where u and v are co-ordinates of points on the pseudo-sphere and u′ and v′ co-ordinates of points on S. The equations of transformation from S to the plane are

$$v = x$$

$$c\,e^{-\frac{u}{d}} = y$$

The real part of the surface being represented on the strip included between $y = c$ and $y = c\,e$.

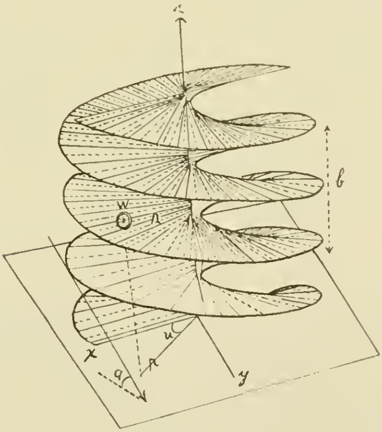
Comparison of Gauss' and Cayley's Proofs of the Existence Theorem.

O. E. Glenn.

[By title.]

Motion of a Bicycle on a Helix Track.

O. E. Glenn.



The equation of the helix surface may be conveniently expressed in surface co-ordinates, thus:

$$x = r\cos u \equiv f_1(ru)$$

$$y = r\sin u \equiv f_2(ru)$$

$$z = \frac{bu}{2\pi} \equiv f_3(ru)$$

in which r represents the distance of a point from the z axis, and u the