Portable Homemade Ventilators: Alleviating Global Medical Shortages

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Due to the coronavirus pandemic, there has been a shortage of ventilator resources around the world. This situation draws our attention to information about ventilators. Excluding the impact of the epidemic, about 1 billion people worldwide suffer from mild or severe sleep apnea. Therefore, we hope to design a simple, civilian-oriented portable home automatic ventilator. In this study, we discuss how ventilators work and retrofit those on the market. The manual ventilator with Lego as the main material was converted into an automatic ventilator, and then the pumping volume of the self-made automatic ventilator was tested, analyzed and compared.

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