ubi x', y', z' coordinatae puncti tactiones, et $\left(\frac{dU}{dx}\right)$, $\left(\frac{dU}{dy}\right)$, $\left(\frac{dU}{dz}\right)$ coefficientes differentiales sunt partiales. Jam si hoc adhibeamus ad aequationem (G), invenimus

$$\left(\frac{dU}{dx}\right) = 2mx', \left(\frac{dU}{dy}\right) = 2ny', \left(\frac{dU}{dz}\right) = -2z'$$

quare quaesita aequatio est haec:

$$2mx'(x - x') + 2ny'(y - y') - 2(z - z') = 0$$

sive:

$$mx'x + ny'y - z'z - f^2 = 0,$$

quae eadem est atque supra inventa.

8. I. Si angulus, quo planum contingens (V) versus pl. (x, y) inclinatum est, significatur litera γ, ex aequatione plani (V) inventa sequitur esse $\operatorname{tg}\gamma = \frac{\sqrt{(m'x^2 + ny'^2)}}{z'}$. Posito $z' = 0$ fit $\operatorname{tg}\gamma = \infty$, ergo $\gamma = 90°$: unumquodque igitur planum superficiem S in puncto aliquo plani (x, y) contingens normale est ad hoc ipsum planum. II. Planum (x, y) plano (V) secatur in linea recta (λ), cuius aequatio est $mx'x + ny'y = f^2$; haec linea (λ) axi XX' occurrit in puncto determinato formula: $x = \frac{f^2}{mx'}$, et versus hunc axem inclinata est angulo $= \varphi$, ita ut sit $\operatorname{tg}\varphi = -\frac{mx'}{ny'}$, ($x'$, y', z' etiam hic sunt coordinatae puncti tactionis.)

9. Si per lineam rectam (λ'), determinatam in pl. (x, y) aequatione $y + qx + \beta = 0$, transit aliquod planum (V'), id ipsum continget superficiem S, si exprimitur aequatione hac:

$$qx - y \pm z\sqrt{\left(\frac{q^2}{m} + \frac{1}{n} - \frac{\beta^2}{f^2}\right)} + \beta = 0 \ldots . (\mathfrak{B}')$$

tactionis vero puncti coordinatae erunt hae:

$$x' = -\frac{qf^2}{m\beta}, \ y' = -\frac{f^2}{n\beta}, \ z' = \pm\frac{f^2}{\beta}\sqrt{\left(\frac{q^2}{m} + \frac{1}{n} - \frac{\beta^2}{f^2}\right)}$$

10. Planum (V'), quod transit per rectam (λ') in pl. (x, y) datam aequatione $y + qx + \beta = 0$, continget superficiem S, si versus planum (x, y) inclinatum fuerit angulo γ' eo, ut sit $\operatorname{tg}\gamma' = \mp\frac{\sqrt{(q^2+1)}}{\sqrt{\left(\frac{q^2}{m} + \frac{1}{m} - \frac{\beta^2}{f^2}\right)}}$; puncti tactionis coordinatae x', y', z' iisdem determinantur formulis atque §. 9.

11. Quodque planum (V) tangens superficiem S secat pl. (x, y) in linea recta (λ) (§. 8, II), quae ipsa aut secat, aut certe contingit ellipsin illam (e), in qua superficies S secatur plano (x, y). Per rectam aliquam (λ') in pl. (x, y) datam aequatione $y + qx + \beta = 0$ sem-