Intelligent mobile robots are increasingly crucial across diverse sectors like industry, medicine, and military operations, driving business growth through versatile applications. This paper provides a comprehensive overview of intelligent mobile robot research (1920–2021), focusing on autonomous vehicle development, principles, and applications. It's the first century–spanning survey of the field, tracing progress from the word "robot's" inception to today's sophisticated systems. This work serves as a valuable resource for both new and established researchers, anticipating further research spurred by its broad scope and in–depth analysis. The article significantly contributes to future research directions within the field of mobile robotics.