

No. 705,639.

Patented July 29, 1902.

A. J. BOLTON.
WIND WHEEL.

(Application filed May 14, 1902.)

(No Model.)

Fig. 1.

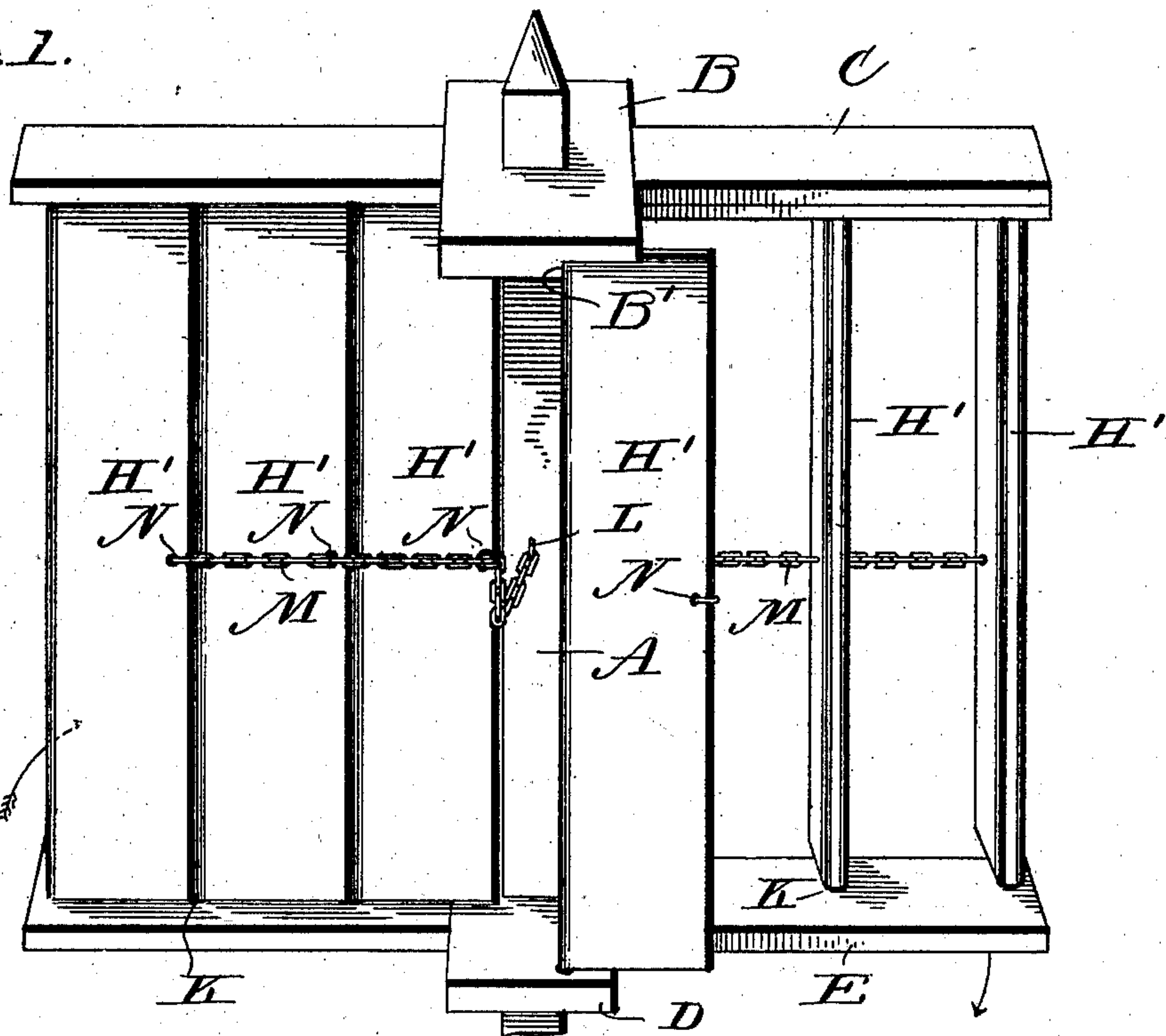
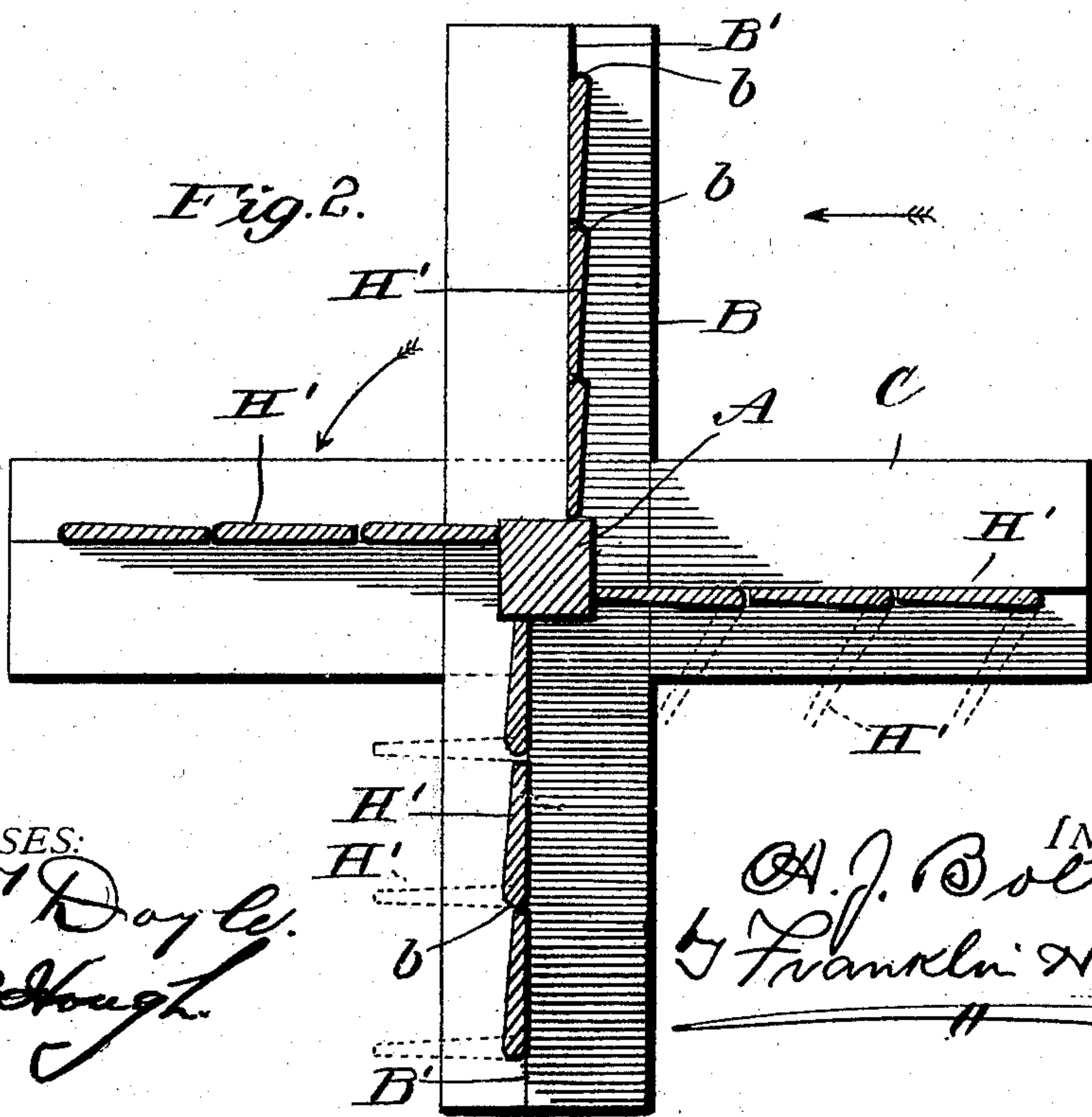


Fig. 2.



WITNESSES:

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ANDREW J. BOLTON, OF PLEASANT SITE, ALABAMA.

WIND-WHEEL.

SPECIFICATION forming part of Letters Patent No. 705,639, dated July 29, 1902.

Application filed May 14, 1902. Serial No. 107,314. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. BOLTON, a citizen of the United States, residing at Pleasant Site, in the county of Franklin and State of Alabama, have invented certain new and useful Improvements in Wind-Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in windmills, and especially to a feathering-wheel having series of blades which are presented with their broad faces toward the wind, and when traveling against the wind said blades are adapted to feather, means being provided to limit the outer throw of the blades and for causing the same to move together.

The invention consists, further, in various details of construction and combinations of parts, as will be hereinafter more fully described and then specifically defined in the appended claim.

The invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1 is a perspective view of the wind-wheel. Fig. 2 is a plan view of one of the end pieces of the frame carrying the blades, showing the shoulders which hold the blades in positions at right angles to the wind.

Reference now being had to the details of the drawings by letter, A designates a shaft, which may be connected by any suitable gearing (not shown) to machinery to be driven, and near the upper end of said shaft are fastened the cross-pieces B, C, D, and E, forming, respectively, the top and bottom bearing portions for the movable blades, said cross-piece B having on its under surface a shoulder B' and a contracted portion intermediate the shoulder and adjacent edge of the strip, which is apertured, as at b, to receive the bearing-pins H of the blades H'. It will

be observed that each strip B has two shouldered portions arranged on opposite sides of the central shaft and in reverse order. The strip C is made similar to the strip B with the shoulder described, and the lower strips D and E are formed with the shouldered portions and have apertures K, in which the lower pivotal ends of the blades are journaled. Corresponding edges of the blades H' are apertured, as at N, and a chain M is connected to each of said blades by being attached to a connection in each aperture, and the inner end of each chain is fastened to the shaft by means of a pin L or other fastening device. These chains are provided for the purpose of limiting the outer throw of the blades, and the inner throw of the blades is limited by means of the ends of each blade coming in contact with the shoulder on one of the strips B or C when the broad faces of the blades are presented at right angles to the wind.

From the foregoing it will be observed that a wind-wheel constructed in accordance with my invention will be simple and durable, and the outer throw of the blades will be limited by means of the chain connections with the edges thereof, and the inner throw of the blades will be held securely against the shoulders at such times as greatest strain is brought to bear upon the blades.

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

A wind-wheel comprising a shaft, cross-pieces with shoulders arranged in reverse order on the opposite ends of said cross-pieces, blades having integral pivotal pins along their inner marginal edge journaled in apertures adjacent to said shoulders, and a chain anchored at its inner end to said shaft and having connection with the swinging edges of said blades to limit their outer throw, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREW J. BOLTON.

Witnesses:

ARTHUR P. PETSU,
CHAS. McRAE.