

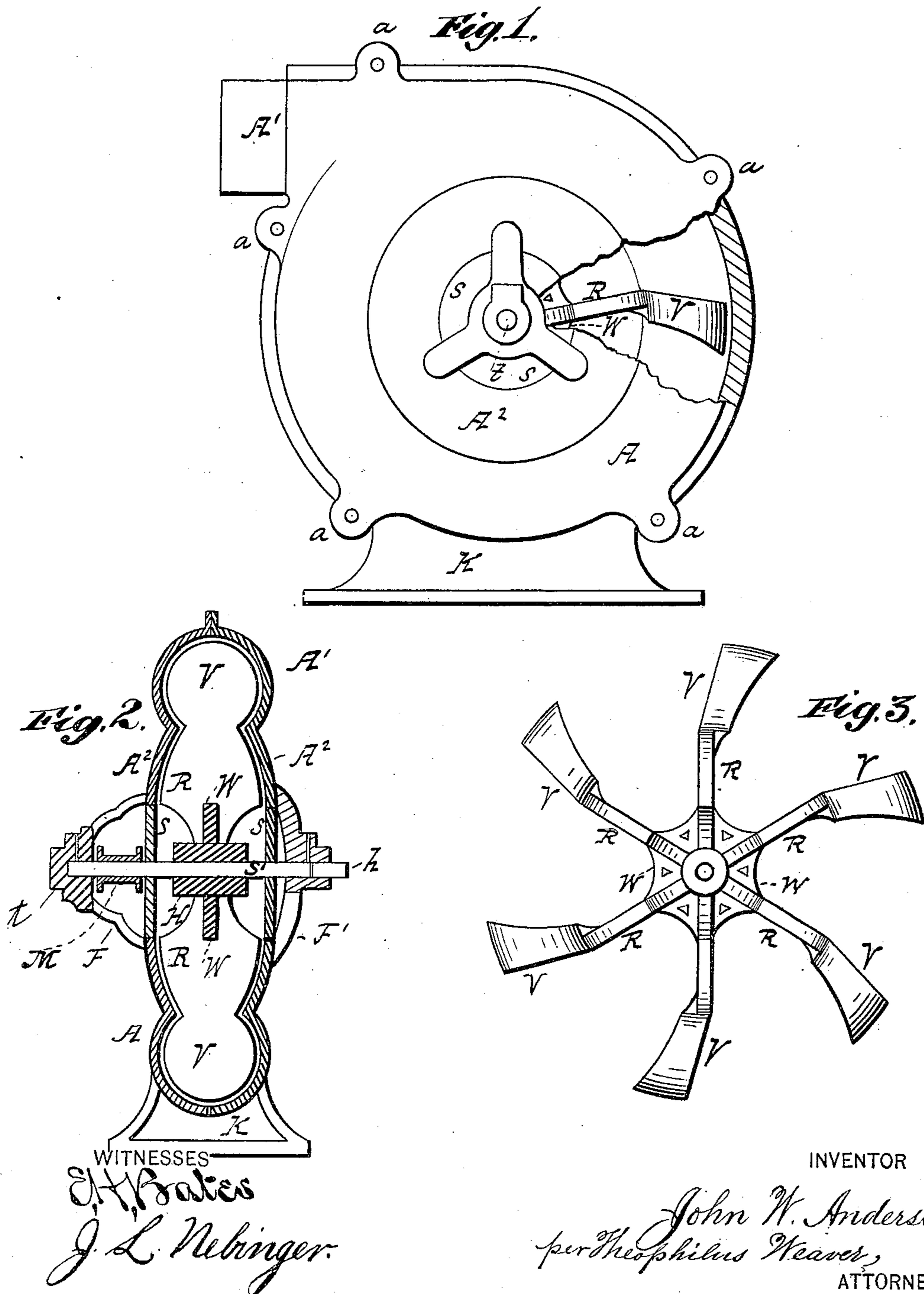
(Model.)

J. W. ANDERSON.

FAN BLOWER.

No. 248,978.

Patented Nov. 1, 1881.



UNITED STATES PATENT OFFICE.

JOHN W. ANDERSON, OF LANCASTER, PENNSYLVANIA.

FAN-BLOWER.

SPECIFICATION forming part of Letters Patent No. 243,978, dated November 1, 1881.

Application filed April 20, 1880. (Model.)

To all whom it may concern:

Be it known that I, JOHN W. ANDERSON, of Lancaster, county of Lancaster, and State of Pennsylvania, have invented a new and useful Fan-Blower, of which the following is a specification.

My invention relates, principally, to the fan-wheel in blowers operated by lever and tackle belts by hand, and usually employed for smith-fires; and its novel features are, first, a fan-wheel with weighted wings, the sectional equivalents of a fly-wheel made with cross-sections corresponding with the radial cross-sections of the casing conformably inclosing the said wheel; second, connecting the wings of a ballasted fan-wheel with braces connecting its weighted wings.

I attain the objects of my invention—viz., a fan-wheel designed to sustain its momentum and to have uniform motion between the strokes of the lever of the operating mechanism—substantially as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my blower-casing, a part being broken away to show a wing of the inclosed fan-wheel. Fig. 2 is a cross-sectional view of my blower-casing and the fan-wheel. Fig. 3 is a perspective view of my fan-wheel.

Similar letters refer to similar parts throughout the several views.

The fan-casing is made in two nearly similar sections, having the cylindrical passage A at its periphery communicating with the outlet A', and having the central part, A², swelled, said sections being joined together at ears a and supported on the pedestal K. Brackets F F' on said sections support the ends of the fan-shaft S', which is regulated in place by the adjustable parts h t. The fan-wheel shown in Fig. 3 is the equivalent of a fly-wheel, it having its wings V weighted or heavy, they being sections of a cylindrical ring, transversely

filling the peripheral part of the casing. My said wheel has its blades R of corresponding size and form, to nearly fill the cross-section of the casing at A². Said blades R are webbed or connected together by a central disk, W, about the hub H.

M represents a fixed pulley on my wheel-shaft, it being designed to be run by tackle-belts directly by any suitable appliance for communicating rotary motion to the fan-wheel.

I make the air-inlets S of my fan-casing abundantly large, that my fan-wheel may act mainly at its wings, where they sweep the gradually-lessened cross-section of the swelled part A² thereof. The extremities of the wings V are made to slant or deflect rearward, for the purpose of taking the air after it has been swept into the part A of the casing and delivering it by crowding or forced centrifugal action.

I construct my fan-wheel with ballasted wings for two reasons: first, to avoid the necessity of having an additional fly-wheel to secure uniform motion between strokes of a hand actuating-lever or other mechanism; second, to secure a longer run of the wheel after the actuating appliance ceases to propel.

I claim as my invention—

The fan-wheel consisting of the webbed central part, H R W, and weighted wings V, the sectional equivalents of a fly-wheel centrally arranged in a casing, A A², whose cross-sections conform to said wings, and operating substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my invention I have hereunto set my hand and seal this 10th day of May, 1881.

JOHN W. ANDERSON. [L. S.]

Witnesses:

THEOPHILUS WEAVER,
PETER STUCKER.