Alexander Berkovich* (alexb@ufl.edu). On some implications of 1907 Hurwitz formula. I start by showing that a 1907 Hurwitz formula is a special case of the Siegel formula for ternary quadratic forms. I then employ the 1907 Hurwitz formula and a special case of the Jacobi triple product identity to prove certain conjectures of Kaplansky. In particular, I will show that $9x^2 + 16y^2 + 36z^2 + 16yz + 4xz + 8xy$ represents, exclusively, all positive integers not of the form

$4^a(8m + 7)$
$4^a(8m + 3), a = 0, 1, 2$
$4^a(4m + 2), a = 0, 1, 2$
$4^a(8m + 5), a = 0, 1$
$M^2, 4M^2,$

where $a, m, M$ are non-negative integers and $M$ is generated by 1 and primes congruent to 1 (mod 4). (Received September 12, 2014)