

H. CROFT, Sr., & H. CROFT, Jr.
Wind-Wheel.

No. 224,817.

Patented Feb. 24, 1880.

Fig. 1.

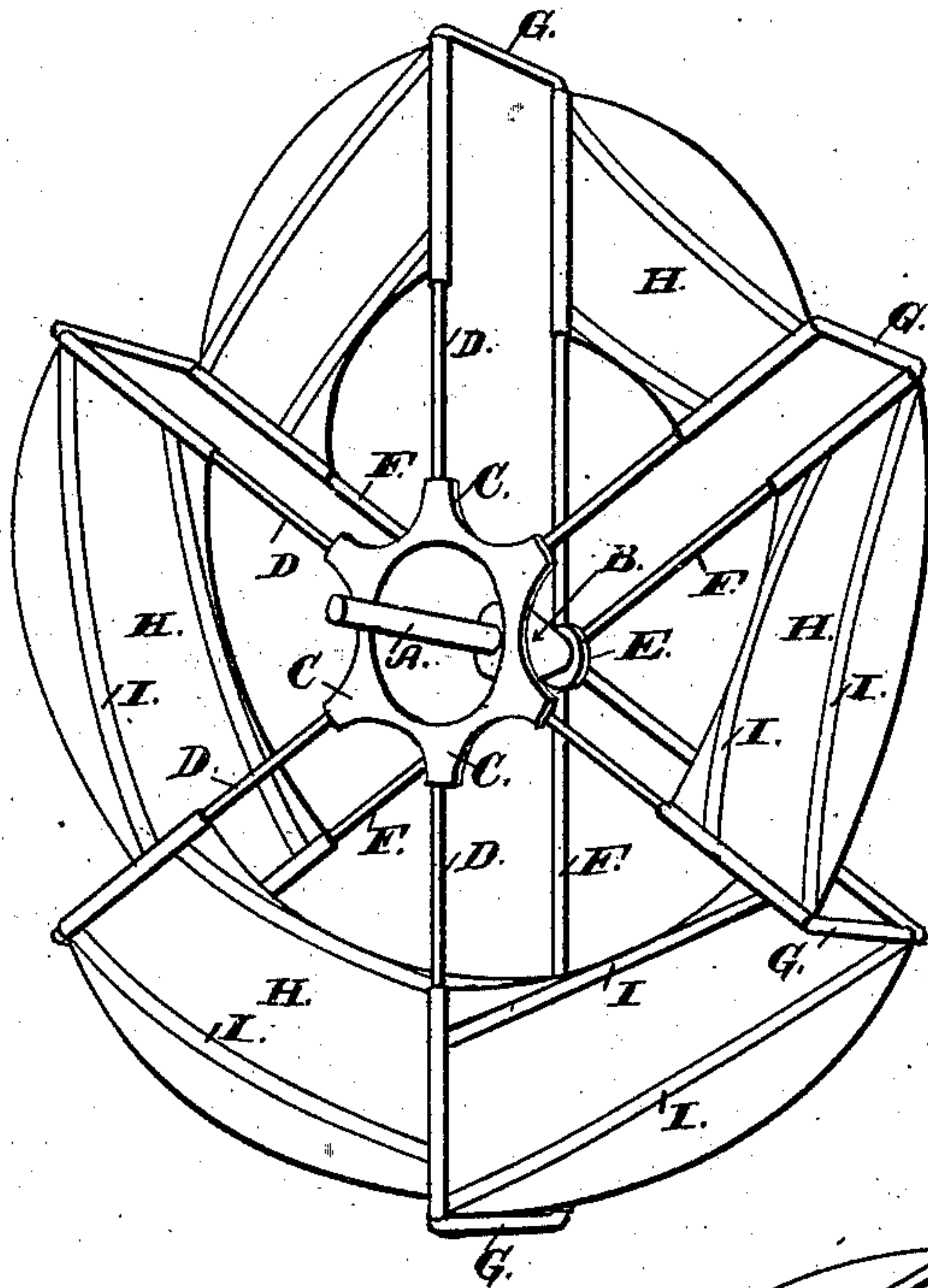
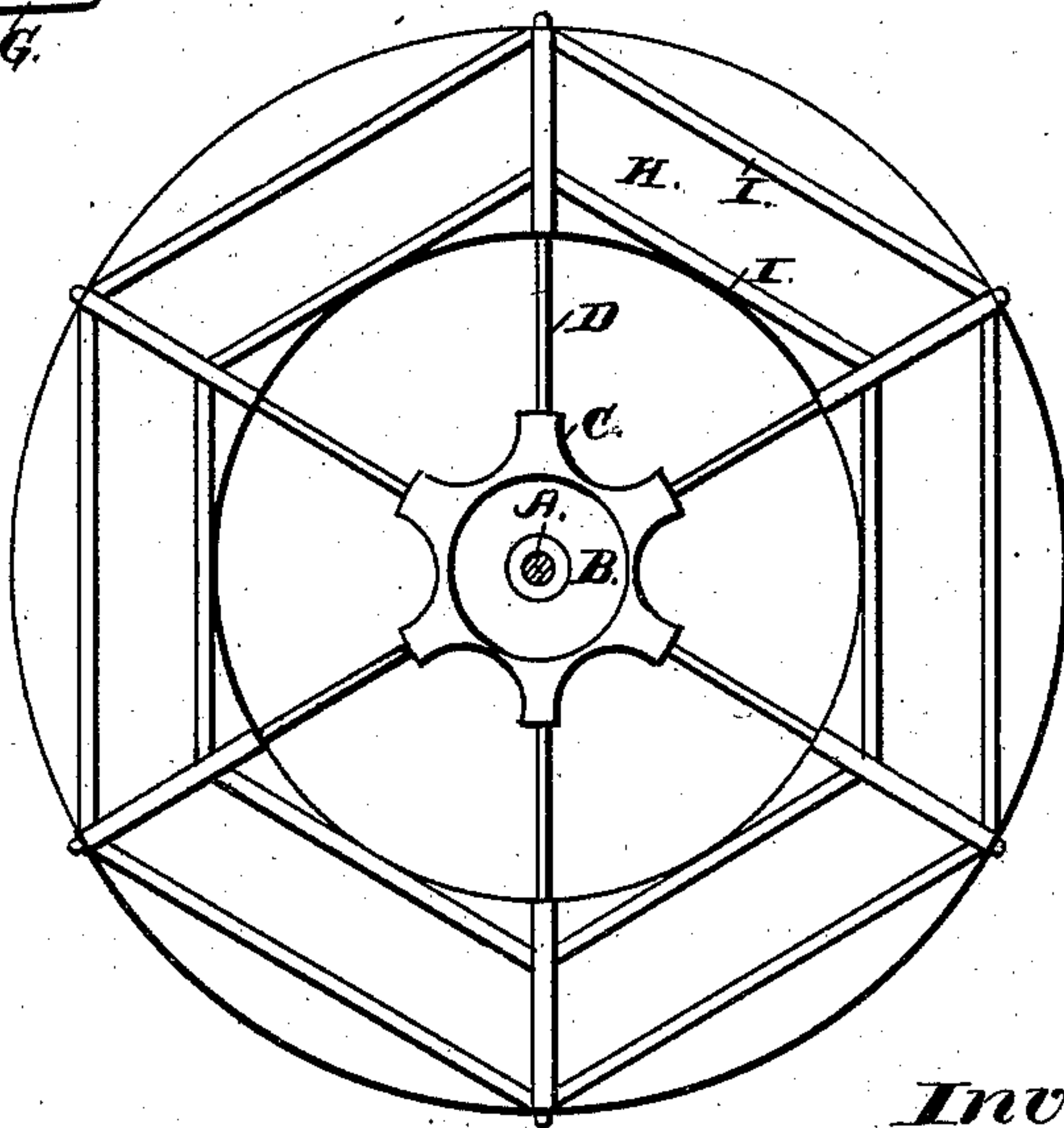


Fig. 2.



Witnesses;
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by Beck & Ritchie
their Attys;

UNITED STATES PATENT OFFICE.

HENRY CROFT, SR., AND HENRY CROFT, JR., OF SPRINGFIELD, OHIO.

WIND-WHEEL.

SPECIFICATION forming part of Letters Patent No. 224,817, dated February 24, 1880.

Application filed December 1, 1879.

To all whom it may concern:

Be it known that we, HENRY CROFT, Sr., and HENRY CROFT, Jr., of Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Wind-Wheels; and we do hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to an improvement in wind-wheels; and its object is to make the wheel lighter, stronger, and more powerful than ordinary.

The novelty consists in securing to the hub two sets of parallel, or nearly parallel, arms, each pair being connected by a brace at its outer end and supporting curved sheet-metal wings or buckets attached to the arms, all as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1 is a perspective view of our improved wind-wheel. Fig. 2 is a rear elevation of the same.

Upon the spindle A is fitted a hollow conical hub, B, with its apex outward. The rear edge of this hub has, in the present instance, six radial arms, C, to which are fastened, in any suitable manner, the radial supporting-arms D. At the front or apex of the hub is a flanged cap, E, to which are fastened, in any proper way, the radial arms F, which correspond in number with and are parallel to the arms D. The lengths of these arms D and F are made to suit the desired diameter of the wheel. In the present instance we have represented each of the pairs of arms D and F as of one piece, united at their outer ends by the right-angular integral brace-piece G, though, if desired, these braces may be separate pieces, attached to the arms in any suitable manner.

This construction so far furnishes a framework light, though strong, whereon to secure the blades or fans H of the wheel. These blades are made of sheet metal, and are curved segments, as shown. The ends of each one are attached to and extend from one of the arms, F, to the next adjacent arm, D, as represented. To stiffen them we apply strips of metal, I, which are riveted to the rear sides, as seen in Fig. 2.

This construction produces a wind-wheel which is not only very powerful but is light and very strong; and,

Having thus fully described our invention, we claim—

1. The wind-wheel consisting of the sheet-metal sails of the form shown and described, each connected with and held at a distance from the central support by means of rigid and connected pairs of radial arms, as set forth.

2. In a wind-wheel, the supporting-frame for the sails, consisting of substantially parallel sets of radial arms extending from each end of a hub or central support and united at their outer ends by connecting-braces, as set forth.

3. In a wind-wheel, the sheet-metal sails of the form shown, having stiffening ribs or braces I on their rear surfaces, as set forth.

Witness our hands this 24th day of October, A. D. 1879.

HENRY CROFT, SR.
HENRY CROFT, JR.

Witnesses:

W. A. SCOTT,
PERCY NORTON.