

(Model.)

J. BACHELDER.
Wind Wheel.

No. 232,799.

Patented Oct. 5, 1880.

Fig. 1

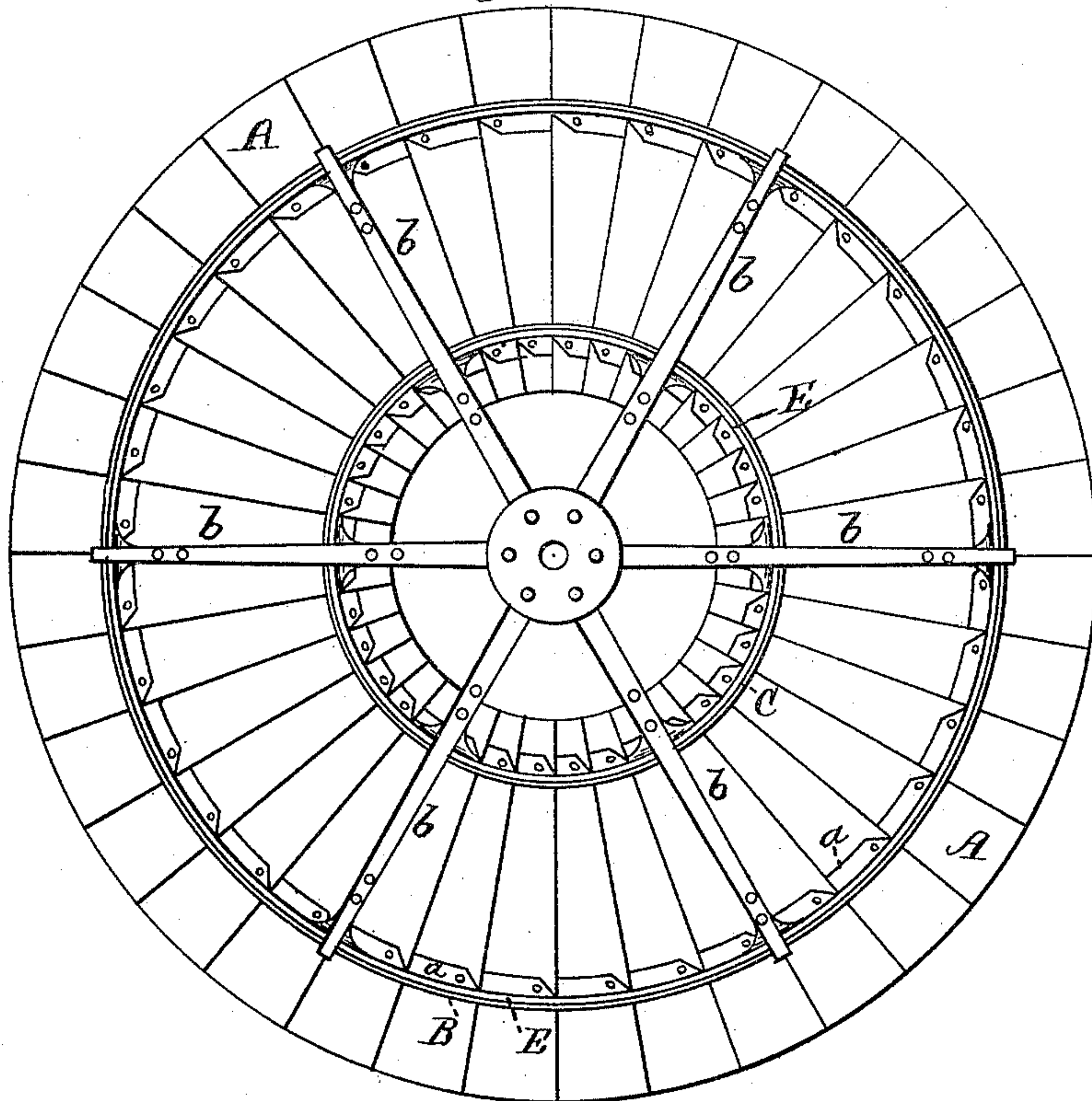


Fig. 2.

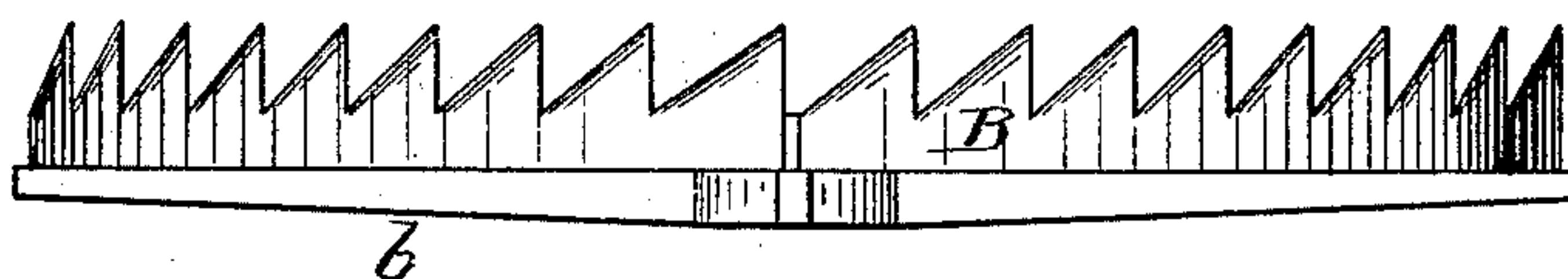


Fig. 3

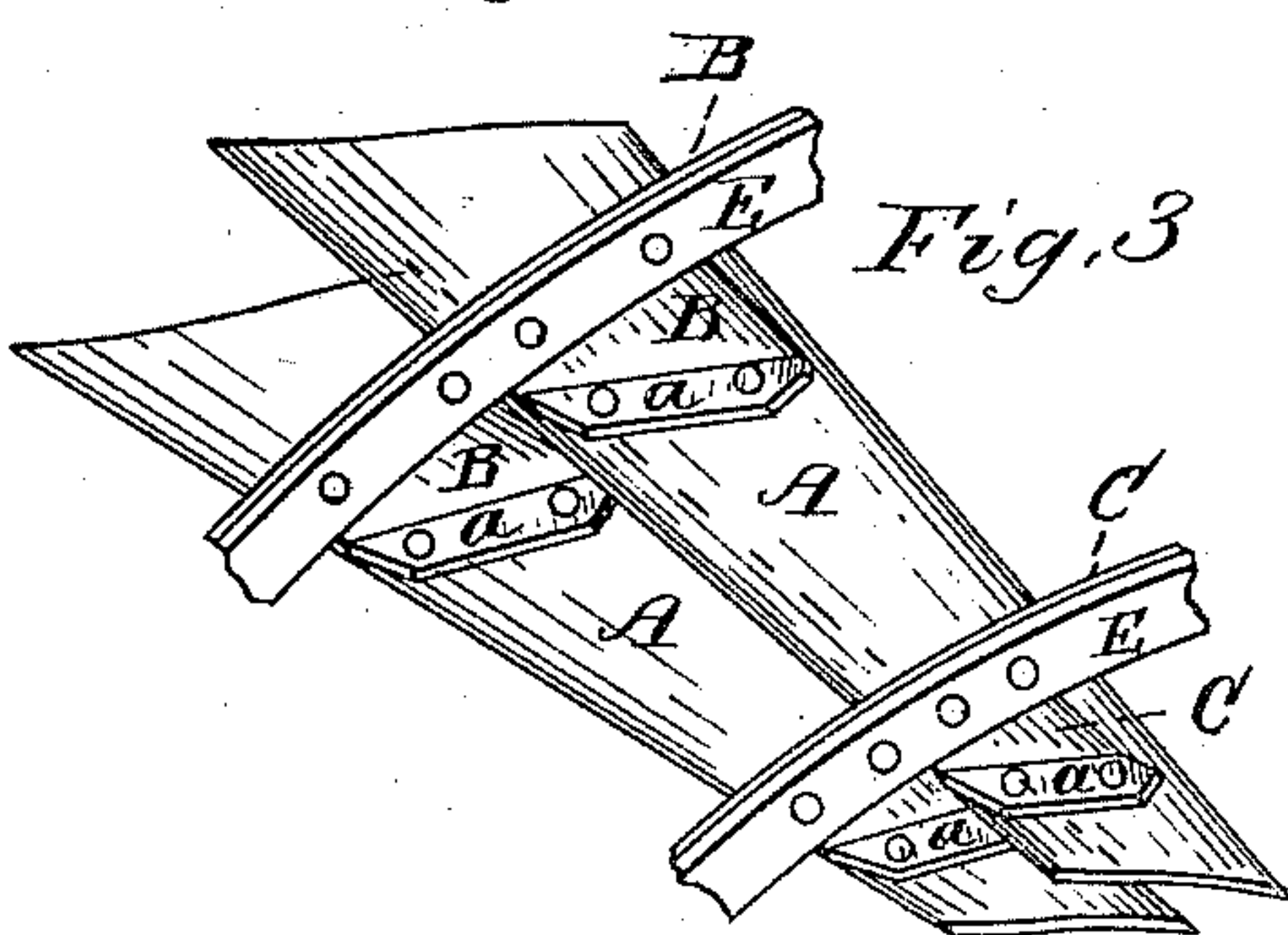
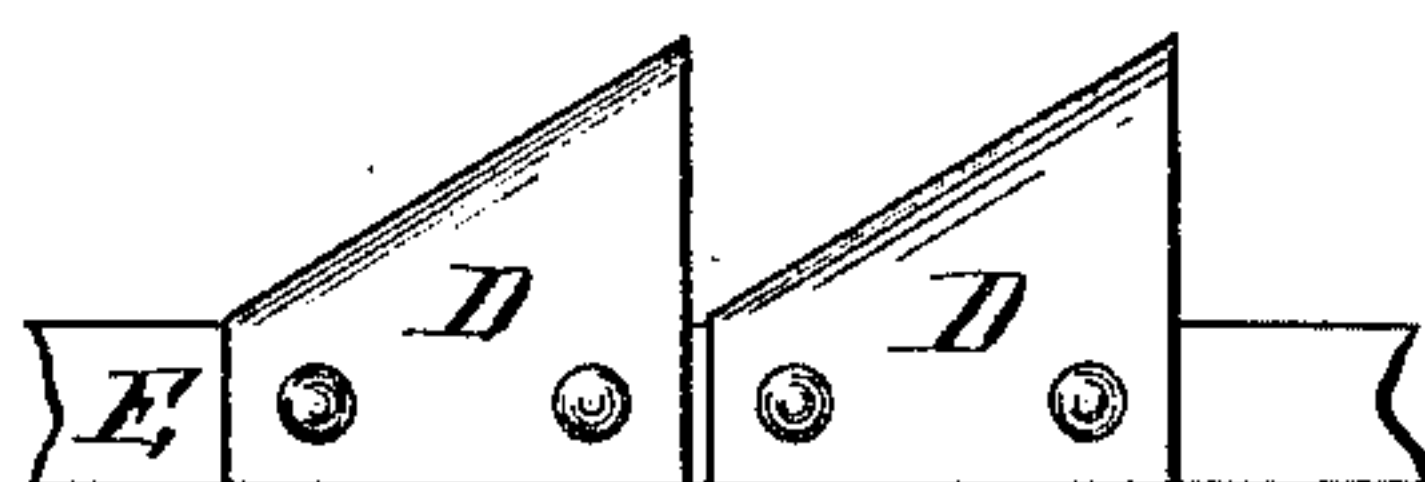


Fig. 4



Witnesses:

Nat. E. Oliphant,
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Inventor:

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per Cha. H. Fowler,
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UNITED STATES PATENT OFFICE.

JOHN BACHELDER, OF NAPA, CALIFORNIA.

WIND-WHEEL.

SPECIFICATION forming part of Letters Patent No. 232,799, dated October 5, 1880.

Application filed August 30, 1880. (Model.)

To all whom it may concern:

Be it known that I, JOHN BACHELDER, of Napa, in the county of Napa and State of California, have invented a new and valuable Improvement in Wind-Wheels; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of a wind-wheel embodying my invention. Fig. 2 is a side elevation of the serrated band to which the blades of the wheel are secured. Fig. 3 is a perspective view in detail. Fig. 4 is a modification of the band.

The present invention has reference to certain novel improvements in wind-wheels; and the object thereof is to provide means for securely holding the blades of the wheel and supporting and securing them in their proper relative position, whereby the wheel is greatly increased in strength and durability, also firmly holding the blades in the necessary curve or bend in order to increase the wind-surface thereof.

The invention therefore consists in a serrated band or bands for supporting the outer and inner ends of the blades of the wheel.

The invention further consists, in connection with the serrated band or bands, of the blades having a twist or curve on their face, as will be hereinafter described.

In the accompanying drawings, A represents a series of blades, of wood or any other suitable material usually employed for the purpose. These blades A together form the wheel of the windmill, and are twisted from their outer to their inner end, as illustrated in Fig. 3 of the drawings. The outer and inner ends of the blades A are secured to serrated bands B C by

screws, bolts, rivets, or any other suitable means desired, each serration of the bands having a turned-in flange, *a*, to which the blades are secured, as above set forth. These bands B C may be made of any desirable length, or formed of short plates D, as represented in Fig. 4 of the drawings, and bolted or otherwise secured to the outer face of a hoop, E.

The arms *b*, which may be constructed of metal or wood, are secured to the serrated blades or hoops, and their inner ends bolted or otherwise fastened to a hub or spider in the ordinary manner.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The serrated band or bands B C, having secured thereto the blades of a wind-wheel, substantially as and for the purpose set forth.

2. The serrated band or bands B C, having flanges *a* to form brackets or supports for the blades A, substantially as and for the purpose specified.

3. The serrated band or bands B C for supporting the blades A of a wind-wheel, in combination with the hoops E, substantially as and for the purpose described.

4. The combination, with the serrated bands B C, of the twisted blades A of a wind-wheel, substantially as and for the purpose set forth.

5. A wind-wheel consisting of the twisted blades A, serrated band or bands B C, provided with flanges *a*, and the hoops E, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN BACHELDER.

Witnesses:

A. J. HULL,
S. A. SCOTT.