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We present a theory for the formation of the solar surface eruptions and sunspots. The key ingredient of the study is the new anti-diffusive effect of heat, based on the recently developed statistical theory of heat. The anti-diffusive effect of heat states that due to the higher rate of photon absorption and emission of the particles with higher energy levels, the photon flux will move toward to the higher temperature regions from the lower temperature regions. This anti-diffusive effect of heat leads to a modified law of heat transfer, which includes a reversed heat flux counteracting the heat diffusion. It is this anti-diffusive effect of heat and thereby the modified law of heat transfer that lead to the temperature blow-up and consequently the formation of sunspots, solar eruptions, and solar prominences. This anti-diffusive effect of heat may be utilized to design a plasma instrument, directly converting solar energy into thermal energy. (Received February 07, 2021)