

P. PARADIS.
Cooking Stove.

No. 90,293.

Patented May 18, 1869.

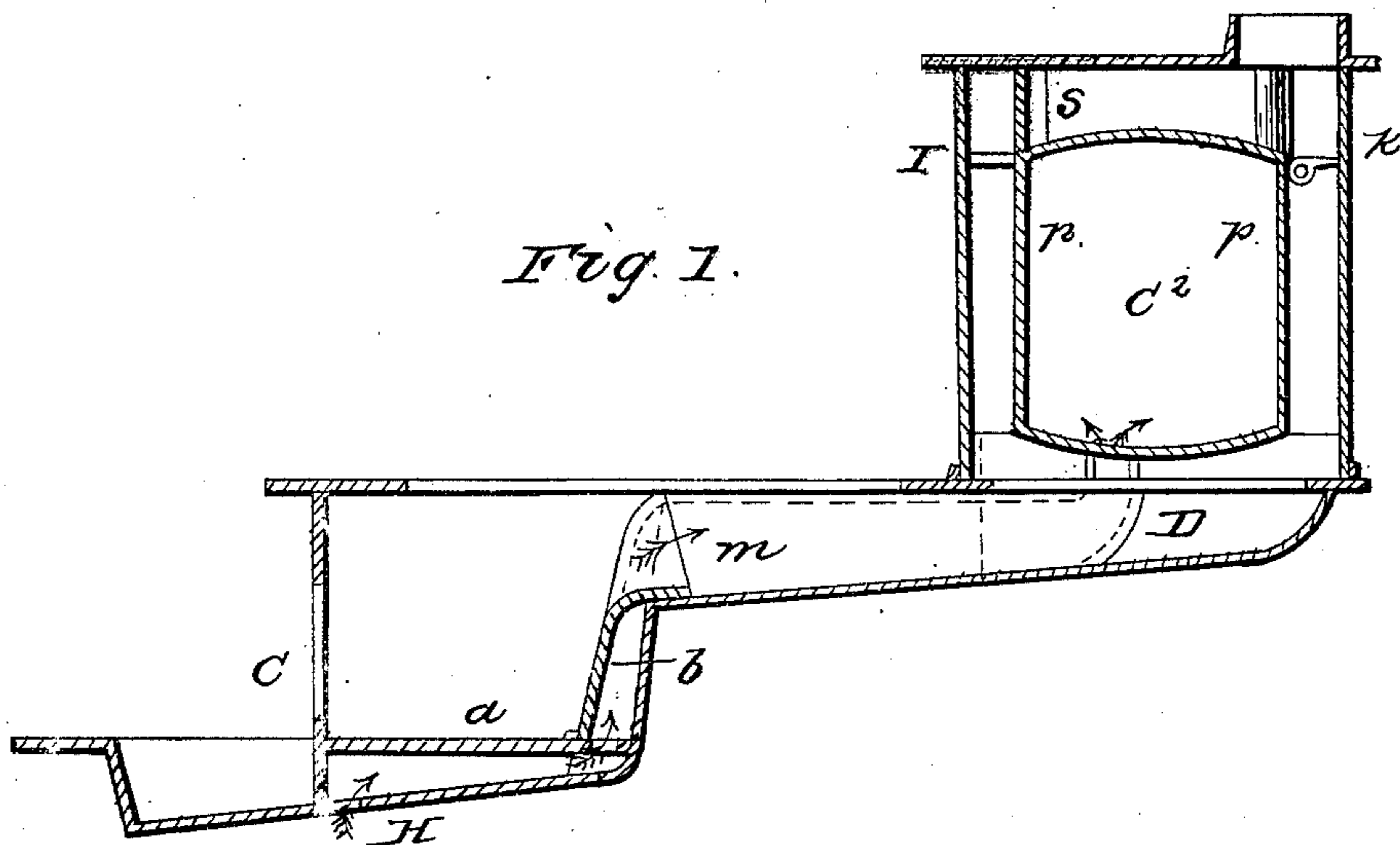


Fig. 2.

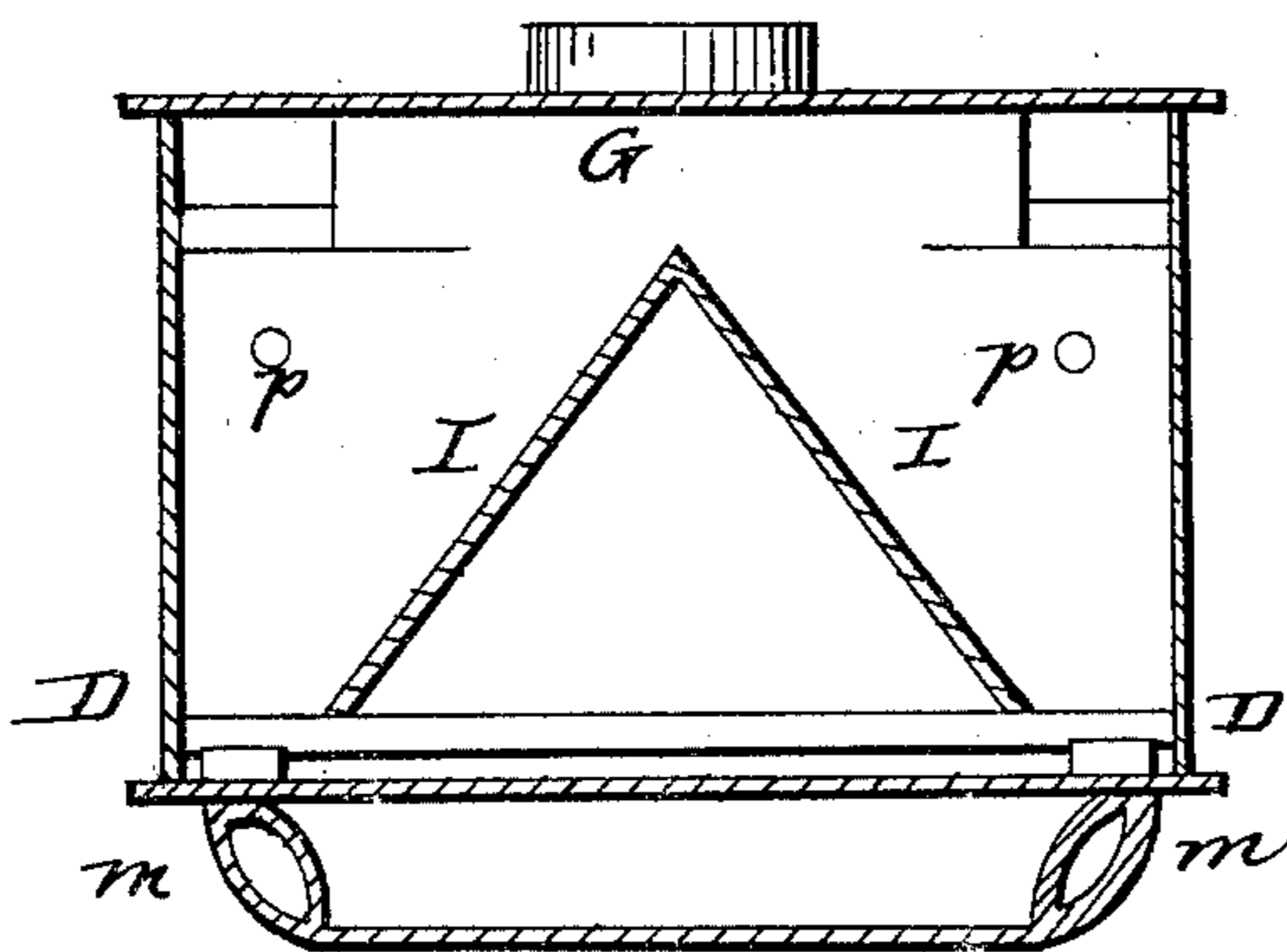
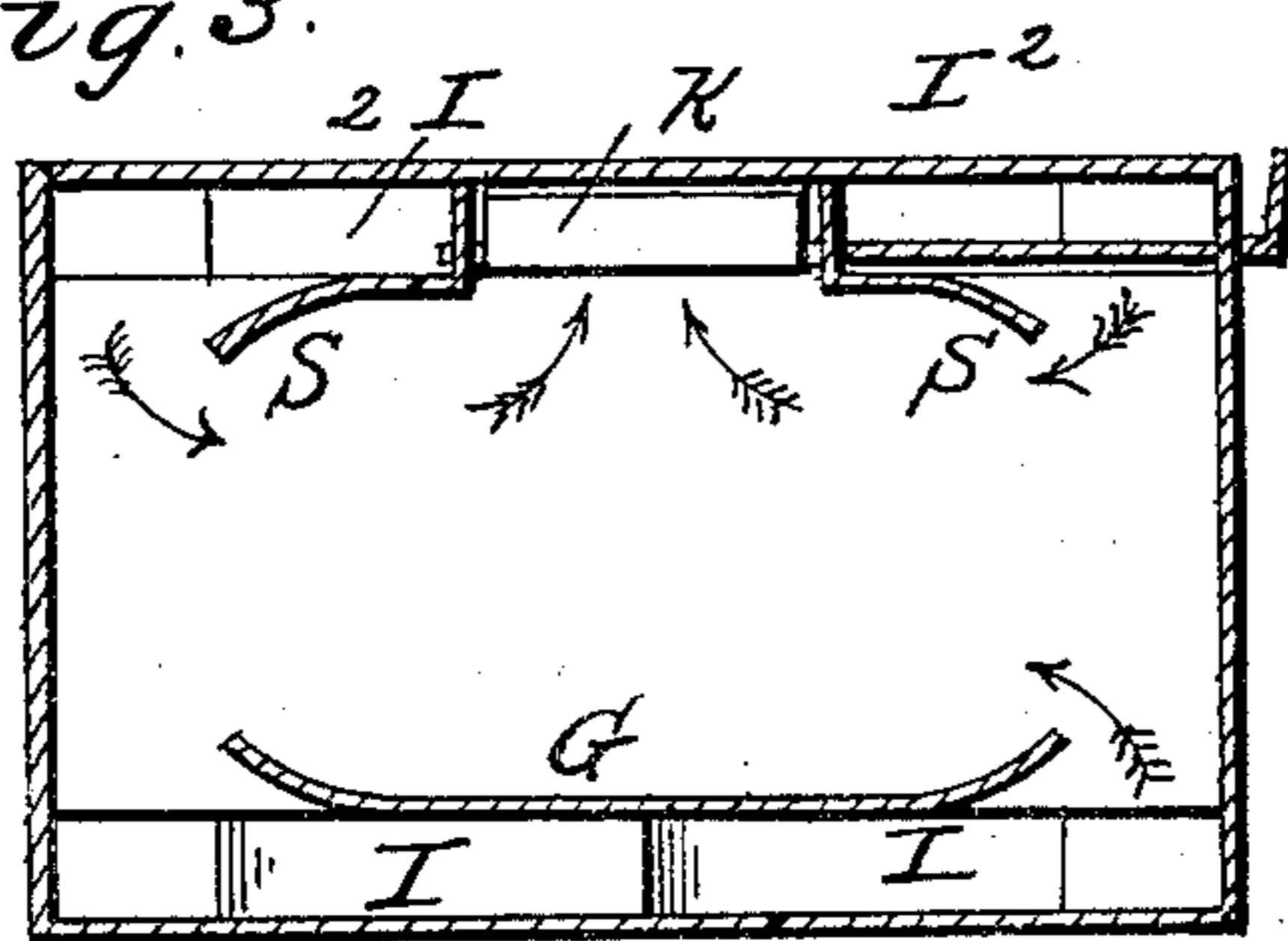


Fig. 3.



witnesses
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PETER PARADIS, OF ROCHESTER, NEW YORK, ASSIGNOR TO EQUITABLE CO-OPERATIVE FOUNDRY COMPANY, OF SAME PLACE.

Letters Patent No. 90,293, dated May 18, 1869.

COOKING-STOVE.

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

To all whom it may concern:

Be it known that I, PETER PARADIS, of the city of Rochester, in the county of Monroe, State of New York, have invented a new and useful Improvement in Wood Cooking-Stoves, having elevated ovens; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a sectional view, from the front to rear, of the stove through the hollow ribs or dog.

Figure 2 is a sectional view through the front of elevated oven, indicated in fig. 1 by a red line, and showing the arrangement of the fire-flues.

Figure 3 is a top view of the elevated oven without the top case.

Like letters indicate corresponding parts.

My invention relates to that class of cook-stoves in which air is taken in under or at the fire-box and is heated and conveyed through flues provided for that purpose, into the oven; and

The invention consists in a peculiar manner of constructing and arranging the flues for heating and conveying the air; and also in a novel method of arranging plates in the smoke and heat-passages around the oven.

To enable others to make and use my invention, I will describe its construction and operation.

On the inside of the plate forming the bottom of the fire-box of wood cooking-stoves, I make one or more ribs, *a*, which are hollow, and extend back to the air-chamber *b*, which is formed by making a double back to the fire-box.

On the outer end of said ribs, I cast a projection, *O*, sufficiently high to keep the wood from falling forward and out of the front doors.

On the outside of the bottom plate of the fire-box, and over the spaces formed by the hollow ribs, I fasten a plate of iron, with one or more holes, *H*, corresponding with the spaces in the hollow ribs or dogs, to admit cold air.

These ribs are thus used for the double purpose of dogs to hold the wood, and to form passages for the air to enter the air-chamber *b*, in rear of the fire-box.

I then, on each side of the part of the stove in rear of the fire-box, form hot-air flues, *m m*, by making the sides double, extending from the air-chamber *b* back as far as the elevated oven *C*².

They are then turned up, as shown in fig. 1 at *D*, until they extend through the lower plate of the oven, which is provided with holes for the reception of said flues.

Through the upper part of the sides of the oven, I provide holes, *p p*, to allow the air to enter the exit-flues, whereby a thorough circulation is obtained through the entire length of the flues formed by the

hollow ribs or dogs *a*, air-chamber *b*, and flues *m m*, into the oven *C*² and exit-holes *p p*.

The elevated oven *C*² is provided with flue-plates, *I I*, between the outside case and the oven.

In front they are joined together at the top, near the centre of the oven, diverging toward the bottom, leaving sufficient space between the lower corner of the oven and the plates to allow the heat from the fire-box to ascend.

Similar plates are provided for the rear of the oven, with the exception that they are not joined together at the top, but are left apart and provided with a damper, *K*, to change the direction of the heat from the fire-box, and extend upward to the lower side of the top covering.

On the front side of the top of the oven, I also place a plate, *G*, between the outside case and the oven, but not extending the full length of the oven.

On the back of the top of the oven, I also put plates of iron, *S S*, between the outside cover and the oven, extending from the flue-plates *I*² *I*² toward but not quite to the ends of the oven, thus leaving passages for the heat from the fire-box, as shown in fig. 3.

The operation of these improvements is such, that as the cold air enters the holes at the bottom of the fire-box, it passes through the hollow ribs or dogs *a* into the air-chamber *b*, and is heated, thence along the air-flues *m m*, acquiring a greater heat before it enters the elevated oven *C*², thence into the exit-flues.

The arrangement of the plates *I I*, *G*, and *S S* is for the purpose of forming a hot-air chamber on the sides of the oven, and distributing the heat more equally over it, and at the same time making self-cleaning flues.

The fire-plates in front being joined at the top and diverging toward the bottom, leave no projection for soot and ashes to lodge, and in the rear the operating the damper effects the same results, and they fall below the oven, and are easily removed.

As the heat passes from the fire-box it is arrested by the flue-plates *I I* and damper *K*, and caused to return to the lower four corners of the oven. Then, as it arises, it is again arrested by the flue-plates *G* and *S S*, and caused to return to the four upper corners; thence it passes over the oven into the exit-flues.

By the arrangement of the hollow ribs answering the double purpose of air-passages, and dogs holding the wood, they are not so apt to burn out, which is the case in stoves having solid dogs, which have to be replaced at short intervals.

I also obtain greater heating-surface for the air as it passes into the oven.

By placing the conducting-flues from the air-chamber to the oven on the sides, I gain the object of having a clear, open space for the draught of the fire, and also the great desideratum of having the hot air enter

the ends of the oven, the great difficulty being to keep the ends of the oven hot.

By the arrangement of the flue-plates I I, G, and S S, I distribute the heat over and around the oven, so that it comes in contact with all its parts, and forms self-cleaning flues.

I am aware that stoves have heretofore been made in which flues were provided for heating and conveying air to the oven, and therefore I do not claim, broadly, a stove having these features, irrespective of its special construction; but, having fully described my improved stove,

What I claim, is—

1. A cook-stove, having the hollow ribs *a*, with the inlet-passage H, chamber *b*, and the side flues *m*, with pipes D, connecting said flues with the oven, all constructed and arranged to operate substantially as shown and described.

2. The arrangement, within the smoke-flues of the oven, of the front inclined plates I, with the deflecting-plate G at the top, the rear inclined plates I², with the valve K, and deflecting-plates S, as herein set forth.

PETER PARADIS.

Witnesses:

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