**Volunteers Produce 3D Printed Valves for Italian Coronavirus Patients**

**志愿者为意大利冠状病毒患者生产3D打印版氧气阀**

A small Italian company has used 3D printing technology to quickly produce oxygen valves to treat some coronavirus patients.

意大利一家小型企业已使用3D打印技术快速生产氧气阀用以辅助治疗冠状病毒患者。

Italy has been battling the world’s largest number of cases of the new coronavirus outside of China.

意大利一直在与除中国外全球数量最多的新冠肺炎病例作斗争。

Cristian Fracassi founded and heads the Italian start-up company Isinnova. He told the Reuters news agency that he heard about a shortage of the valves at a hospital near the northern city of Brescia. The area has had an explosion of coronavirus cases.

克里斯蒂安·弗拉卡西创立并领导了意大利初创公司“最新星”（Isinnova）。他告诉路透社，他听说北部城市布雷西亚附近一家医院的氧气阀门短缺。该地区爆发了冠状病毒疫情。

The devices are called Venturi valves. They are named after 18th century Italian physicist Giovanni Battista. The devices are used to connect patient masks to oxygen equipment. The oxygen masks are used to treat patients suffering from breathing problems.

这些设备被称为文丘里阀。它们以18世纪意大利物理学家乔瓦尼·巴蒂斯之名命名。该设备用于将患者的面罩连接到氧气设备上。氧气面罩用于治疗呼吸困难的患者。

Fracassi, a 36-year-old engineer, said the hospital was in serious need of the valves. The devices “are impossible to find at the moment,” he said. He added that the fast-spreading virus was simply preventing current production from meeting the growing demand.

弗拉卡西是一位36岁的工程师，他说当时医院急需氧气阀，并表示当时这些设备“处于无处可找的”境况。他还补充道，病毒的快速传播使得当下的生产力无法满足不断增长的需求。

He decided to offer the services of his company’s 3D printing equipment and of his 14 employees to help ease the shortage.

他决定利用公司的3D打印设备及其14名员工为社会提供服务帮助缓解（氧气阀）短缺的现象。

“When we heard about the shortage, we got in touch with the hospital immediately. We printed some prototypes, the hospital tested them and told us they worked,” Fracassi said. “So we printed 100 valves and I delivered them personally.”

“当我们得知物资短缺的情况时，立即与医院取得了联系。我们打印了一些原型，医院对它们进行了测试，并告诉我们它们能够正常工作，” 弗拉卡西说。 “然后我们打印了100个氧气阀门，我亲自将它们交给了医院。”

The company’s team was able to effectively copy the valves using a 3D printer at the company headquarters in Milan.

该公司的制作团队能够在位于米兰的公司总部利用3D打印机有效地打印氧气阀。

The company produces a series of technology products. They include high-tech luggage for Italian designer Gucci and a special paint developed to survive temperatures up to 1,000 degrees Celsius.

公司生产了一系列新科技产品，其中包括为意大利设计师品牌古驰（Gucci）设计的高科技行李箱，以及可在高达1000摄氏度的温度下正常使用的特殊涂料。

Fracassi told Reuters it cost his company very little to produce the plastic valves, which weigh around 20 grams each.

弗拉卡西告诉路透社，生产塑料阀门的成本非常低。每个塑料阀门重约20克。

“I’m not going to charge the hospital,” he said. “It was the least I could do to help doctors and nurses who work all day long to save human lives.”

他说：“我不会向医院收费。这是我能为夜以继日救死扶伤的医护人员所尽的一点微薄之力。”

The company's quick action to help coronavirus patients was praised by Italy’s Minister of Innovation Technology Digitalization, Paola Pisano. In a Twitter message, she thanked Fracassi and his employees for supplying the valves. She also published a picture of the freshly made 3D devices.

意大利创新技术数字化部长保拉·皮萨诺对该公司迅速协助救治冠状病毒患者的行动表示了赞许。他发推文称，感谢弗拉卡西及其员工提供的氧气阀。她还晒出了新制作出来的3D氧气阀设备的图片。

At least 10 hospital patients had used the new valves as of March 14, reported Massimo Temporelli, the president and co-founder of Italy’s FabLab. The organization creates technology-based solutions for companies. It has worked with Isinnova in the past.

意大利FabLab公司总裁兼联合创始人马西莫·特莫佩利表示，截至3月14日至少有10家医院的患者使用了这种新阀门。FabLab为各种公司提供技术方面的解决方案，并曾与“最新星”合作过。

In a Facebook post, Fracassi said he did not want to be called a hero or a genius for the actions he took. “Sure, people were going to die, but we only did our duty,” he wrote. Fracassi added that refusing to act after learning of the need could have likely resulted in more patient deaths.

弗拉卡西在脸书发帖称，他并不想因为这件事而被称为英雄或天才。他写道：“是的，人终将一死，而我们只是履行了应尽的职责。” 弗拉卡西补充道，在得知了需求后拒绝采取行动可能会导致更多的患者死亡。

In the message, Fracassi said the company does not plan to profit from its valve production and will only use its designs and manufacturing methods to help those currently in need.

弗拉卡西还写道，该公司不打算从其阀门生产中获利，只会使用其设计和制造方法来帮助那些目前有需要的人。

He added: “Let's focus on the real heroes, those who save lives, who work 16-hour hospital shifts, and are day and night next to the sick, and praise them.”

他补充道：“让我们关注真正的英雄，关注那些正在挽救他人生命、在医院16小时轮班工作并日夜陪在病人身边的人并赞美他们。”

I’m Bryan Lynn.

布莱恩·林恩报道。

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