

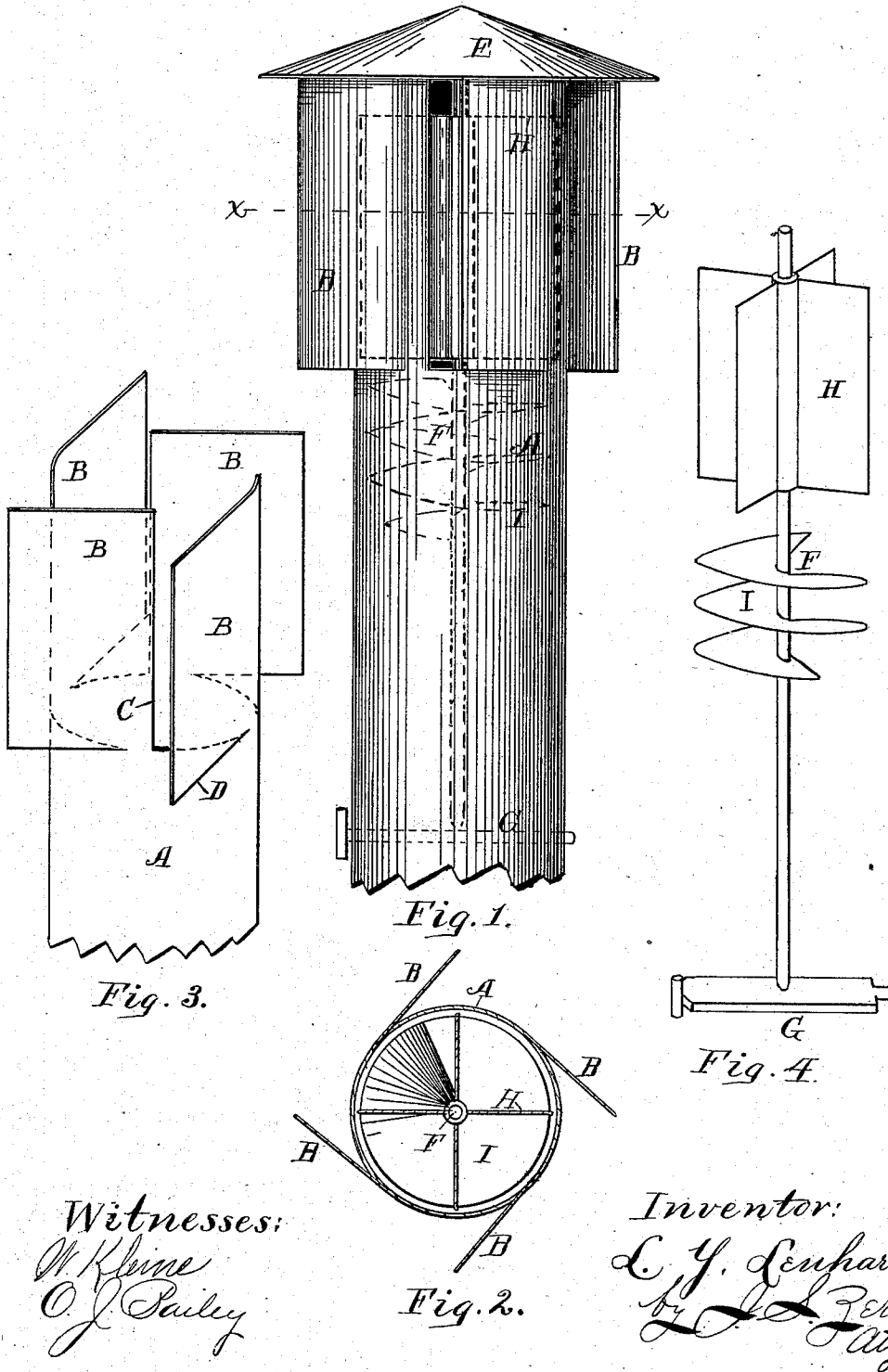
(No Model.)

L. Y. LENHART.

DRAFT REGULATOR FOR PIPES, FLUES, AND VENTILATORS.

No. 293,043.

Patented Feb. 5, 1884.



UNITED STATES PATENT OFFICE.

LEWIS YOUNG LENHART, OF RED WING, MINNESOTA.

DRAFT-REGULATOR FOR PIPES, FLUES, AND VENTILATORS.

SPECIFICATION forming part of Letters Patent No. 293,043, dated February 5, 1884.

Application filed December 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, L. Y. LENHART, of Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and useful Improvement in Draft-Regulators for Pipes, Flues, and Ventilators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front elevation of a pipe equipped with my improved draft-regulator for pipes. Fig. 2 is a horizontal sectional view of the upper part of the pipe through line *xx* of Fig. 1. Fig. 3 is a perspective elevation of the pipe, showing how the wings are formed; and Fig. 4 is a perspective elevation of the fan and screw-conveyer.

The object of my invention is to provide a draft-regulator for pipes, and also so adapted as to increase the draft and extinguish sparks, as will be hereinafter more fully described, reference being had to the accompanying drawings.

In the drawings, A represents an ordinary joint of stove-pipe. At the upper end four opposite slits, C, are cut, extending downward a suitable distance. At their base transverse slits D are cut across, so that the leaves B have only about one-third of their base remaining. The leaves *b* are then bent outwardly, as shown in Figs. 2 and 3, thus forming four openings for the entrance of air. The pipe thus constructed is covered by means of an ordinary top or cap, E. Within the pipe is the vertical shaft F, socketed centrally to a cross-piece, G, below, the upper end of the shaft being journaled centrally in the dome of the pipe. The upper end of this shaft is provided with blades or wings H, which are in such a position that the air or blast as it passes through the openings formed by the wings B of the pipe will strike them and cause them to turn in one direction only. Below the blades H a vane, I, is secured to the vertical shaft F.

The operation is as follows: The product of combustion and heated air passes up through the pipe A and acts against the vane I, causing it to revolve when the force of the wind is not sufficient to accomplish this. When, however, the wind blows, it enters the apertures at the wings B, striking the blades H, causing the shaft and vane to revolve rapidly. The vane, therefore, acts as a conveyer and prevents the draft from going down the flue.

In practice, the blades H are somewhat shorter than the wings B, so as to prevent a space between the blades and down the pipe, thereby permitting the air to pass out with greater facility.

I am aware it is not new to provide draft-regulators with vanes and blades, and also others having the outer casing, shell, or cylinder constructed with wings, and I do not claim this, broadly. My invention has special reference to the arrangement and combination of the cylinder wings, vane, and blades, whereby it may be cheaply and easily constructed.

Having described my invention, what I claim is—

As a new article of manufacture, the draft-regulator consisting of a pipe, A, the tangential wings B, formed by cutting the end of said pipe vertically and horizontally, the conical cap E, secured directly to the top edges of said wings, the central rotary shaft, F, the flat radial blades H, arranged on this shaft in the plane of the openings between the wings B, the spiral vane I, and the cross-step G, all constructed and adapted to operate as shown and described.

LEWIS YOUNG LENHART.

Witnesses:

O. M. HALL,
W. S. HUBBARD.