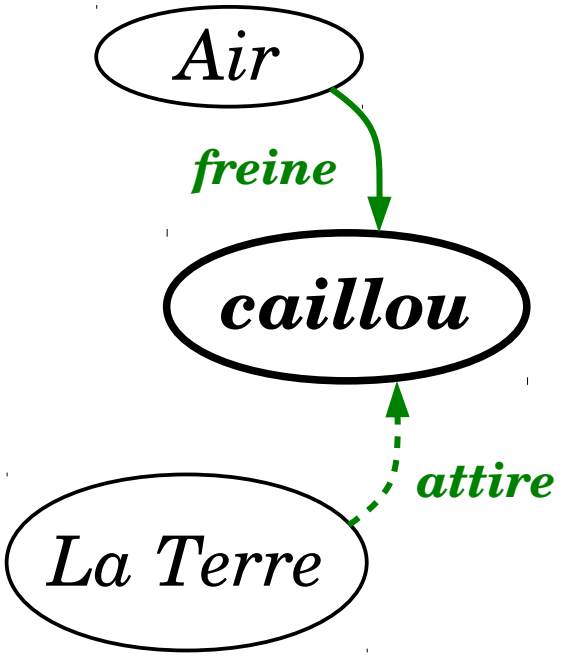
Pas de frottement

La réaction du sol est perpendiculaire,
la somme des forces est parallèle au sol.

Chute à vitesse constante.



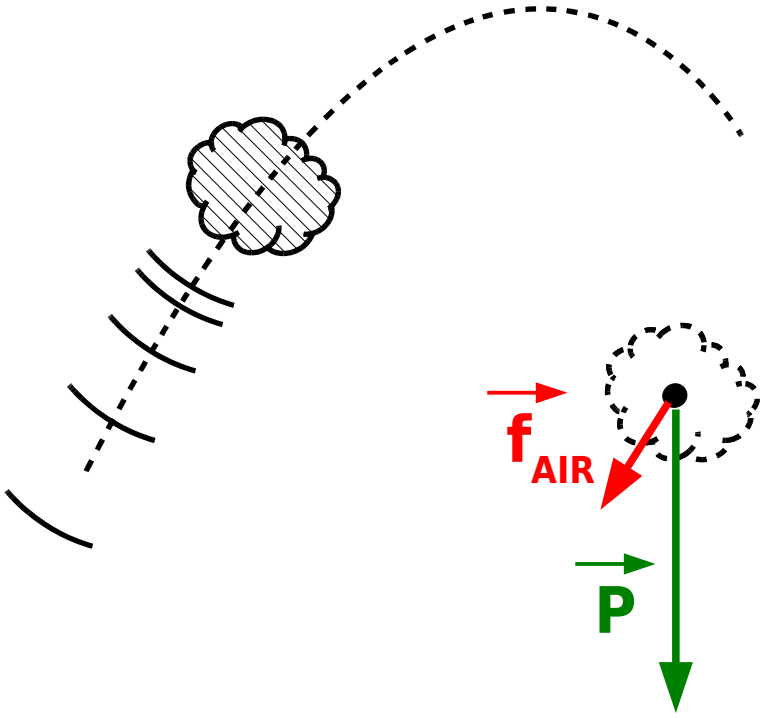


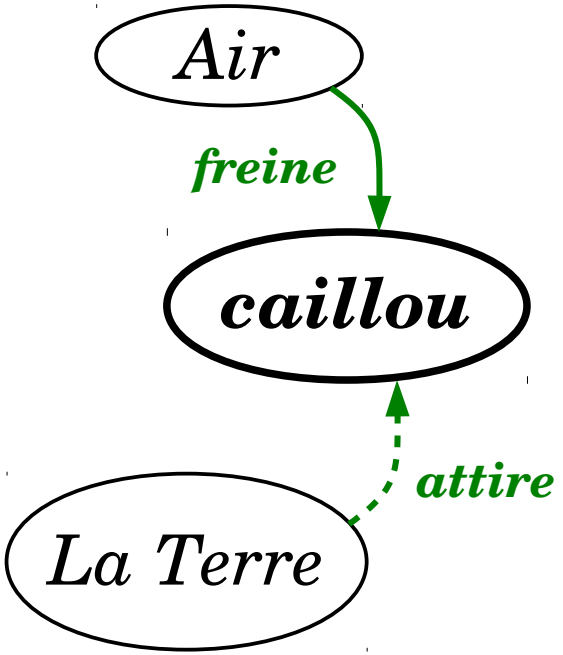


Vitesse constante + trajectoire rectiligne

La somme des forces est nulle

Trajectoire parabolique, mouvement ascendant

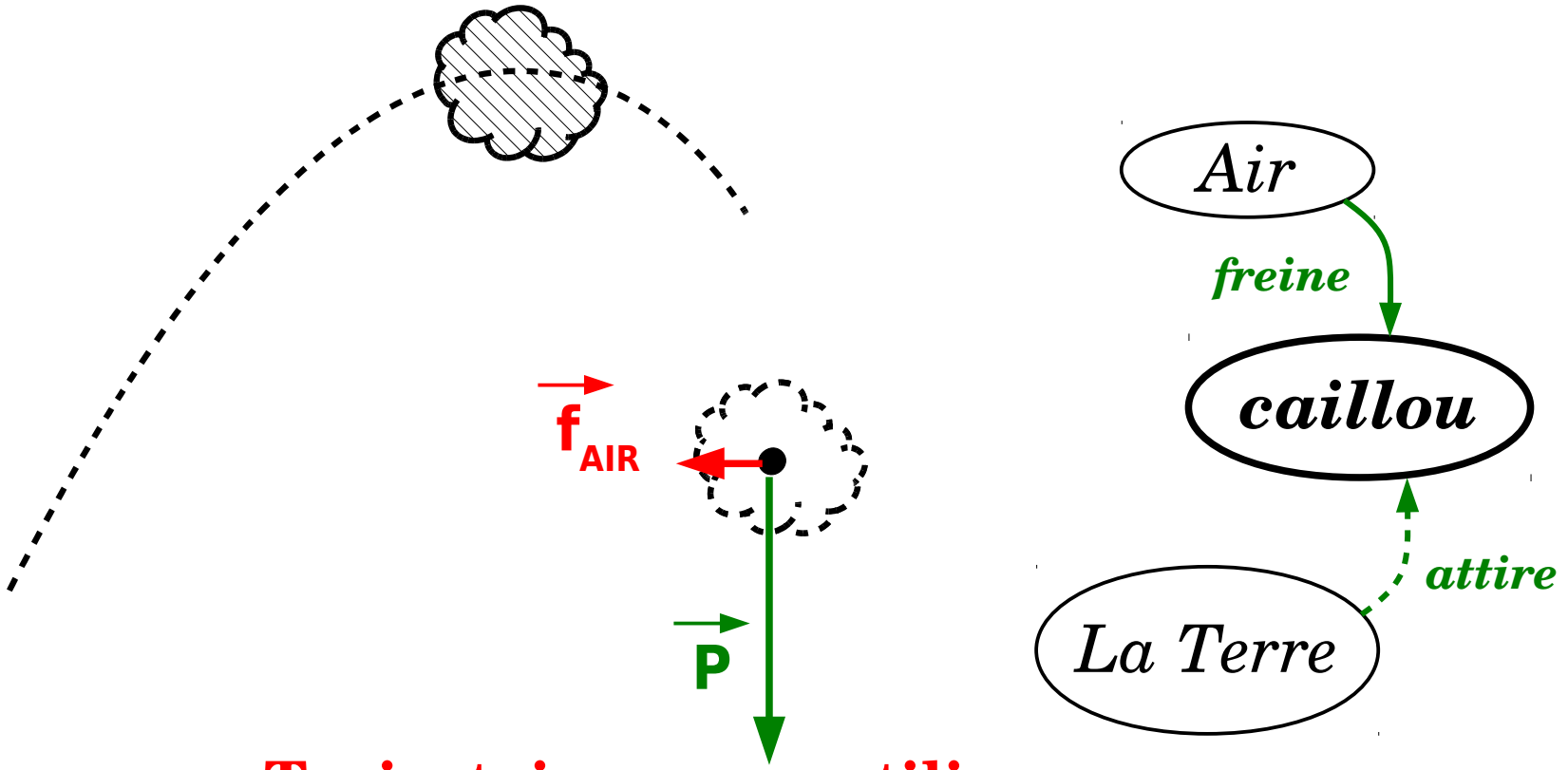




Trajectoire <u>non</u> rectiligne

La somme des forces <u>n'est pas</u> nulle

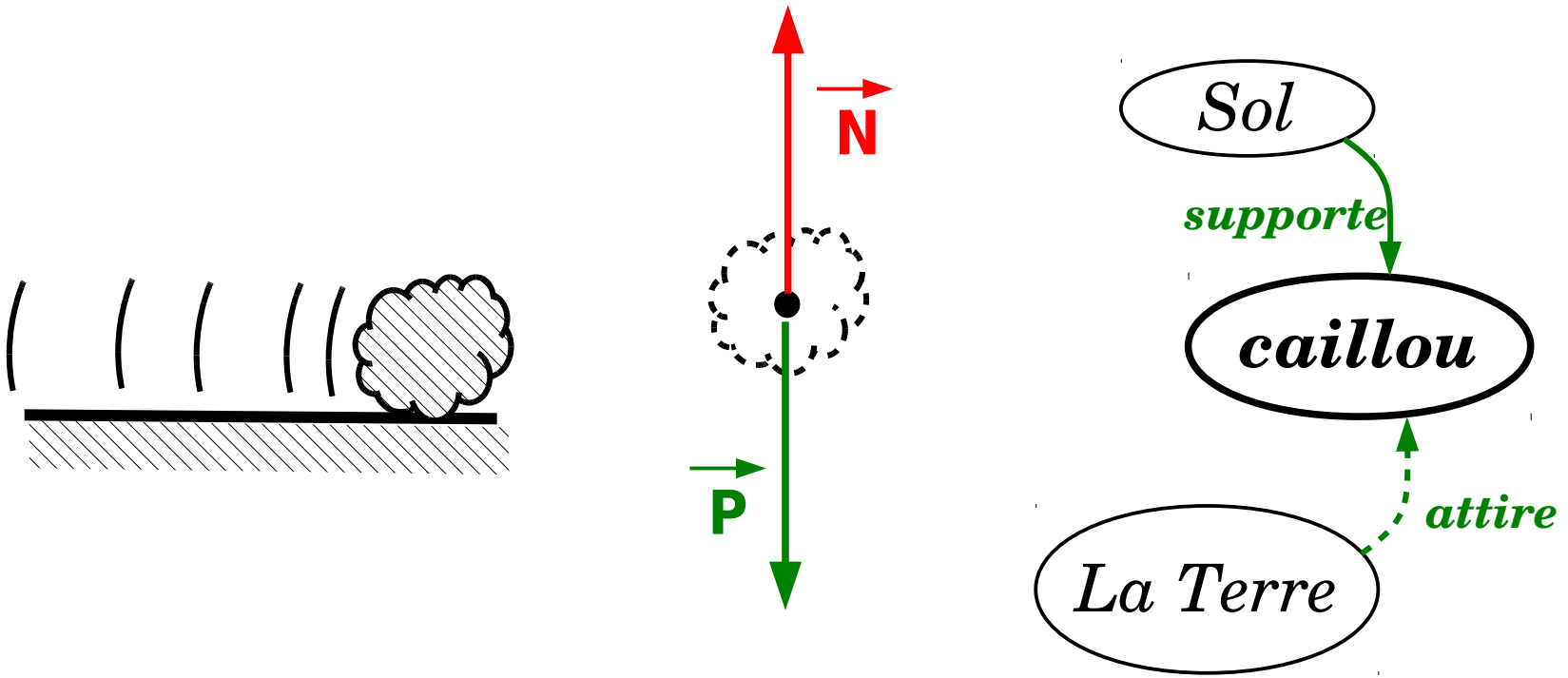
Sommet d'une trajectoire parabolique



Trajectoire <u>non</u> rectiligne

La somme des forces <u>n'est pas</u> nulle

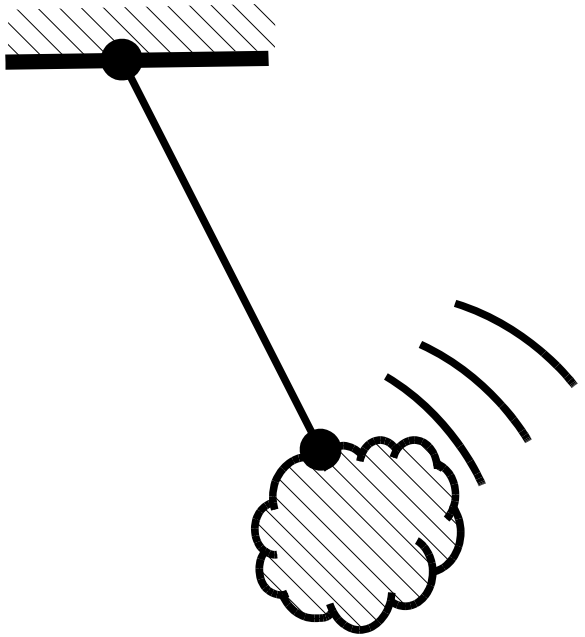
Glissement à vitesse constante, sans frottement.

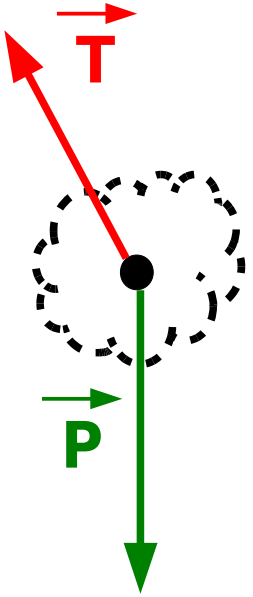


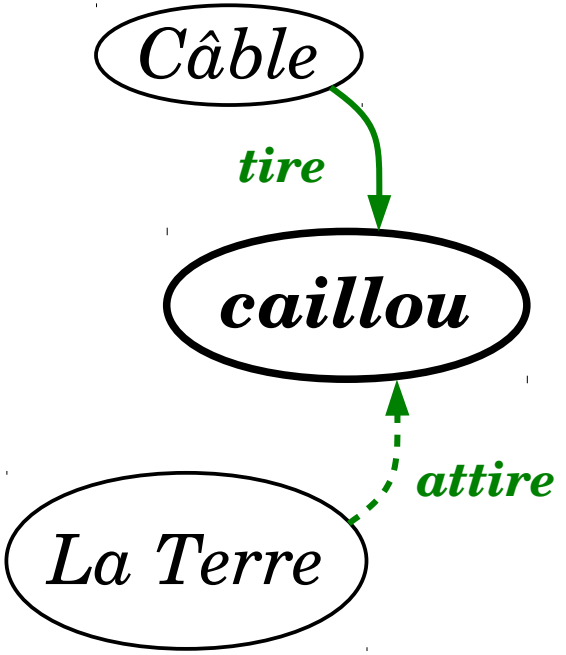
Trajectoire rectiligne, vitesse constante

La somme des forces est nulle

Oscillation au bout d'une corde, pas de frottements







Trajectoire non rectiligne, vitesse non constante

La somme des forces n'est pas nulle