

J. W. CLOUGH.
Oven and Stove Pipe Drum.

No. 86,907.

Patented Feb. 16, 1869.

Fig. 1,

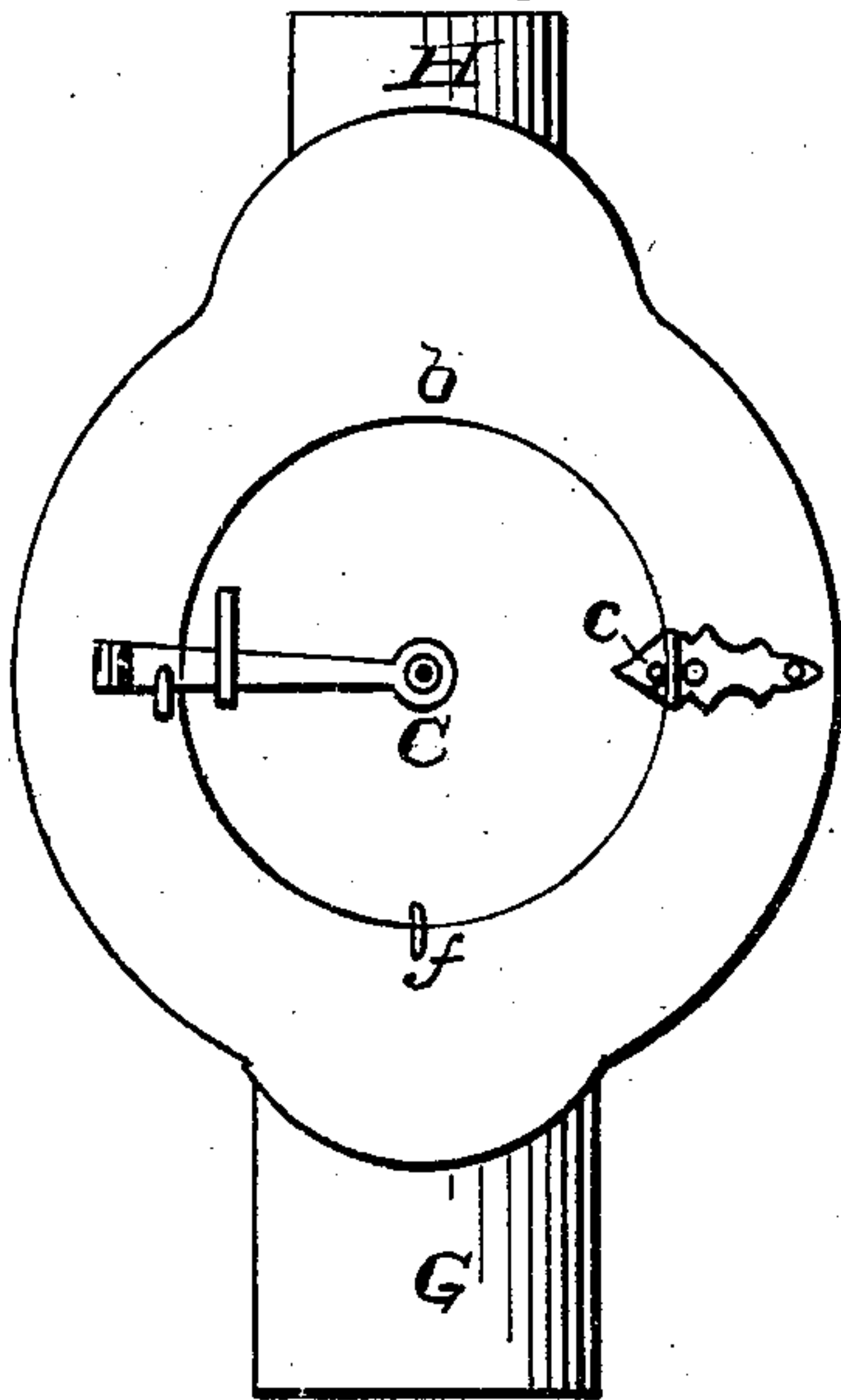


Fig. 2,

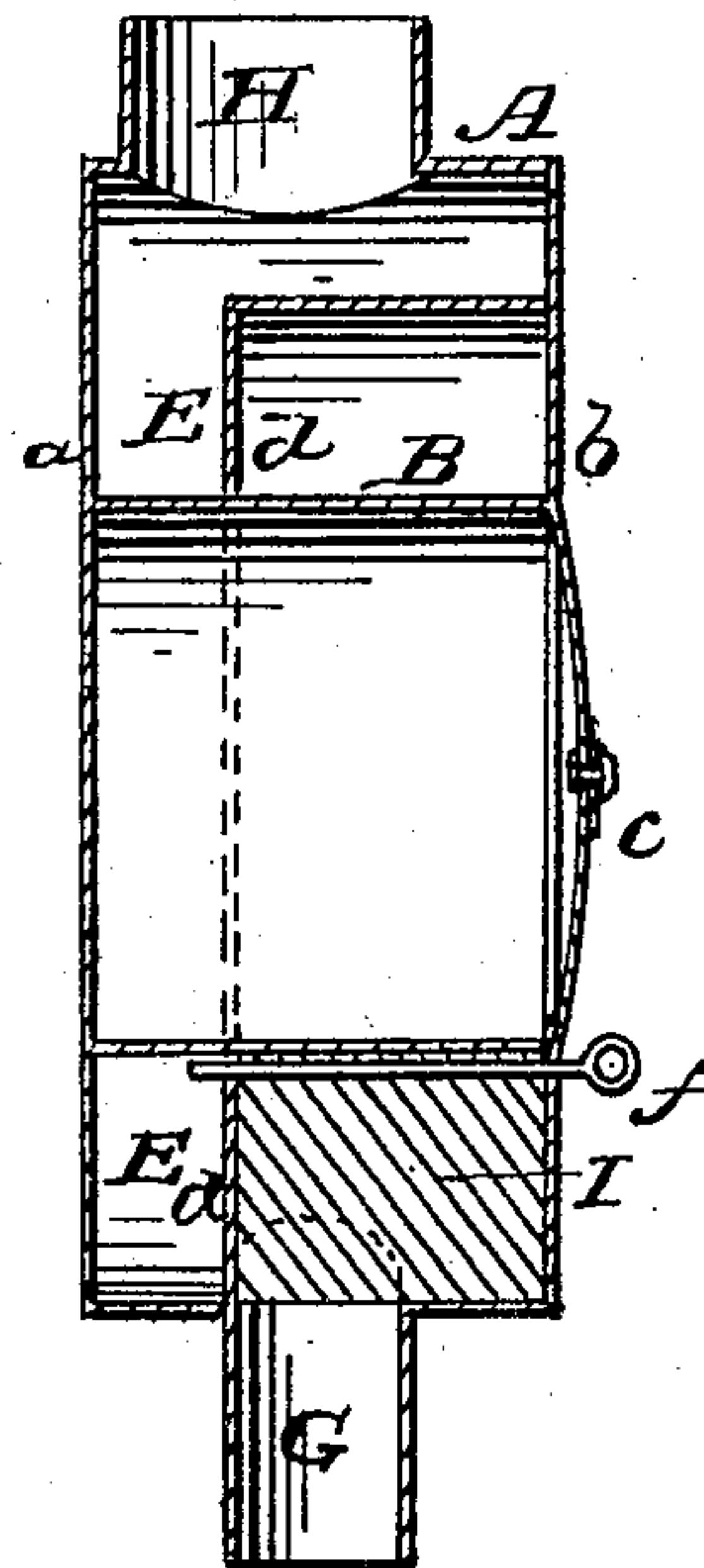


Fig. 3,

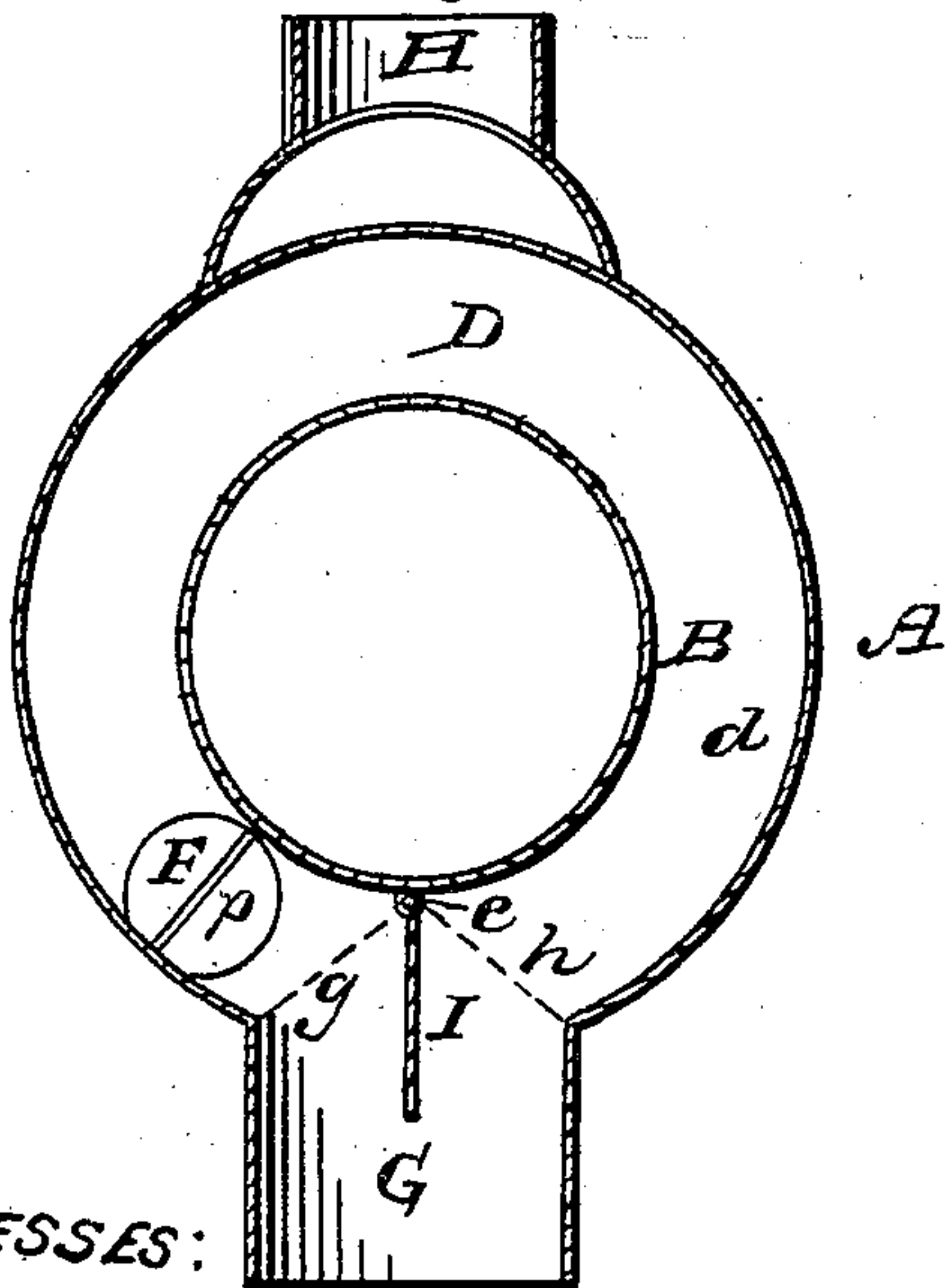
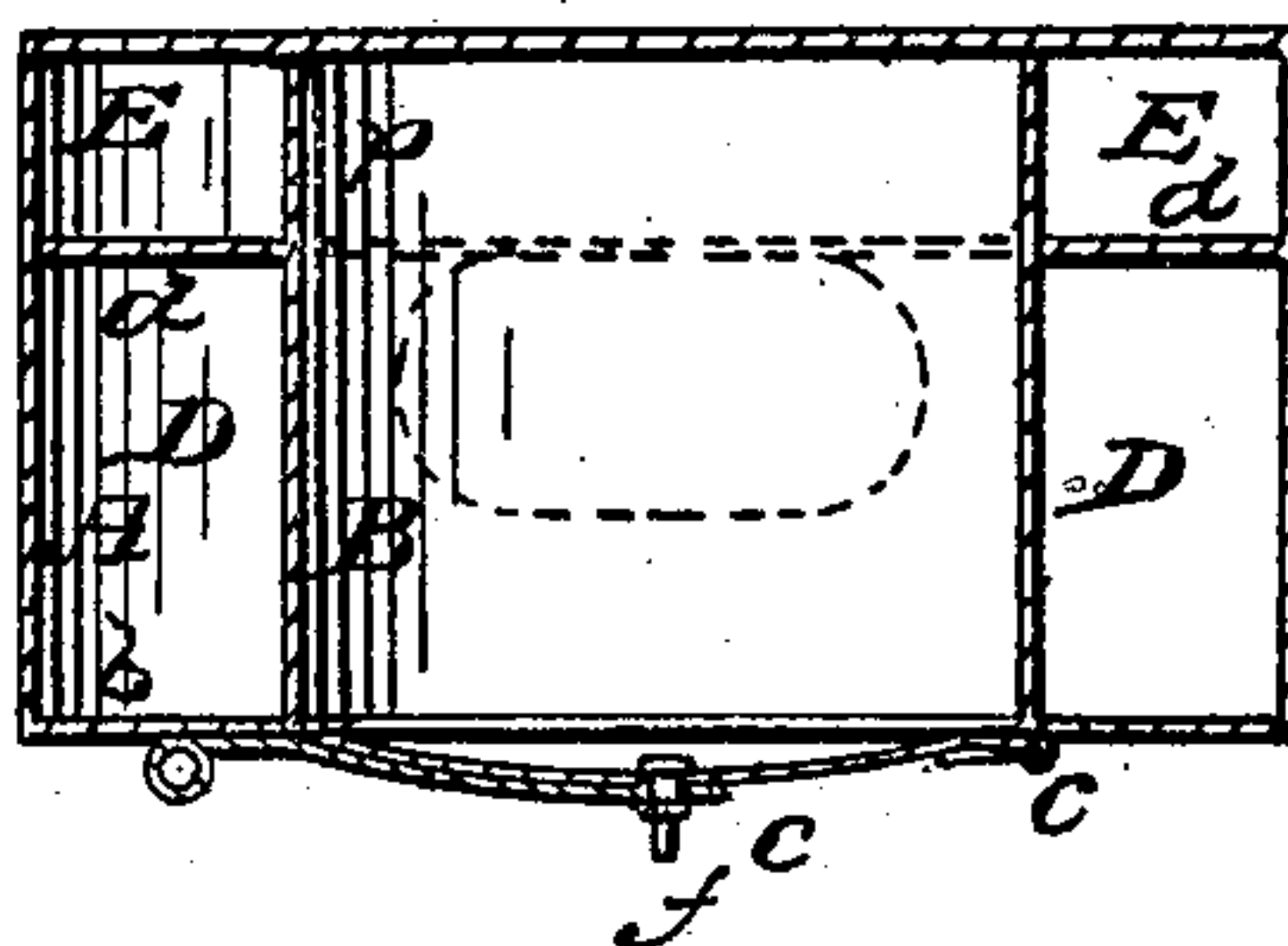


Fig. 4,



WITNESSES:

S. V. P. per
W. H. H. Jr

INVENTOR:

J. W. Clough,

by his attorney,
R. V. Cady

United States Patent Office.

JOHN W. CLOUGH, OF MONTVILLE, MAINE.

Letters Patent No. 86,907, dated February 16, 1869.

COMBINED OVEN AND STOVE-PIPE DRUM.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, JOHN W. CLOUGH, of Montville, in the county of Waldo, and State of Maine, have made a new and useful invention, having reference to Radiators for Stove-Pipes; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation,

Figure 2, a vertical and longitudinal section,

Figure 3, a transverse and vertical section, and

Figure 4, a horizontal section of it.

The body of the radiator consists of two concentric drums, A B, arranged as represented, so that there may be a flue-space encompassing the inner and within the outer of such drums.

Such flue-space is closed both in front and in rear by the heads *a b* of the outer drum.

The inner drum, which is intended for use as an oven, extends from one of such heads to the other, and is open at its front end, to which a door, C, is applied, so as to swing on a hinge, *c*.

There extends vertically through the flue-space an annular partition, *d*, by which the space surrounding the inner drum is divided into two flues, D E, which communicate with each other by means of an opening, F, made in the partition.

Furthermore, the back flue E is divided by a secondary, or lesser, partition, *p*, which goes across it and the opening F, it being arranged so as to cause any current of smoke, when passing through the opening F, to be so divided as to pass entirely around the oven, and equally heat that portion of its external surface which may be within the back flue.

The secondary, or lesser partition *p*, is to prevent the smoke, after going through the opening F, and into the back flue, from coursing in one direction only about the oven, as it would otherwise be likely to do.

An induction or entrance-pipe, G, leads into the lower part of the front flue, and the rear flue, at its top, opens into an eduction-pipe, H, disposed so as to project from the upper part of the outer drum.

A damper or swing-valve, I, is arranged in the lower part of the front flue, and, with respect to the induction-opening thereof, in manner as represented.

The spindle *e* of the damper comes through the front end of the outer drum, and is provided with a handle, *f*.

By turning this damper into the inclined position, as shown by the dotted line, at *g*, smoke, after entering the front flue-space D, will be caused to pass entirely around the oven, and thence through the opening F, and thence in the flue-space E, and again around the oven, and finally through the eduction-passage.

But by turning the damper into the position indicated by the dotted line *h*, the smoke will be caused to pass directly into the opening F, without going around the oven.

The smoke, in passing through the flues, will not only heat the oven, but will impart heat to the outer drum, from whose external surface the heat will be radiated.

The said oven and radiator combined are intended for use in the escape-pipe or funnel of a stove, which pipe is to lead or open into the induction-passage, and out of the eduction-passage of the oven and radiator.

When the oven is not required for baking, its door may be left open, in which case the heat radiated into the oven may be employed to advantage in heating the apartment in which the radiator may be placed.

I claim the arrangement and combination of the annular partition *d* and its opening F, with the two concentric drums A B, the damper I, and the induction and eduction-openings or pipes G H, the whole being substantially as set forth.

I also claim the combination and arrangement of the secondary, or lesser partition *p*, with the annular partition *d* and its opening F, the two concentric drums A B, the damper I, and the induction and eduction-passages or pipes G H, arranged substantially as specified.

JOHN W. CLOUGH.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.