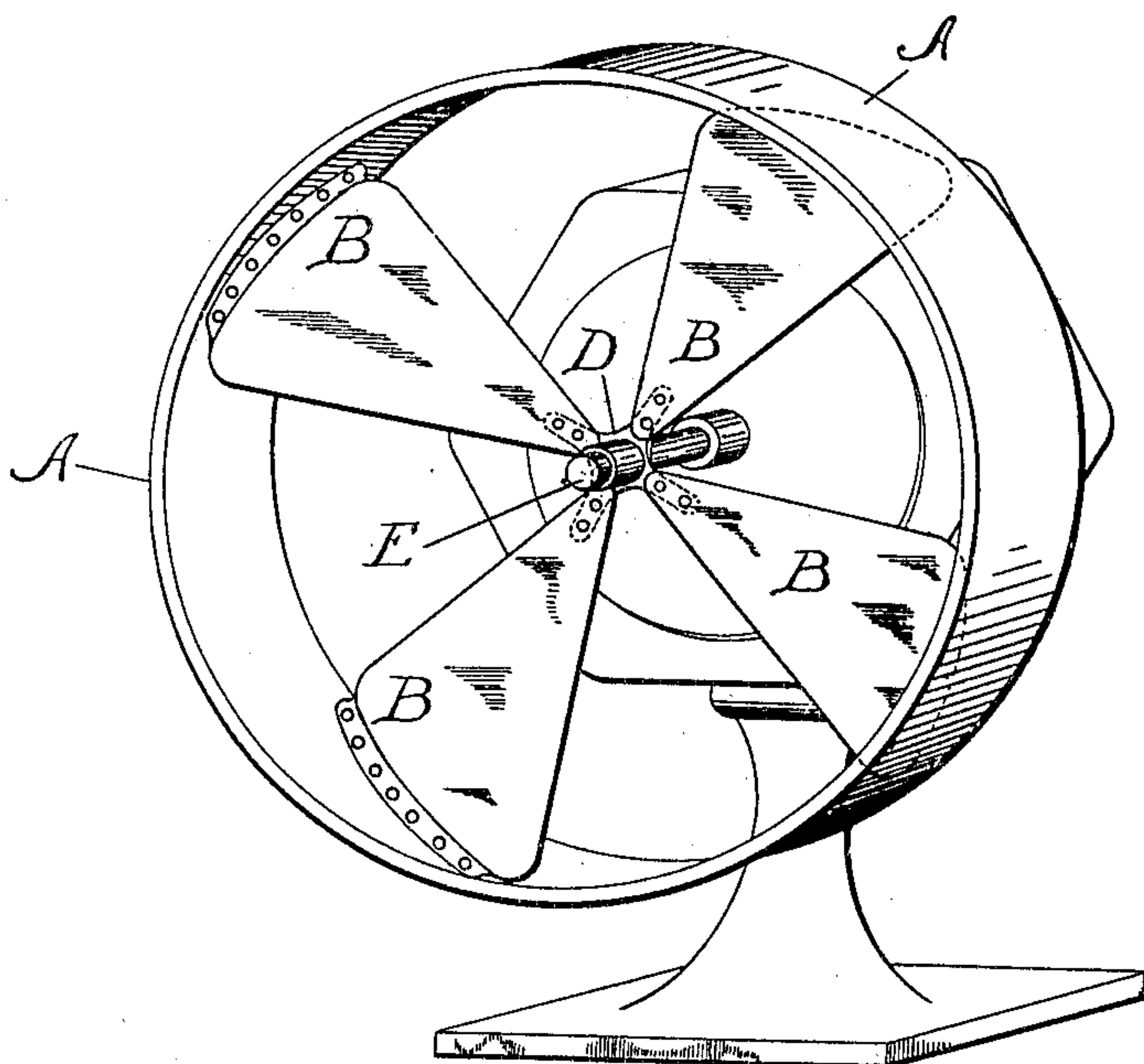


No. 818,804.

PATENTED APR. 24, 1906.

C. F. WINCH.  
FAN.

APPLICATION FILED SEPT. 10, 1904.



WITNESSES:

*C. F. Winch*  
*Arthur Fuchs*

INVENTOR

*Charles F. Winch*

BY

*Thomas H. Decker*  
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# UNITED STATES PATENT OFFICE.

CHARLES F. WINCH, OF NEW YORK, N. Y.

## FAN.

No. 818,804.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed September 10, 1904. Serial No. 223,947.

*To all whom it may concern:*

Be it known that I, CHARLES F. WINCH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, (with post-office address 156 Madison avenue,) have invented certain new and useful Improvements in Fans, of which the following is a specification.

My invention relates to certain improvements in the construction of rotary fans, and has a twofold object—viz., to secure noiseless operation of the fan and to prevent injury to the person from accidental contact with the fan while it is in motion.

My invention consists, essentially, of a rotary fan having wings, vanes, or blades of some flexible material extended between a suitable rim and hub.

In carrying out my invention I may use leather, cloth, or other flexible material for the wings, vanes, or blades and either rigid or flexible material for the rim.

The accompanying drawing shows in perspective a rotary fan constructed in accordance with my invention.

A is the rim, preferably in the form of a hoop, the periphery of which is unbroken circumferentially.

B indicates the wings, vanes, or blades set at an angle, as usual in the art, and attached at one end to the rim and at their other to the hub D.

As will be seen, the mechanical relation of the fan blades, wings, or vanes to the hub and rim is that of tension-spokes in a wheel. The

hub is fastened for rotation to any suitable drive-shaft E, as usual in the art.

It is obvious that owing to the nature of the material used for the spokes or blades in my invention no harm can come from accidental contact therewith, even when the fan is rotated at high speed, also that the fan will be practically noiseless.

As will be seen, therefore, my present invention is an improvement upon that of my prior patent, No. 759,951, dated May 17, 1904, in that it not only accomplishes the ends sought by the construction shown in that patent in a better manner, but also secures the additional result of noiselessness in the operations of fans which as heretofore constructed have had their vanes made of rigid material.

What I claim as my invention is—

1. In a rotary fan, the combination of blades or spokes of flexible material, and a continuous metal band forming a rim by which the spokes are permanently distended, as and for the purpose described.

2. In a rotary fan, the combination of a continuous hoop or band forming a wheel-rim and fan-blades of flexible material forming tension-spokes of said wheel.

Signed at New York, in the county of New York and State of New York, this 2d day of September, A. D. 1904.

CHARLES F. WINCH.

Witnesses:

C. T. TISCHNER, Jr.,

ARTHUR FUCHS.