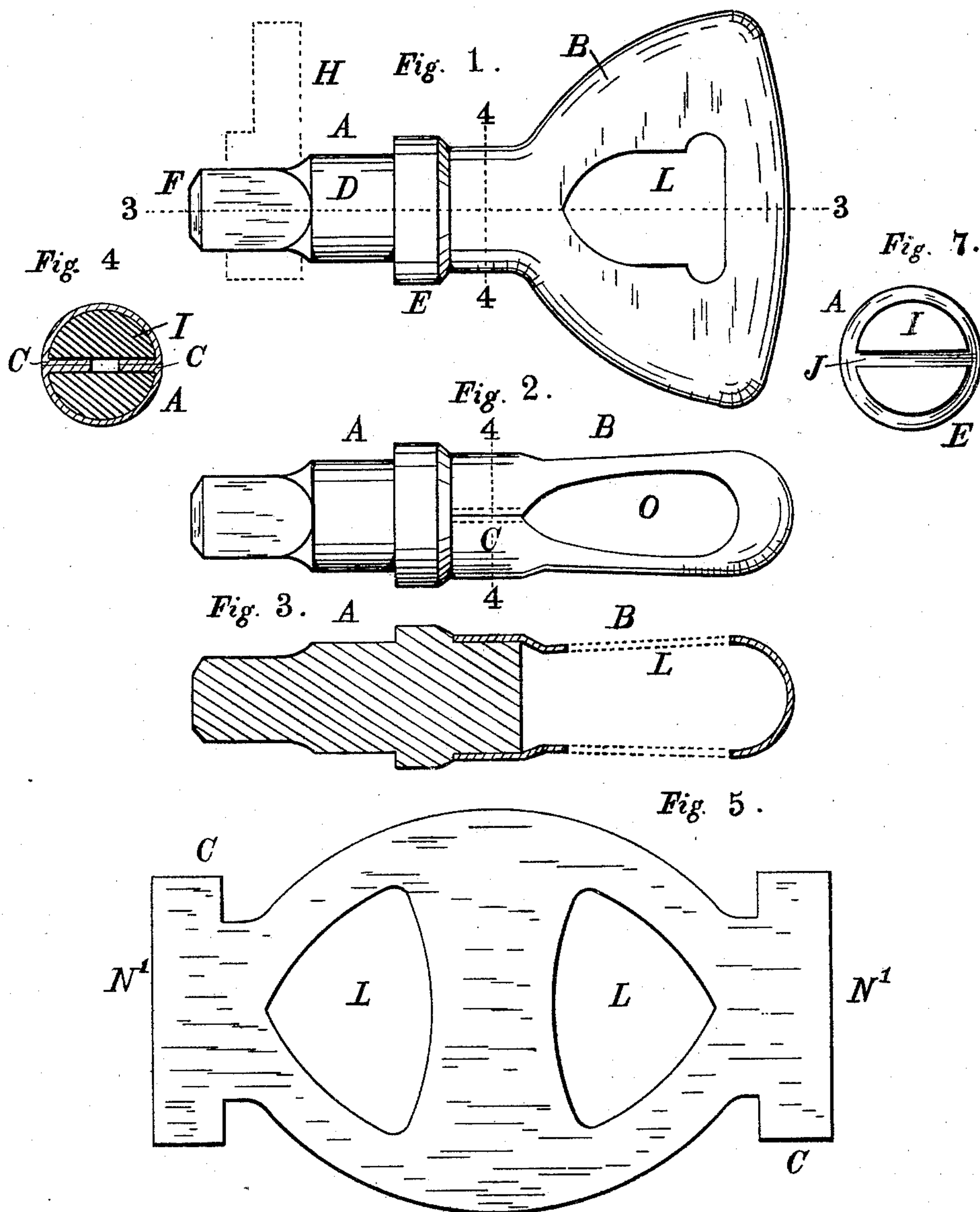


(No Model.)

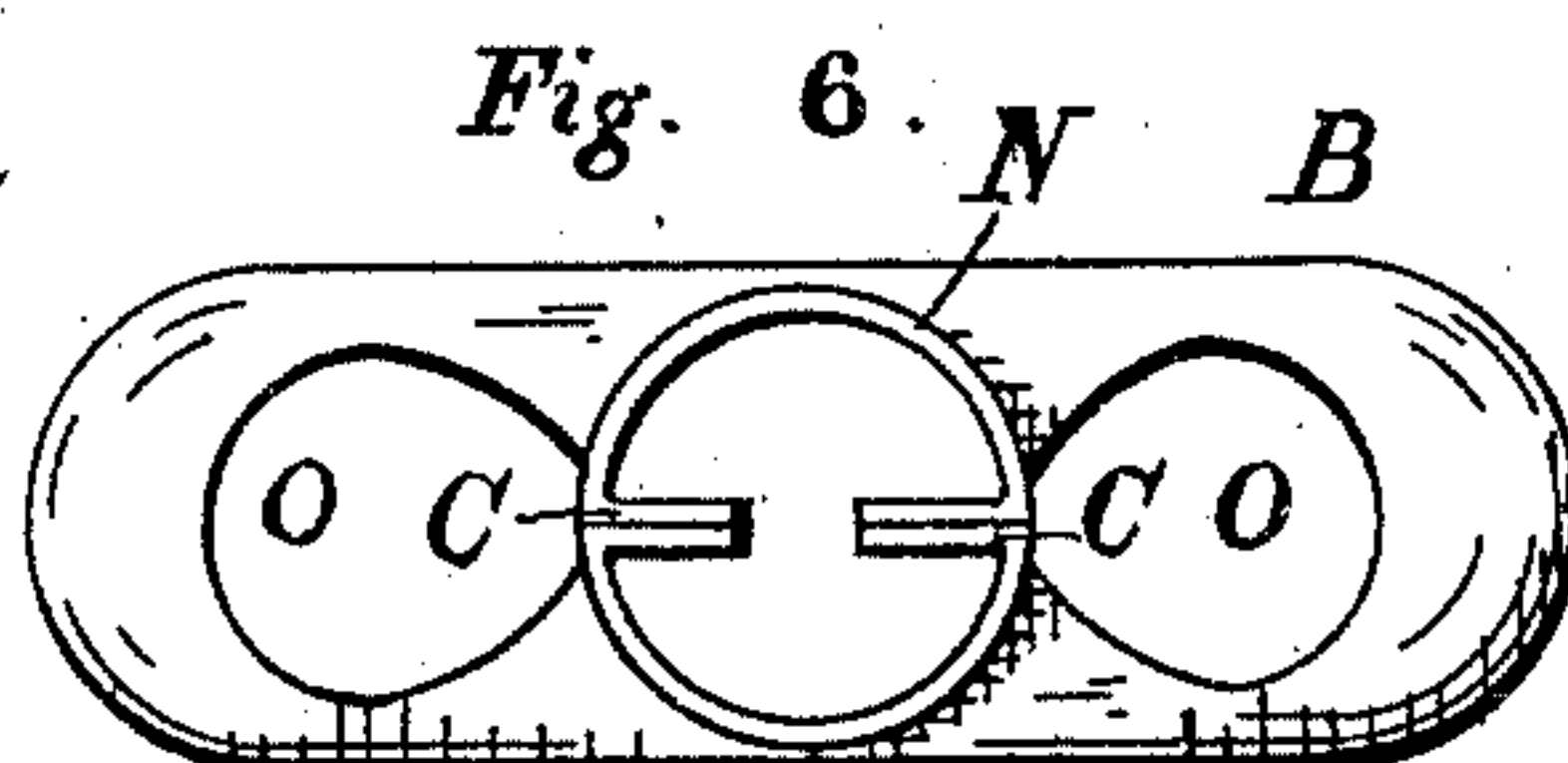
J. W. HEAPHY, Jr.  
STOVE DOOR KNOB.

No. 474,471.

Patented May 10, 1892.



Witnesses:  
*R. F. Osgood.*  
*C. G. Coanell.*



Inventor:  
*John W. Heaphy, Jr.*  
By *Geo. B. Selden.*  
*Atty.*



# UNITED STATES PATENT OFFICE.

JOHN W. HEAPHY, JR., OF ROCHESTER, NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO FREDERICK G. KIMMAN, OF SAME PLACE.

## STOVE-DOOR KNOB.

SPECIFICATION forming part of Letters Patent No. 474,471, dated May 10, 1892.

Application filed May 13, 1891. Serial No. 392,620. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. HEAPHY, Jr., a citizen of the United States, residing at Rochester, in the county of Monroe, in the State of New York, have invented an Improved Stove-Door Knob, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved construction of a ventilated stove-door knob which always remains cool, so that the door or damper to which it is applied can be opened without burning the fingers.

My invention is fully described and illustrated in the following specification and the accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, representing my improved stove-door knob, Figure 1 is a side elevation. Fig. 2 is a view taken at right angles with Fig. 1. Fig. 3 is a longitudinal section. Fig. 4 is a transverse section on the line 44, Figs. 1 and 2. Fig. 5 represents the sheet-metal blank. Fig. 6 is an end view of the same formed ready for attachment to the shank. Fig. 7 represents the end of the slotted shank.

In the manufacture of my improved ventilated stove-door knob I form the shank or stem A of malleable iron or other suitable metal of a shape adapted to the purpose, the shank being provided with a circular portion D, adapted to turn in a hole in the door, a collar E, which fits against the outside of the door, a squared portion F, to which the toe or button H is fastened, inside the door, and an outer circular end or projection I, provided with a transverse slot J. The perforated hand-piece is formed of sheet metal, a blank being cut of the form substantially such as is represented in Fig. 5 by any suitable machinery. The blank is provided with one or more projections C, Fig. 5, which, when the hand-piece is finally attached to the shank, enters the groove J and prevents the possibility of the hand-piece turning on the shank. The blank may be provided with openings of any preferred shape or form, as indicated at L. After having been struck out flat the

blank is bent on itself along its median line into the form substantially as represented in Figs. 2 and 3. This operation is performed by any suitable machinery, and either at the same time or at another operation the projecting flanges C are bent inward and the intermediate portions N' of the blank are bent to a semicircular form, adapted to fit on the end I of the shank, as indicated at N in the end view, Fig. 6. The hand-piece then having been shaped to the form represented in Fig. 6, is applied to the end of the shank, the flange or flanges C entering the slot J in the shank, and the article then finished under a suitable drop-press with semi-cylindrical dies, which set the curved plates N firmly on the end of the shank and effect a durable union between the shank and the hand-piece. The slot J in the shank may be either cast or milled, the former way being preferred as the cheaper. The action of the dies in the drop-presses may be caused to close up the slot on the flanges C. One of these flanges would be sufficient to prevent the hand-piece from turning on the shank, and two, one on each side, may be used; but I prefer to use four, as indicated in the drawings. As an additional precaution against the detachment of the hand-piece from the shank the surface of the latter may be provided with projections or depressions which engage with the inner surface of the plates N for the purpose mentioned. It will be perceived that the hand-piece is provided with the perforations O, which are formed by giving the edges of the blank such a shape that they do not meet when the blank is bent up to the proper form. These openings permit the free circulation of the air through the interior of the hand-piece, and when they are used it is not necessary to employ the openings L, which, as indicated in Figs. 1 and 5, may be given any desired ornamental shape.

My improved stove-door knob may be nickeled or otherwise finished in any preferred way.

I claim—

1. The combination, with the shank A, of the hollow sheet-metal hand-piece B, formed with air-circulation openings between its ad-

5 jacent edges and attached to the shank by compression thereon with a projection fitting a recess, whereby the turning of the hand-piece on the shank is prevented, substantially as described.

2. The combination, with the slotted shank A, of the perforated sheet-metal hand-piece B,

bent to suitable shape and having one or more flanges C engaging in the slot in the shank, substantially as described.

JOHN W. HEAPHY, JR.

Witnesses:

GEO. B. SELDEN,  
C. G. CRANNELL.