It follows that Γ'' is identical with $SH(6, 2^n)$. But Γ'' is holoedrically isomorphic with $G_{p=2}$ and therefore with $HA(4, 2^{2n})$, whose second compound is $G_{p=2}$.

4. NOTE.—It appears that the quaternary transformation group which naturally corresponds to the finite group $HO(4, p^{2n})$ is *not* continuous.

THE UNIVERSITY OF TEXAS,
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THE HESSIAN OF THE CUBIC SURFACE. II.

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THE aim of the following paper is to extend the results of a previous article on the same subject (BULLETIN, March, 1899, p. 282) by determining all the quintic and sextic curves on the Hessian of the cubic surface, and giving some theorems connected with them, and with the quartic curves already determined.

I will write the equation of the Hessian in the form

$$F \equiv xyzu + wyzu + wxzu + wxyu + wxyz = 0,$$

where w, x, y, z, u are connected by the relation

$$aw + bx + cy + dz + eu = 0,$$

in which a, b, c, d, e are arbitrary constants.

As already shown, the surface F contains three classes of biquadratic curves, viz.:

α_1. A class containing 15 families which lie on 30 families of cones, all the cones of the same family cutting F in two lines and tangent along a third.

α_2. A class containing 30 families of curves lying on 30 families of cones tangent to F along two lines.

α_3. A class containing 15 families of curves determined by as many families of quadrics each intersecting F in a gauche quadrilateral, and by 30 families of quadrics each meeting F in two lines and a conic.

Consider the family of α_1 determined by the cones

$$(1)\qquad \begin{aligned} A_1 &\equiv x(w + y) + \lambda wy = 0, \\ A_1' &\equiv x(z + u) + (1 - \lambda)zu = 0. \end{aligned}$$