(No Model.)

C. J. KERR.

WEATHER VANE INDICATOR.

No. 477,551. Patented June 21, 1892.

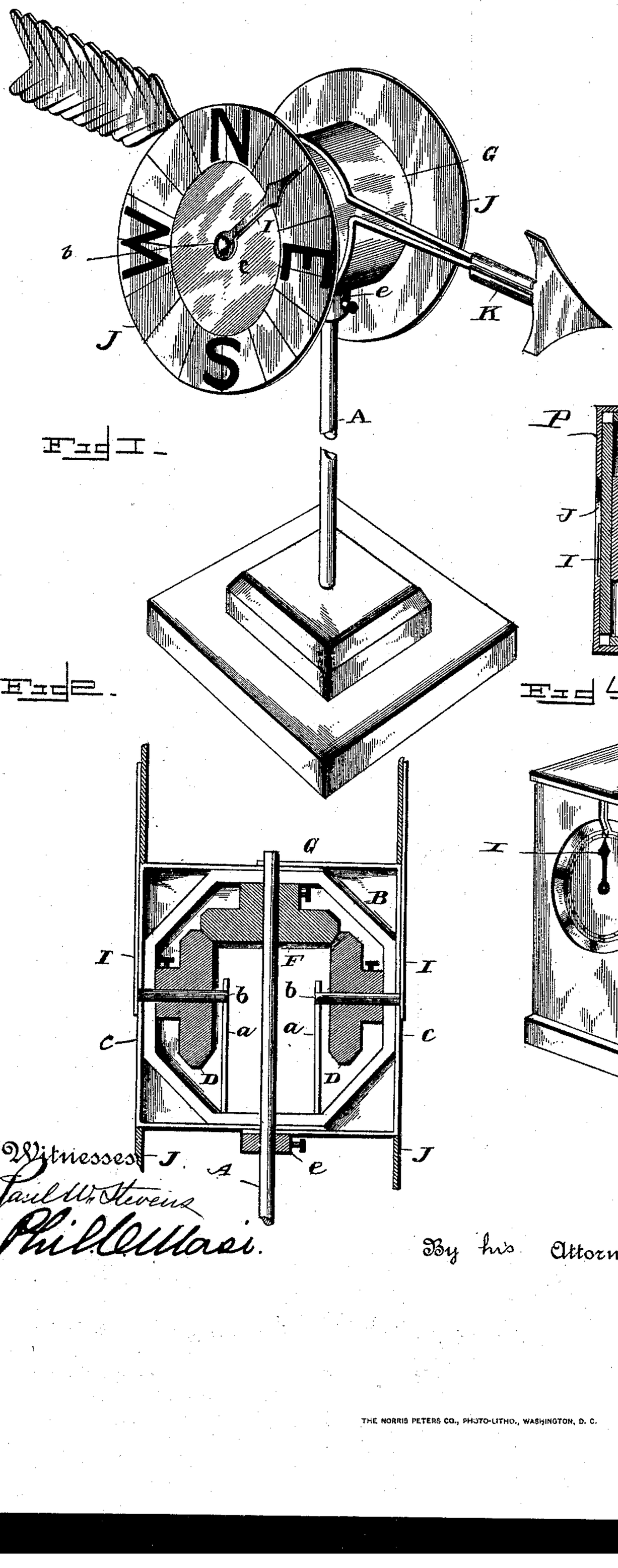

Fig 1.

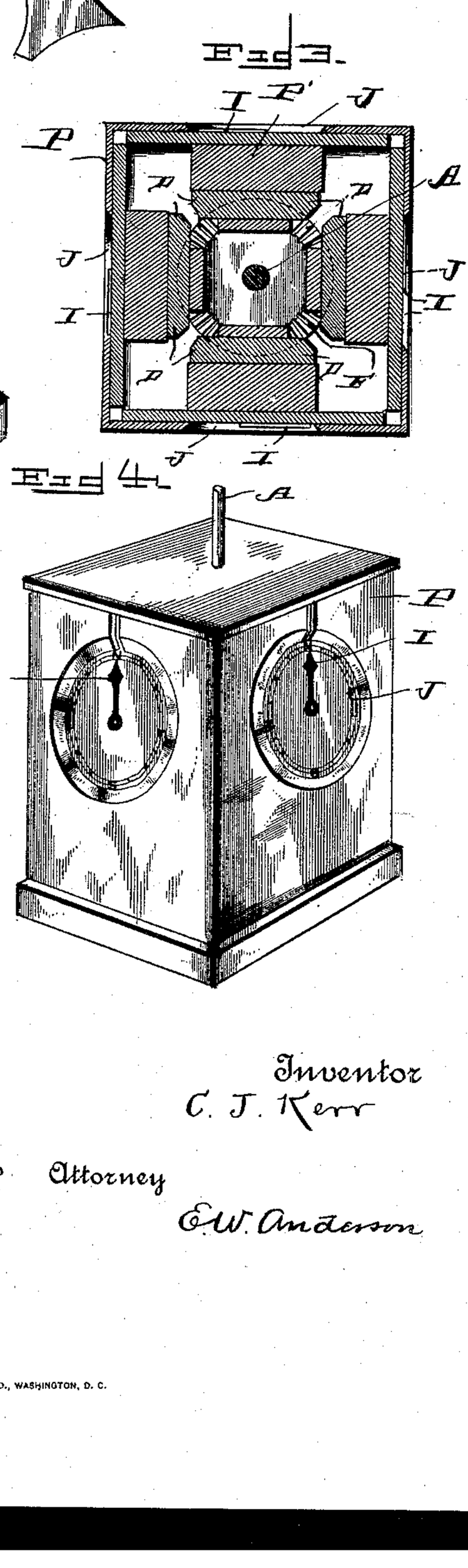

Fig 3.

Fig 2.

Fig 4.

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UNITED STATES PATENT OFFICE.

CHARLES J. KERR, OF REYNOLDSVILLE, PENNSYLVANIA.

WEATHER-VANE INDICATOR.

SPECIFICATION forming part of Letters Patent No. 477,551, dated June 21, 1892.

Application filed December 28, 1891. Serial No. 416,318. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. KERR, a citizen of the United States, and a resident of Reynoldsville, in the county of Jefferson and State of Pennsylvania, have invented certain new and useful Improvements in Weather-Vane Indicators; 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view of the vane-indicator. Fig. 2 is a vertical section of the casing. Fig. 3 is a horizontal section of a modified form of casing, and Fig. 4 is a perspective view of the same.

This invention has relation to weather-vane indicators; and it consists in the novel construction and combination of parts, as hereinafter specified, and pointed out in the claims.

In the accompanying drawings, the letter A designates an upright rod or stem secured firmly at its lower portion to the top of a tower, building, or any other structure or support where desired.

B designates a frame or yoke, shown as of octagonal form, carried loosely and revoluble on the rod or stem A at its upper portion. In this frame or yoke are the arms or uprights *a*, one on either side of the shaft, and having bearings therein for the inner ends of short spindles or shafts *b b*, which also have bearings in the side portions *c* of the frame, through which they project. Each shaft or spindle carries a bevel-wheel D. Rigidly secured on the rod or shaft inside this frame is a bevel-toothed gear-wheel F, which is in mesh with both wheels D on the shafts *b b*.

G is a cylindrical or other suitably shaped casing, which incloses the frame B and the gear, and is also revoluble on the stem or rod A, and supported by a collar *e* thereon. This casing G is formed in two sections fitting together, and through the end portion of each section projects the outer end of one of the shafts *b b*, and on these projecting ends is secured the hands or indicators I.

J J are dials placed on the ends of the cylinder-sections and bearing representations denoting different points of the compass.

K is the vane, which may consist of an arrow, as shown, or it may be of any other suitable form, style, or figure. This vane is rigidly secured to the cylinder-casing, as shown, in a position at right angles to both its horizontal and vertical axis. In setting up the indicator the point of the vane is placed due north, with the indicator-hands at N on the dials. Any variation of the wind is denoted on the dial by its action on the vane, causing the cylinder and frame to revolve on the rod A, the engagement of the bevel gear-wheels D with the stationary gear on said rod causing the shafts *b b*, carrying the hands, to revolve. It will be seen that by putting in additional bevel-gears D, having their shafts at right angles to the shafts *b b*, and a corresponding change in the supports, frame, and cylinder, that three or four dials may be employed instead of two; or, if desired, one of the wheels D and its indicator may be omitted, using but a single dial.

In Figs. 3 and 4 I have shown a modified form of the invention especially designed for use without a tower. In this construction a rectangular frame P is employed, having a dial J on each of its four sides. Inside this casing is a frame P′, which forms bearings for four of the indicator-shafts, each of which at its outer end projects through the casing and carries a hand or pointer I, which traverses its respective dial. On the inner end of each shaft is a bevel gear-wheel D, which is driven by a similar wheel F on the rod or shaft A, which in this construction is designed to revolve under the action of a vane. The casing, it is apparent, incloses all the gear. By this arrangement the direction of the wind may be observed from any side.

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

1. In a weather-vane indicator, the combination, with a vertical shaft carrying a bevel-toothed gear-wheel fast thereto and a plurality of short horizontal shafts at right angles to said vertical shaft, and carrying each a bevel-toothed wheel meshing with the wheel of said vertical shaft, of the inclosing box or

casing, in which said gear is located, a plurality of dials on the faces of said box or casing, an interior frame forming bearings for said short shafts, and a hand or pointer on the projecting outer end of each short shaft arranged to traverse one of said dials, substantially as specified.

2. The combination, with the vertical stationary shaft and the bevel-toothed gear-wheel fast thereto, of the casing inclosing said wheel and revoluble on said shaft, a dial on each end of said casing, short shafts at right angles to said stationary shaft within said casing, a bevel gear-wheel on the inner end of each short shaft, a hand or pointer on the outer end of each shaft, and a vane fast to said casing and moving therewith, substantially as specified.

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

CHARLES J. KERR.

Witnesses:

O. F. SMITH,

ALBERT REYNOLDS.