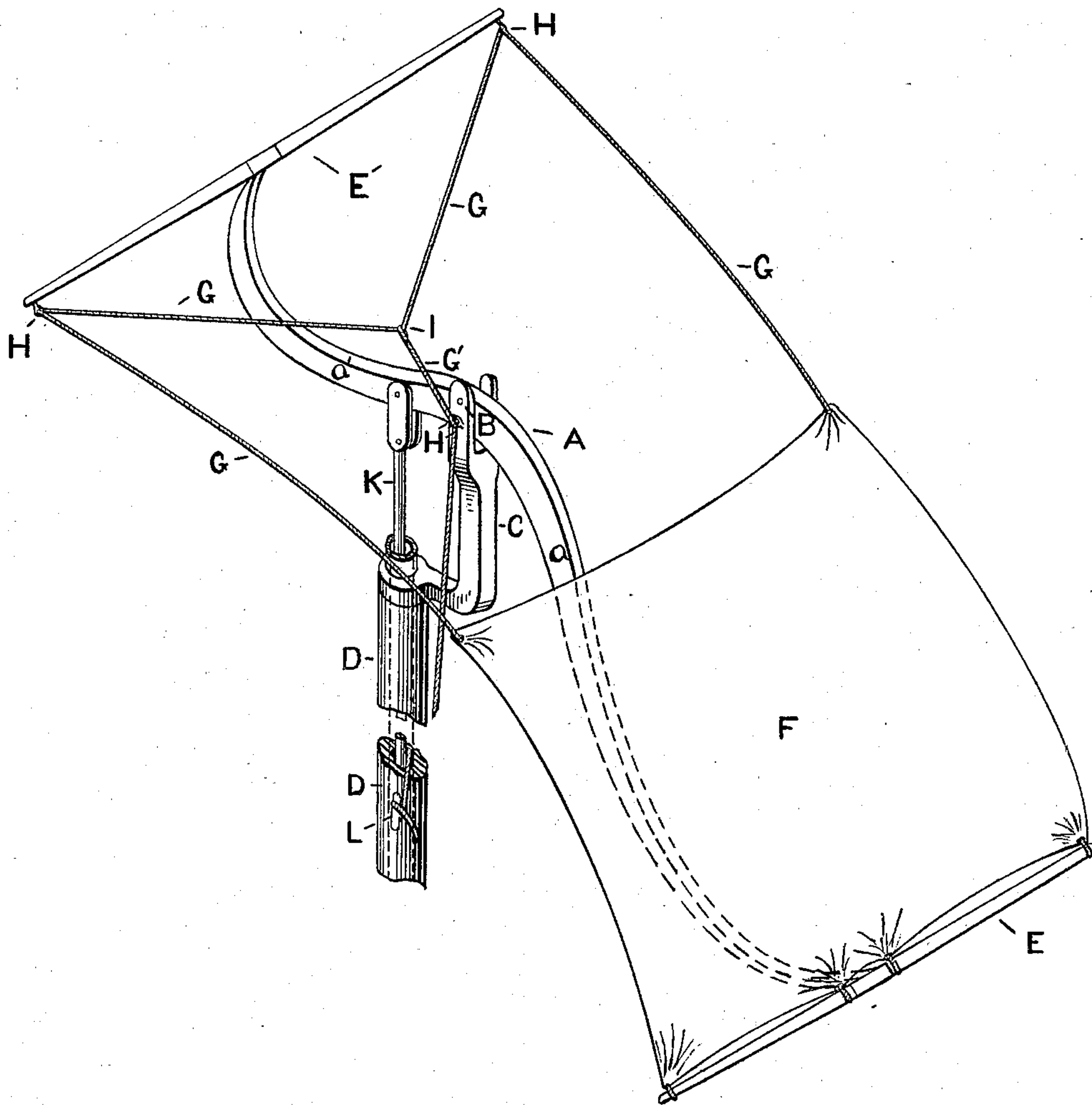


(No Model.)

E. E. MILLIKEN.
WINDMILL.

No. 535,504.

Patented Mar. 12, 1895.



WITNESSES:

Maudie Clayton.
Chas H. Douse

INVENTOR

Elmer E. Wilkins
BY *J. R. Mason*
ATTORNEY.

ATTORNEY.

UNITED STATES PATENT OFFICE.

ELMER E. MILLIKEN, OF BRIDGEWATER, MAINE.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 535,504, dated March 12, 1895.

Application filed April 2, 1894. Serial No. 506,053. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. MILLIKEN, a citizen of the United States, residing at Bridgewater, (Center,) in the county of Aroostook and State of Maine, have invented certain new and useful Improvements in Automatic Regulators for Windmills; and I do hereby 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.

My invention consists of an improved wind mill and is fully illustrated in the accompanying drawing which shows an isometric view of the whole device. Its object is to provide a cheap and simple means of utilizing the force of the wind.

In construction I provide a beam A having a long arm a and a short arm a' and oscillating perpendicularly upon a fixed shaft B having bearings in a slotted standard C formed to revolve upon a fixed support D, that shown in the drawing being a pump cylinder. To each end of the beam A are rigidly attached at right angles the yards E E' and to the yard E is bent a sail F, preferably rectangular, of less length than the arm a . The end of the sail opposite that bent to the yard E is controlled by sheets G G attached to its corners running through eye-bolts H H in the yard E' and preferably meeting at I and continuing in one sheet G' through an eye bolt H' on the standard C after which it may be made fast to a cleat L upon the support D or other convenient point of attachment.

In operation the sheets G G being slightly slackened and the sail slightly depressed from the horizontal position the sail is caught by the wind and the revolving standard C turns upon its support until the sail is presented at right angles to the wind and receives its full force. The wind then acting upon the under side of sail raises the arm a of the beam A

and lowers the arm a' . As the arm a passes the horizontal and rises above it the sail jibes and receives the wind upon its upper side when the action of the beam is reversed, the arm a is lowered and the arm a' raised, and so on continuously.

The power of the device is obtained by means of a pitman attached to the short arm a' of the beam A and operating a crank shaft or as shown in the drawing by a piston rod K operating the pump piston or by other ordinary means for the transmission of power.

The arm a' of the beam and its pitman or piston rod are preferably made approximately to balance the weight of the longer arm a and the sail carried by it.

The operation of the device is stopped by hauling the sheets taut and preventing the jibing of the sail.

A triangular sail may be used if desired in place of the rectangular sail shown and in such case the yard E' may be dispensed with and the sail controlled by a single sheet running through an eye bolt in the arm a' or standard C.

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

In a wind mill the combination of a beam oscillating perpendicularly upon a standard revolving horizontally upon a fixed support, said beam carrying at each end a yard at right angles to itself; a sail bent to the yard upon the long arm of said beam; sheets attached to the unsecured end of said sail and running through eyebolts in the yard upon the short arm of said beam; and a cleat upon said fixed support or other point of attachment.

ELMER E. MILLIKEN.

Witnesses:

S. JOSEPHINE PEABODY,
DON A. H. POWERS.