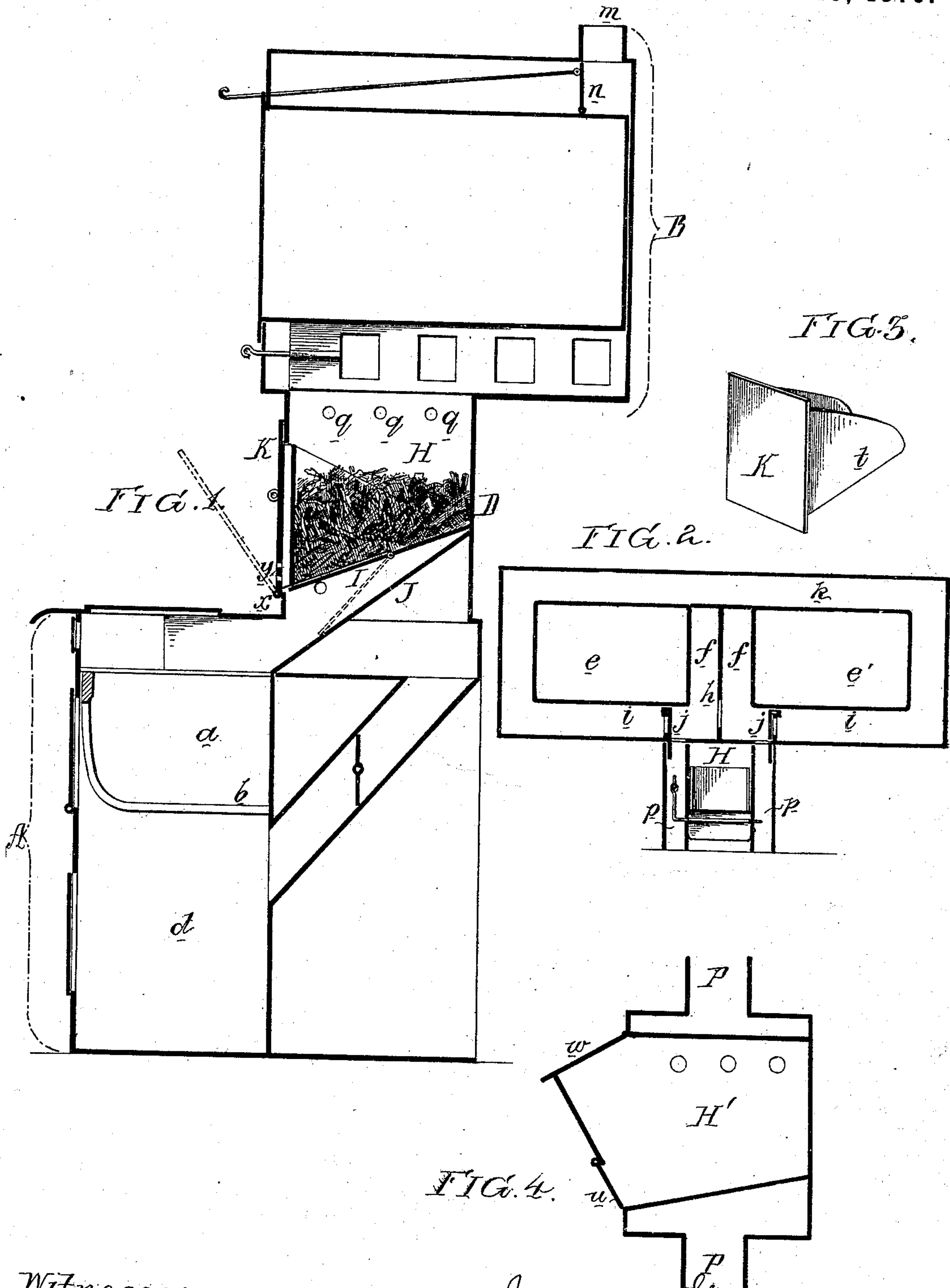


I. A. SHEPPARD.
COOKING-STOVE OR RANGE.

No. 173,678.

Patented Feb. 15, 1876.



Witnesses,
John Deemer.
Harry Smith

Isaac A. Sheppard,
by his Attorneys
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UNITED STATES PATENT OFFICE.

ISAAC A. SHEPPARD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN COOKING STOVES OR RANGES.

Specification forming part of Letters Patent No. **173,678**, dated February 15, 1876; application filed November 10, 1875.

To all whom it may concern :

Be it known that I, ISAAC A. SHEPPARD, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Cooking Stoves and Ranges, of which the following is a specification :

The object of my invention is, to combine with a cooking range or stove a kiln in which the discarded portions of vegetables and other refuse matter may be converted into available fuel; and a further object of my invention is to so construct the kiln that the dried and parched contents may be readily discharged into the fire-place.

These objects I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of a range with my improvement; Fig. 2, a vertical section (drawn to a reduced scale) on the line 1 2; Fig. 3, a detached view of part of the kiln; and Fig. 4, a modification of my invention.

In Figs. 1, 2, and 3, A is the lower and B the upper portion of a range, the two being connected together by a casing, D, as usual in ranges of this class.

The lower portion of the range has the ordinary fire-place *a*, grate *b*, and ash-pit *d*, and the upper portion B has two ovens, *e* and *e'*, separated from each other by the two vertical flues *f, f*, and a central partition, *h*.

In the lower flue *i* of each oven there is a damper, *j*, and the two dampers can be so adjusted that the products of combustion can be made to pass from the casing D round either or both of the ovens as circumstances may require, and a damper, *n*, in the upper flue *k*, near the exit pipe *m*, may be so adjusted as to compel the products of combustion to take a circuitous course round the ovens, or a more direct course to the exit-opening.

In the connecting-casing D, between the upper and lower portions of the range, there are two vertical flues, *p p*, forming direct communication between the fire-place of the range and the flues of the oven, and between these flues there is, within the casing D, a chamber, H, which constitutes the kiln for drying refuse vegetables and other waste matter which result from the preparation of articles of diet for cooking.

The refuse matter placed in this kiln is exposed to the action of the products of combustion which pass through the flues *p p*, the moisture passes off in vapor through orifices *q q* into the flues, and the matter which remains soon becomes so charred as to be available for fuel.

Different arrangements may be adopted for the introduction of the refuse matter into, and for its withdrawal from, the kiln, but I prefer the plan illustrated in Fig. 1 of the drawing, on reference to which it will be observed that the base of the kiln is inclined, and that part of the base consists of a hinged door, I, which is so combined with a retaining and releasing device that it can be held in the position shown in the drawing, or permitted to fall to the bottom of the chute J, as shown by dotted lines, when the charred contents of the kiln will pass down the said chute into the fire-place *a* of the range.

For the admission of refuse matter into the kiln there is an opening provided with a door hinged at *x*, and constructed with side plates *t*, as best observed in the detached view, Fig. 3. When this door is depressed, as shown by dotted lines in Fig. 1, it forms a pocket in which the cook can place potato-peelings and other refuse matter, and when the pocket is full the door may be elevated and secured so that the contents of the pocket will be contained within the kiln, where they are dried preparatory to being discharged into the fire-place.

In order that there may be no escape of noxious vapors through the doorway of the kiln, I prefer to make the door of two plates, as shown, with an intervening space between them, so that air may pass through perforations *y* at the lower end of the front plate, and upward between the two plates into the kiln, this current of fresh air effectually counteracting any tendency of the vapor in the kiln to pass therefrom through crevices which may exist between the door and front of the casing D.

It is not essential, in carrying out the main feature of my invention, that the kiln should be situated at the point described, for a kiln may be attached to or combined with a range or stove in many different ways, providing, in

all cases, that the products of combustion from the fire-place are employed to dry the refuse matter.

In a range, however, I prefer the situation of the kiln heretofore explained, for the reason that it affords facilities for discharging the contents into the fire-place.

In Fig. 4 I have illustrated a modification of my invention in which the kiln is applied to the smoke-pipe of a stove or range, the continuity of the pipe being interrupted by the kiln H, on the top, bottom, and sides of which are flues for the passage of the products of combustion before they can escape to the chimney, the kiln being provided with two door-ways, one for the reception and the other for the withdrawal of the refuse matter.

I claim as my invention—

1. The combination of a cooking stove or range, with a kiln having a flue or flues communicating with those of the stove or range, all substantially as set forth, for the purpose specified.

2. The combination in a range of the connecting-casing D, the flues *pp*, hinged door K with its sides *tt*, the door I, and chute J.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC A. SHEPPARD.

Witnesses:

HARRY HOWSON, Jr.,
HARRY SMITH.