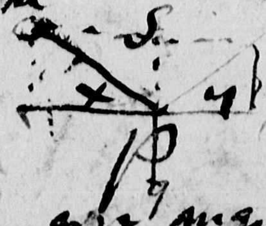
4° Si m sit elasticum, et β sit

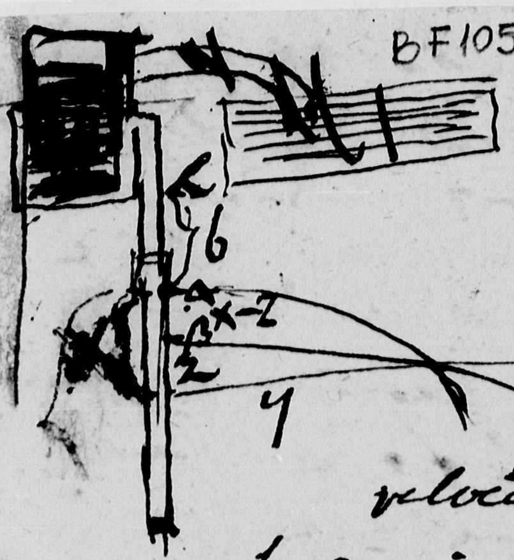


immobile durum, vel tantum sit β elasticum, ea de magnitudine, ~~ut~~ ut angulus incidentiae $x = y$ angulo reflexionis.

5° Si ~~[illegible]~~ ultra β fuerit medium quoddam, quod auget ~~[illegible]~~ aliquid motus celeritatem perpendicularem sβ manente parallela et ms, (saltem si sβ parum fuerit respectu ms), infringetur via corporis versus perpendiculum βq, si ~~[illegible]~~ sβ fuerit minimus respectu ms, tum refringetur.

BF 104/2v

BF 105/1

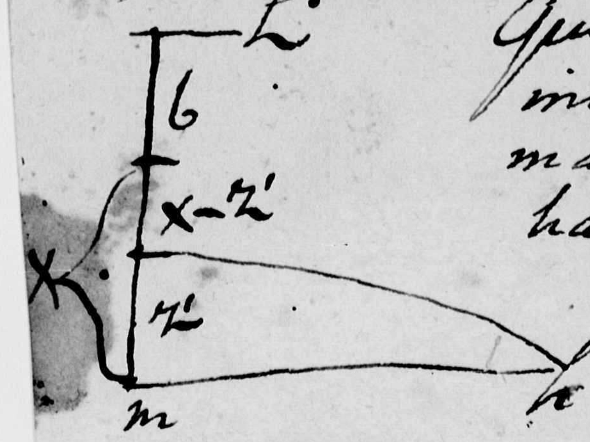


L sit libella aquae, in α et β sint lumina: quaeritur quantum secabunt se parabolae.

Patet tunc semper y esse utrique commune.

Pro superiore reperietur y, si filum velocitate $\sqrt{4bg}$ explosum concipietur horizonti ~~pa~~parallele motu uniformiter ac celerato decidere, et quaeratur ~~[illegible]~~ quae sub tempore $\sqrt{\frac{x}{g}}$ quantam viam fecerit celeritate $\sqrt{4bx}$, ita ut pro $\sqrt{4bg}$, adcommodetur y hujus $\sqrt{4bx}$, ita ut rationis erit ~~$\sqrt{4bg}$~~ $\sqrt{4(b+x-z)g}\;\sqrt{\frac{z}{g}} = \sqrt{4(b+x-z)z}$

~~adeoque $(b+x-z)z = bx$ e qua aequatione quadratica quae $(b+x-z)z$ et bx neque radix 2 aliter esse aequales, nisi $z = x$ sit.~~



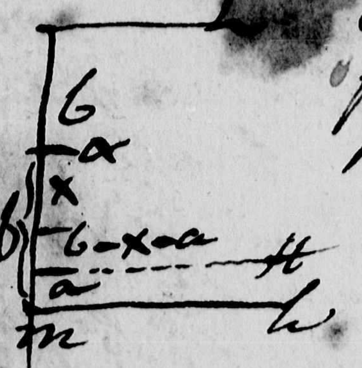
Quaeritur illud z', e cujus vertice incipiens parabola habeat maximam ordinatam mh; tunc in recta hac erit ~~et~~ punctum h extremum.

Est mh $= \sqrt{4(b+x-z')z'}$; quaeritur maximum hujus fractionis;

~~est $4bdz + xdz$ [illegible]~~

Est $b\,dz' + x\,dz' - 2z'dz' = 0$; hinc $b+x = 2z'$, et $z' = \frac{b+x}{2}$

Pro $z' >$ vel $< \frac{b+x}{2}$ prodeunt valores ordinatae minores Hinc cum pro quovis x inde deorsum ~~[illegible]~~ sicut ibi sit $\sqrt{4\left(b+x-\frac{b+x}{2}\right)\left(\frac{b+x}{2}\right)} = \sqrt{4\left(\frac{b+x}{2}\right)^2} = 2\left(\frac{b+x}{2}\right) = b+x$, patet lineam extimam ipsam aquae profluentis esse rectam. Patet etiam terminum $z' = b$, ubi $x - z = 0$



At supra nisi erit extima linea parabola per ~~[illegible]~~ guttam α describere. Nam ~~[illegible]~~ [illegible] quadrata [illegible] extremum; quia ad unum [illegible] x fauit in H [illegible] $= \sqrt{4(b+x)(b-x-a)}$; peser vero [illegible] valorem esse eo ~~majorem~~, quo minus fit x; nam

$(b+x)(b-x-a) = b^2 - bx - ab + bx - x^2 - ax$
$= b^2 - ab - x^2 - ax$, eo fieri maximum si $x = 0$; adeo que fieri ordin. in H aequalem $\sqrt{4b(b-a)}$; qui est valor ordinatae in eo loco parabolis punctum α.

Ha arci [illegible], hogy ha b-rek is b+a-nak

[illegible] ollyan lévő lyukakból hólvágják egymásra a parabolái: [illegible] $x = a+b$
ekkor $y = \sqrt{4bx} = \sqrt{4(a+b)(x-a)}$
tehát $bx = ax + bx - a^2 - ab$
tehát $x = a+b$, [illegible]

Spiral, ... Attractio [illegible] a luna [illegible] 43
Perturbationes ...

Computo vitrin
Machinas effungentibus.)
Pekles.
~~[illegible] lunae per terram [illegible]~~
~~Celeritas [illegible] aeterna.~~

Summa progressionis $\frac{1}{x-y}$ ... $\frac{1}{\infty}$ si ad 0
x crescente a 0 in ∞; decrescente [illegible] illud spatium, quod [illegible] [illegible] in motu [illegible] [illegible] primis velocitas AK, [illegible] x tempore, quo si K aequabiliter [illegible] describeret.

Accedat terrae motus annuus [illegible] [illegible]

~~[illegible]~~ Celeritas [illegible] ~~[illegible]~~ [illegible]
[illegible] est $\frac{x}{a(a-x)}$ ~~et celeritas [illegible]~~ $\sqrt{\frac{x}{a-ax}}$ quid est?

Summa progressionis $\frac{1}{1+x}$ ... $\frac{1}{\infty}$ crescente x a 0 usque in ∞

13.

Fél [illegible] inter 2 planetas. —
[illegible] centrum collisionis inter 2 planetas [illegible] centro indifferentia.

Determinare utramque.
1° centrifugam abeuntis corporis in ∞ quam lineam describeret [illegible] ipso 1° corporis [illegible] gravitatis expertis.
2° [illegible] est # Quae revolutiones per data vi ordinis celeritatis [illegible]
1° centrifuga ~~[illegible]~~ projiciendi corporis si [illegible] per gravitatem alicuius [illegible], quam lineam describeret
descendere aequalis [illegible] ascendere descendere tempore [illegible] in plano eodem
[illegible] [illegible] attractionis [illegible] centrifugam [illegible] gravitas ~~[illegible]~~ cujus [illegible] $\frac{1}{t}$
Dareme pro attractione [illegible] [illegible] contra se agentes, [illegible] [illegible] cujus [illegible] $\frac{1}{t^n}$, [illegible]
[illegible] differentiam celeritas corporis attracti [illegible]?
Resp. [illegible] dare [illegible] [illegible]