H. BLEECKER.

Cooking Stove.

No. 6,718. Patented Sept. 18, 1849.

Fig. 1.

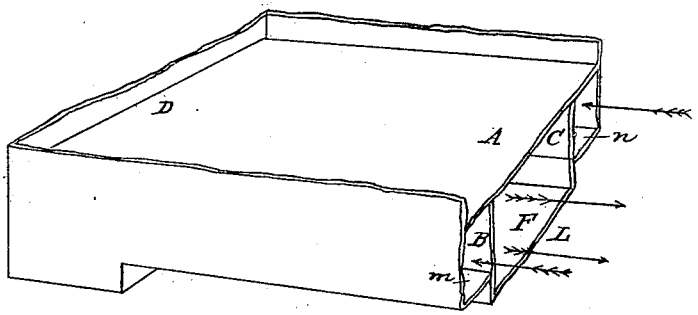


Fig. 2

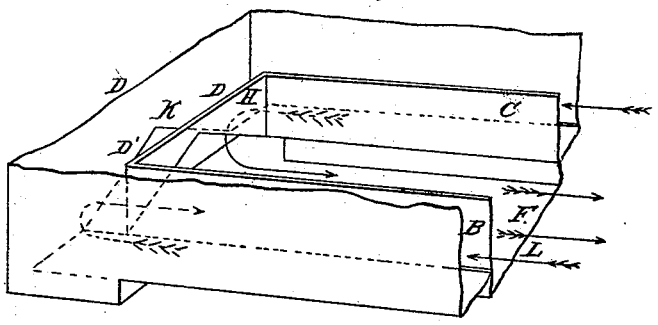


Fig. 3.

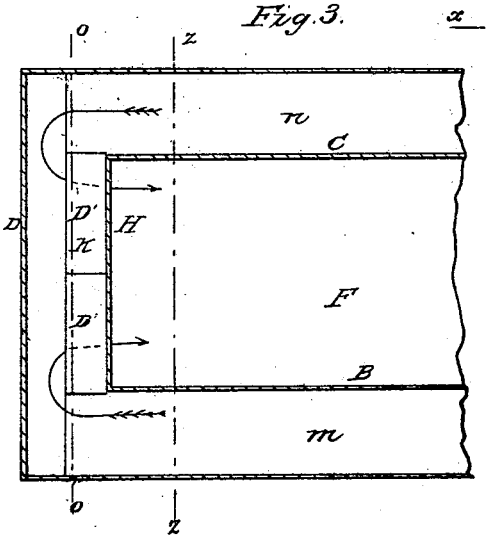


Fig. 4

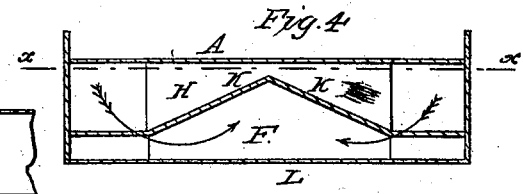
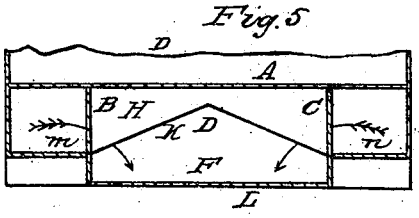


Fig. 5



UNITED STATES PATENT OFFICE.

HENRY BLEECKER, OF ALBANY, NEW YORK.

FLUE FOR COOKING-STOVES.

Specification of Letters Patent No. 6,718, dated September 18, 1849.

To all whom it may concern:

Be it known that I, HENRY BLEECKER, of the city and county of Albany and State of New York, have invented a new and useful Improvement in Cooking-Stoves, which is described as follows, reference being had to the annexed drawings, making part of this specification.

Figure 1 is a perspective view of the front portion of the bottom flues beneath the oven of a cooking stove, a fragment of the plate (A) composing the bottom of the oven being in its proper place. Fig. 2 is a similar view of the flues, the said fragment of the bottom oven plate (A) being removed. Fig. 3 is a longitudinal section of the bottom flues on the line *x x* of Fig. 4. Fig. 4 is a vertical transverse section on the line *o*, *o*, Fig. 3 looking toward the rear. Fig. 5 is a vertical transverse section on the line *z z* Fig. 3 looking toward the front.

Similar letters in the several figures refer to corresponding parts. The arrows show the directions of the draft.

The improvement in which my invention consists is the manner in which the conveying flues (*m n*) are reverted into the return flue (F), in the chamber at the front of the stove. The useful purpose, claimed to be discovered in this construction, is securing a more steady and effectual heat at the extreme front part of the oven, at the same time combining the advantages of heating the outsides of the oven through the flues (*m n*). I do not set up the combination of flues, as represented, to be new, except so far as they are combined with the reverting chamber in front. The objection, in use, to flues constructed so as to convey the heat first along the outsides, and return it through the center, in a chamber partially divided by division plates such as (B and C), has been that the front ends of these division plates must necessarily be so far removed from the front plate (D), in order to afford sufficient space for the current of heat to travel in, that much of the heat escapes into the return flue without imparting the desired quantity of heat to the extreme front of the oven. In other cases, when the division plates are extended nearer to the front to compel the heat to a greater proximity with the front of the oven, the object is not attained, because the outlets from the conveying flues to the returning flue are so much contracted as to impair the draft and the general heat is abated to a very injurious degree. When these two objections are obviated, this construction is believed to be the most perfect and practicable of any flues in use. The manner in which these difficulties are overcome in my invention is by forming a chamber D′ in front of the plate (H), above the angular plate (K), by means of which I am enabled to distribute the heat along the whole breadth of the stove, thus securing the necessary space in which to revert the current of heated air, at the same time bringing it within a very close proximity with the front plate (D). In the chamber thus formed, the angular shape of the plate (K), affords an advantage by compelling the largest proportions of heat to the outsides, under the front of the oven, so that the outer front corners, which in most flues are imperfectly heated, have an increased supply. The angular shape of the plate (K), also affords more reverting space along the line of the front edge, than a straight plate would admit of, which enables me to bring the current of heat still nearer the front than if it were reverted in a horizontal sheet. I also make a depression in the front of the bottom plate (L), in order to allow the reverting current ample room and draft in gathering into the return flue.

In flues of the construction before alluded to when the chamber under the oven is simply divided by partial division plates such as (B and C), it is supposed that the two outside flues being diametrically opposite in entering into the return flue, encounter each other and tend to a collision which in a measure neutralizes the draft; which in my invention is avoided by allowing the currents gradually to converge and unite in the return flue. The current of heat in going and returning is kept in constant contact with the bottom oven plate except in reverting under the plate (K).

I do not claim the division plates (B and C) or the flues formed by them.

What I claim as my invention and desire to secure by Letters Patent is—

The reverting chamber D′ formed by the angular plates K and plate H under the front of the bottom of the oven, as herein set forth, when this is combined with the flues formed by the plates (B and C) as herein described.

HENRY BLEECKER.

Witnesses:

HENRY S. WILSON,

REUBEN M. VAN SICKLER.