

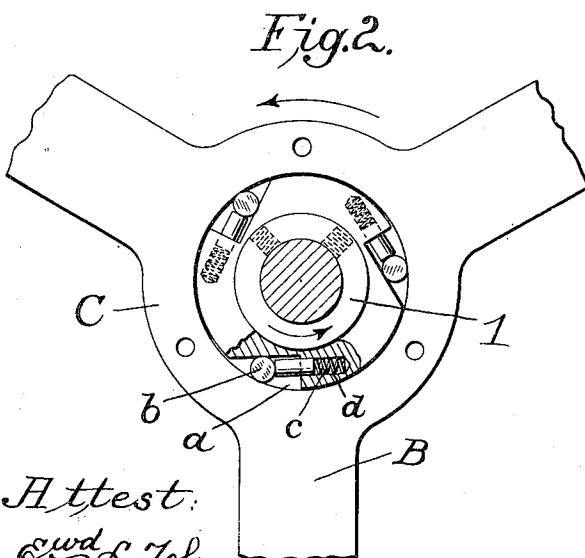
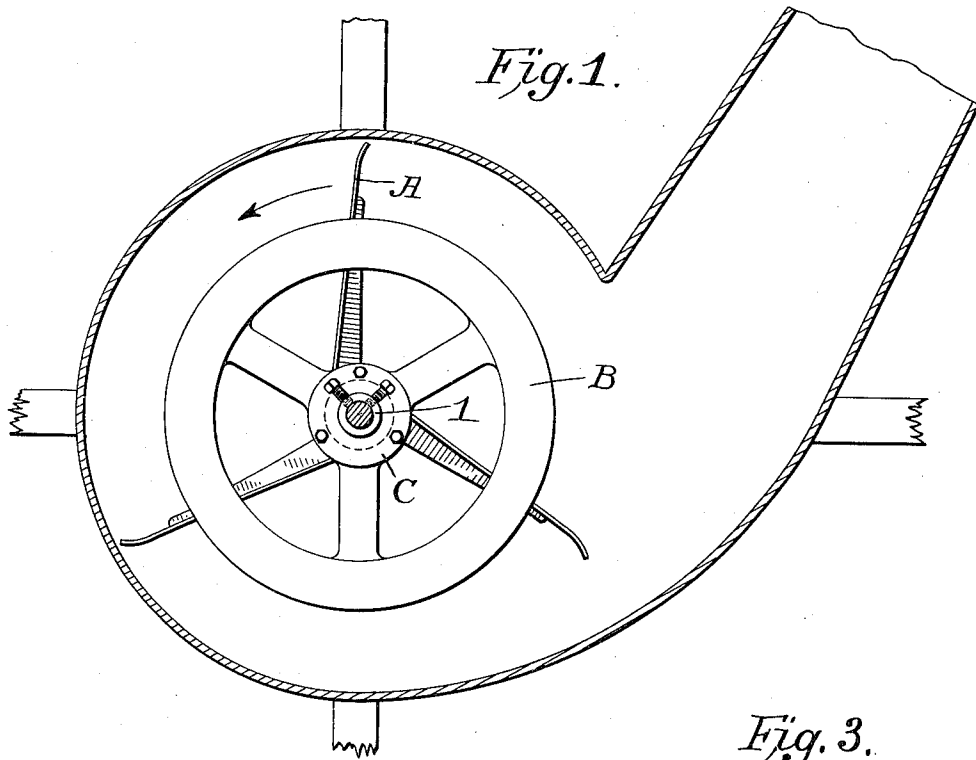
D. H. COOK & E. J. WILSON.

BLOWER FAN.

APPLICATION FILED NOV. 11, 1911.

1,039,099.

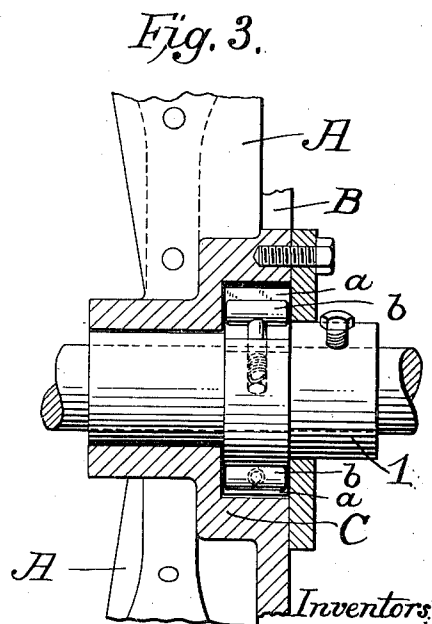
Patented Sept. 24, 1912.



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UNITED STATES PATENT OFFICE.

DARWIN H. COOK AND ERVON J. WILSON, OF LANSFORD, NORTH DAKOTA.

BLOWER-FAN.

1,039,099.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed November 11, 1911. Serial No. 659,811.

To all whom it may concern:

Be it known that we, DARWIN H. COOK and ERVON J. WILSON, citizens of the United States, residing at Lansford, North Dakota, have invented certain new and useful Improvements in Blower-Fans, of which the following is a specification.

Our invention is designed to improve the blower, spiders or fans inclosed in a drum or housing ordinarily used for the purpose of creating a blast to dispose of straw, corn-fodder, or other substances, such for instance as the wind fan in a straw blower or grain fan of a threshing machine, our invention being intended for use particularly where a steady blast is required. We construct the blower fan or spider, with a controlling mechanism which allows the momentum of the fan to release itself from its driving shaft and continue to revolve, and to keep up the blast for a reasonable time whenever there is a check in its driving power or in the rest of the machine.

In the accompanying drawing we have shown in Figure 1 a blower fan, and in Figs. 2 and 3 details of our improvements as applied thereto.

In these drawings, the fan blades are shown at A, the blades being carried by balance wheel B provided with a hub C, and this hub is fitted to a main hub 1 which is secured to the driving shaft. This hub has a raised portion which, as shown in the sectional view, is provided with triangular recesses *a*, and these recesses are provided with rollers and plungers supported by springs acting as friction devices *b*, normally pressed out by springs *c* in the recesses *d*. In the ordinary rotation of the driving shaft, the hub 1 rotates with it, being secured thereto, and the first action is the forcing out of the clutch devices *b* by their springs, which slide up the inclined walls of the recesses *a*, and cause frictional engagement with the balance wheel carrying the fan member, rotating the same by

frictional engagement. It will be seen, however, that if, for any reason, there is a check in the speed of the inner hub, releasing the frictional engagement between the inner and the outer hub, the balance wheel will continue to rotate by its own momentum, and hence any cessation or stopping of the driving shaft will not immediately effect the rotation of the fan. As soon as the shaft is started up it will soon catch up with the momentum of the fan as the friction devices engage therewith, and the two parts will rotate together.

Our invention not only provides for the production of a continuous blast, but it also does away with the belt friction of the blower belt of a threshing machine or other agriculture machine where a device of this kind is employed.

Our invention will enable the fan to do better service and with a looser belt than now employed; it will save injury to the boxing of the blower, and allow the boxings to run cooler and in view of its automatic action of unlocking, it will assist in giving a steady motion to the rest of the machine.

We claim as our invention:—

In combination in a blower fan for threshing machines, a casing having an inlet and an outlet, a shaft extending into said casing and continuously driven in one direction, a fan mounted on said shaft, a clutch between the shaft and fan to drive the said fan, and to permit the fan, by its own momentum, to run ahead of the shaft when the said shaft is checked or reduced in its speed of rotation in one direction, substantially as described.

In testimony whereof, we affix our signatures in presence of two witnesses.

DARWIN H. COOK.
ERVON J. WILSON.

Witnesses:

E. O. HARALDSON,
E. SCHIBSBY.