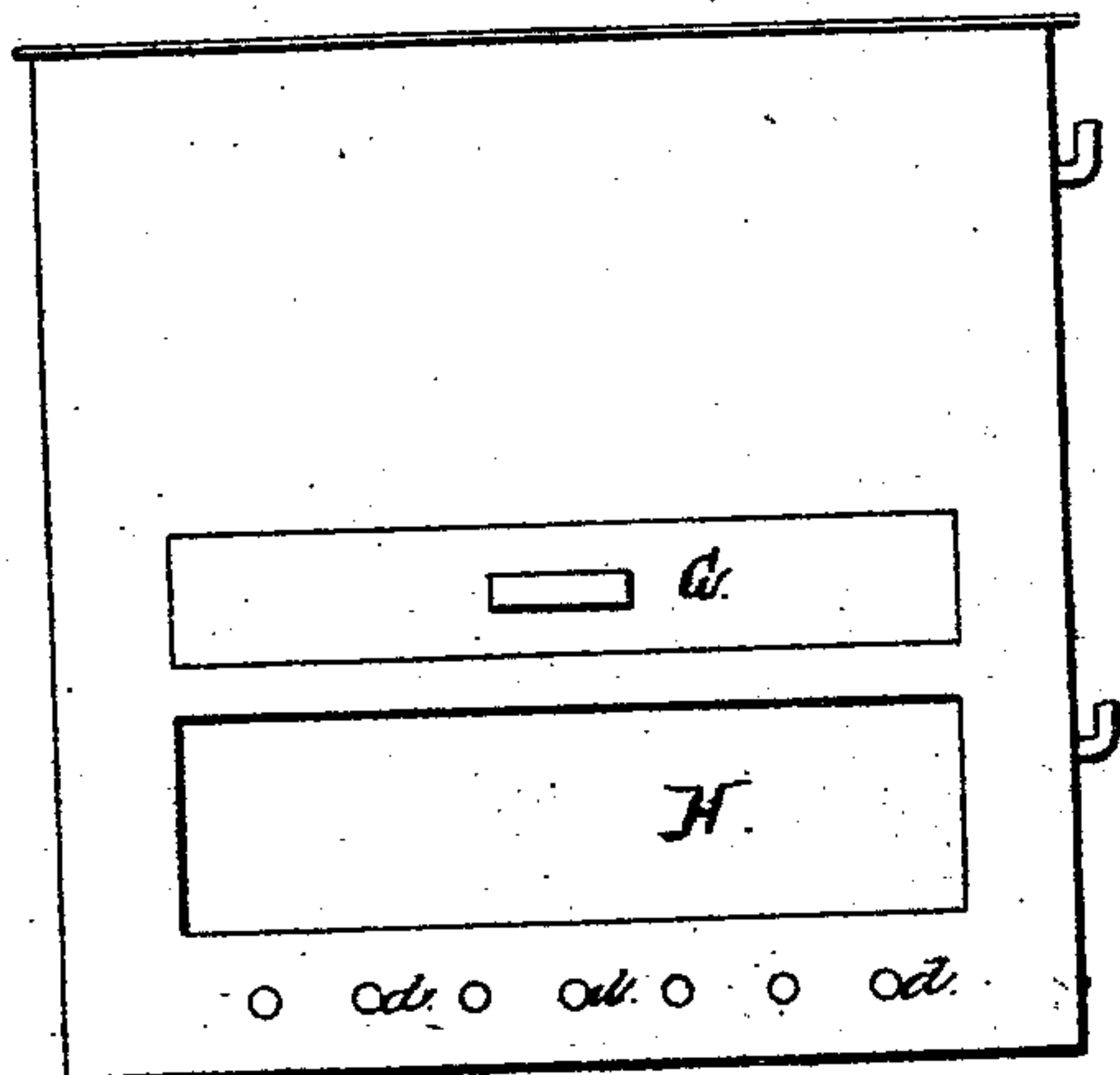


C. Williams,

Cook Stove.

No. 82,574.

Fig. 1.



Patented Sept. 22, 1868.

Fig. 2.

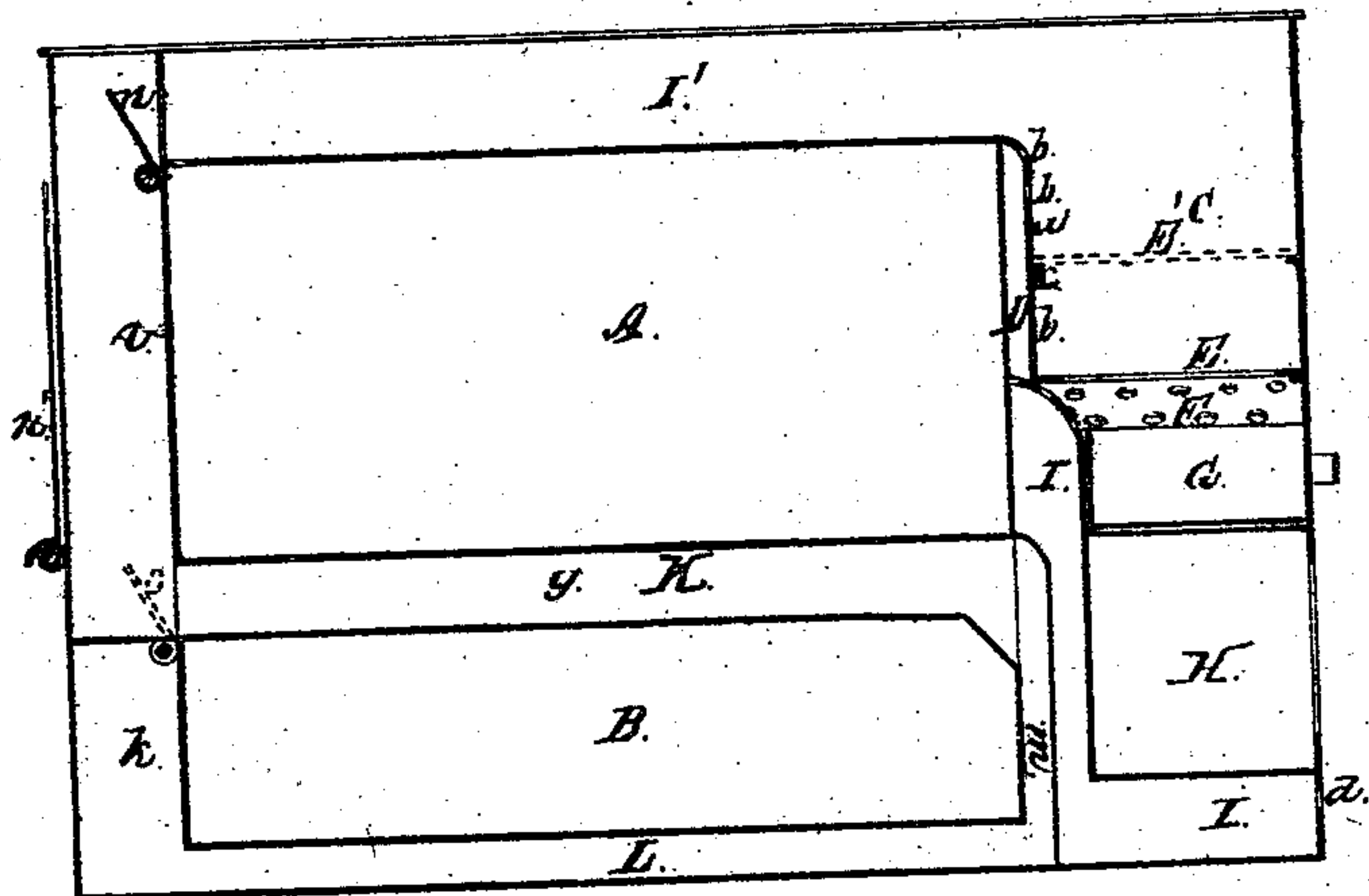


Fig. 3.

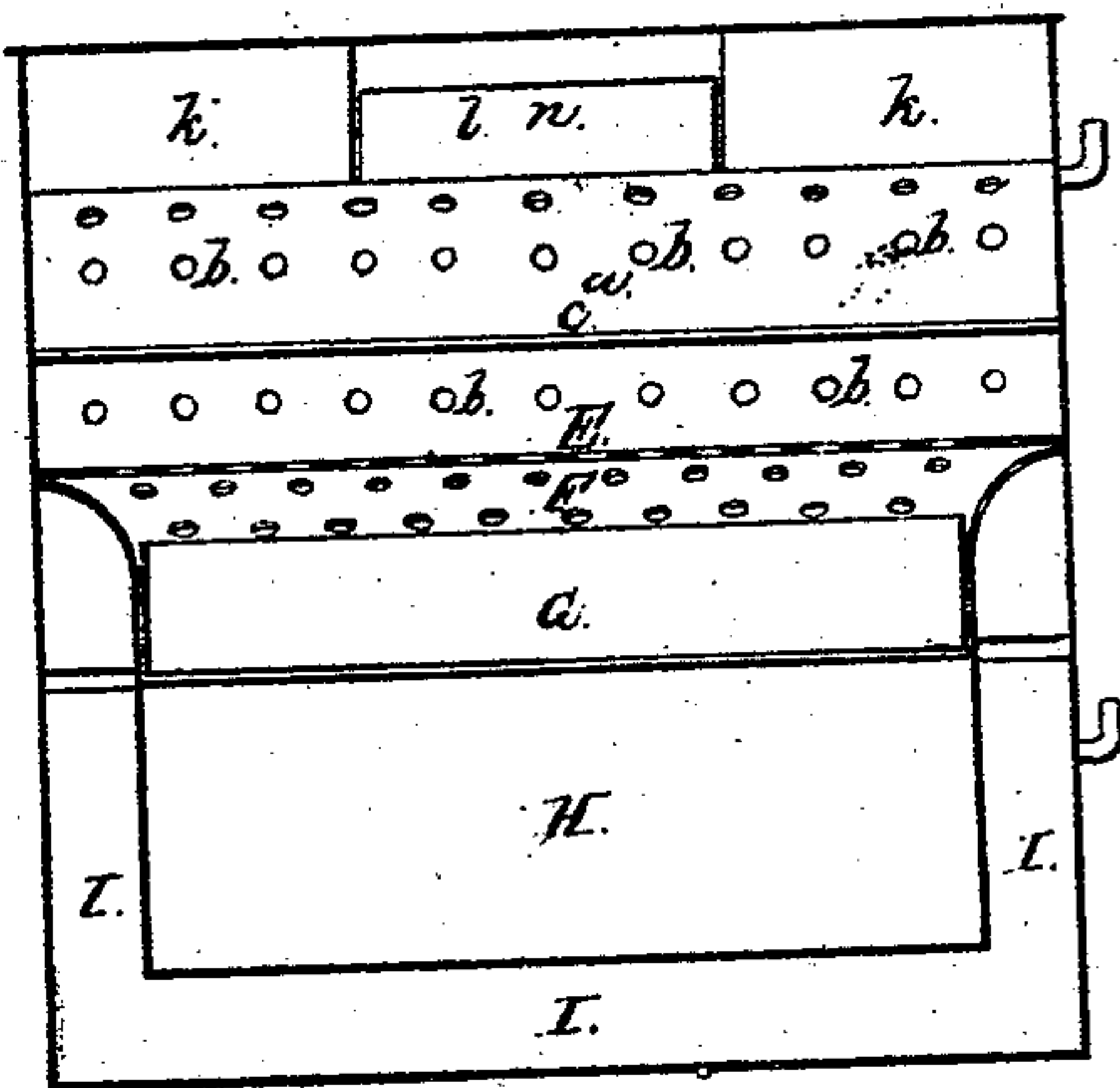


Fig. 4.

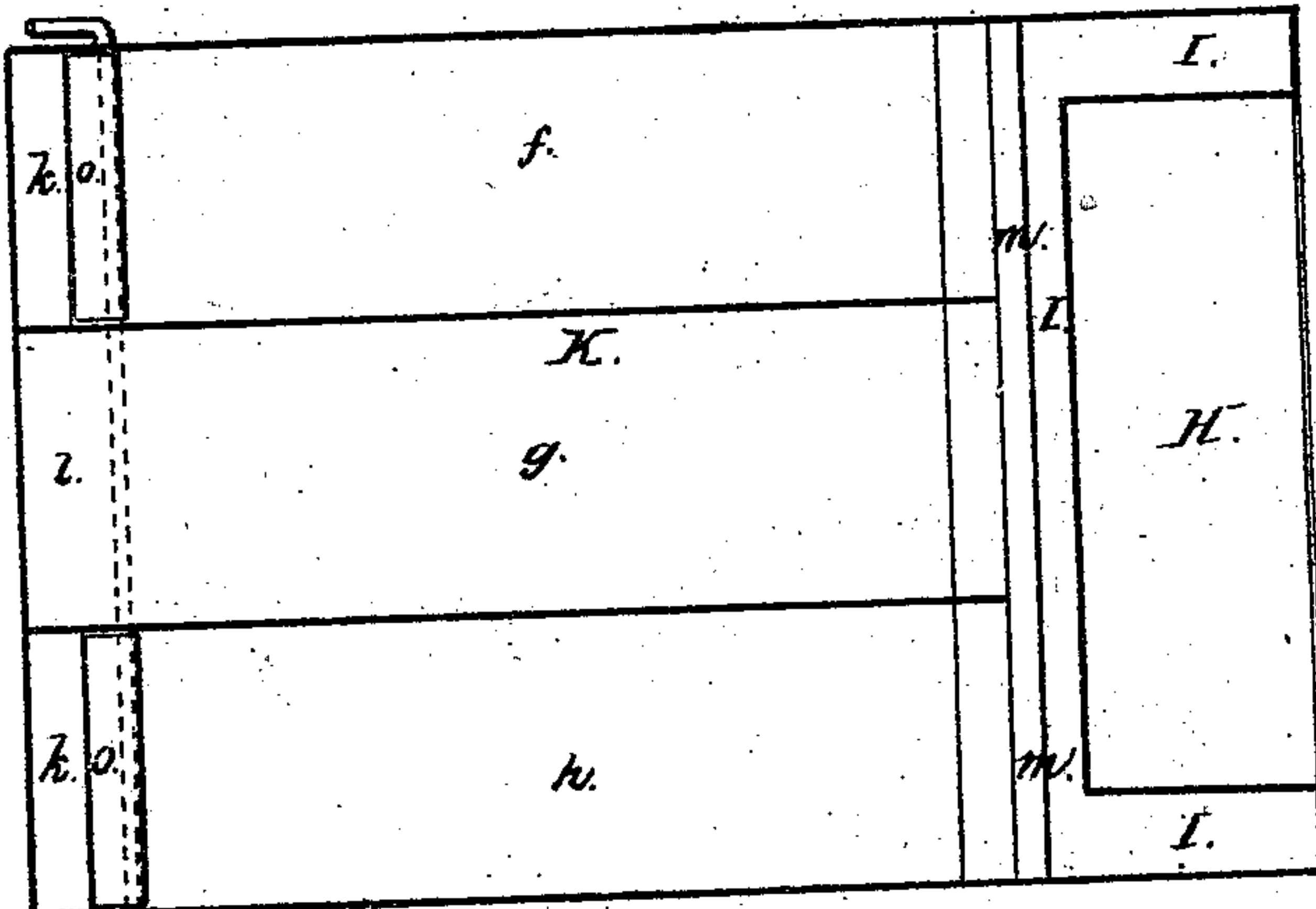
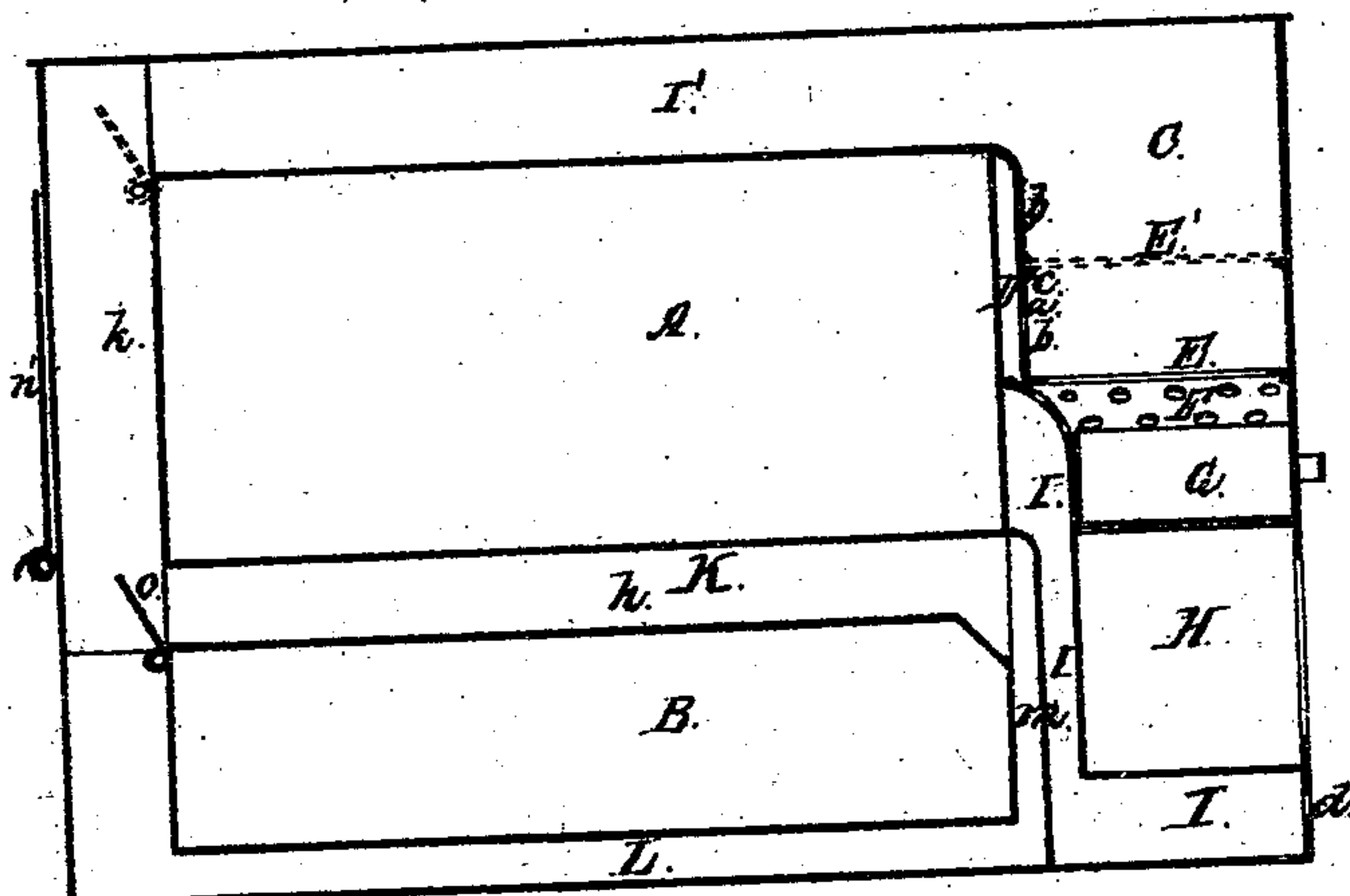


Fig. 5.



Inventor.
C. Williams.

by his attorney.

R. W. W.

United States Patent Office.

CHARLES WILLIAMS, OF MANCHESTER, NEW HAMPSHIRE.

Letters Patent No. 82,574, dated September 29, 1868.

IMPROVEMENT IN COOKING-STOVES.

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, CHARLES WILLIAMS, of Manchester, of the county of Hillsborough, and State of New Hampshire, have invented a new and useful Improvement in Cooking-Stoves; 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 view, and

Figure 2 a longitudinal section of a stove constructed with my improvement.

Figure 3 is a transverse section taken through the fireplace.

This stove I construct with two ovens, A B, the upper one being the larger. The fireplace, C, is arranged in front of the upper oven, a narrow air-chamber, D, intervening between the two. The front plate, *a*, of the said narrow chamber is perforated with a series of holes, *b b*, and is provided with a ledge or narrow shelf, *c*, to extend from end to end of about midway of its height. The purpose of this ledge is to support the grate E, when raised into the position as exhibited by dotted lines at E', which it may be for use in summer, but under other circumstances the grate will be placed at the foot or lower part of the plate *a*.

Immediately beneath the grate is the ash-chamber F, which opens through the front end of the stove, and receives a drawer, G. Underneath the ash-chamber is a "hot closet" or heating-chamber, H, which opens through the front end of the stove, and should have one or more doors to its opening.

Extending along underneath the said chamber H is an air-receiving chamber, I, provided with a series of holes, *d d*, in its front.

This air-receiving chamber I also surrounds the heating-chamber, and the ash-chamber at the rear and ends of them. The upper part of the air-chamber is curved, in manner as represented, and is foraminous, or provided with numerous holes, through which air, when the stove may be in operation, passes directly into the space underneath the grate, and also into the auxiliary chamber D.

There is a flue, I', extending from the fireplace over the entire top of the upper oven. There is also a flue-space between the two ovens, which is divided into three flues, *f g h*, (see Figure 4,) which is a horizontal section, taken through the flue-space K. There are also three vertical flues, *k l k*, in rear of the upper oven. The middle one, *l*, which is to lead to a chimney, opens at its side into the flue I', and into the flue *g*, and has a damper, *n*, at its junction with the flue I'. The two flues *k k* open out of a flue, L, which goes underneath the lower oven, and which communicates with the space K, or its flues *f g h*, by a vertical flue, *m*, arranged in front of the lower oven. There are dampers, *o o*, at the openings of the flues *k k* into the flues *f h*, such dampers being fixed on one rod, and made so as, when turned down horizontally on the flues *k k*, to cut off any flowage of smoke downward into the space underneath the lower oven.

To the back of the stove I hinge a bracket, *n'*, so that it may be turned down from a vertical to a horizontal position. This bracket is very useful as a support for a vessel or article which it may be desirable to heat by radiation of heat from the stove.

Figure 5 is a vertical section, taken through the flues *k k*.

On raising the dampers into vertical positions, the smoke will be caused to pass down the flues *k k*, and into the flue L, thence through the same, and up the flue *m*, and into and through the flue *g*, and thence up the flue *l*.

On turning the lower dampers down into horizontal positions, and the upper damper into a vertical one, the smoke will pass from the flue I' into the flues *k k*, thence through the flues *f h*, and thence through the flue *g* into the flue *l*. In this way we can heat the larger oven by the application of the smoke to its top, rear, and bottom, the lower oven being then heated by the smoke acting against its top. We can throw the smoke or cause it to course against the top, bottom, front, and back of the lower oven, provided we turn the lower dampers up into a vertical position. By opening the upper damper, that is, by turning it down into a horizontal position across the flue *l*, the smoke will be caused to flow upward through such flue, instead of going down in rear of either oven.

By arranging the larger oven over the smaller oven, and arranging the flues and dampers with respect to them,

in manner as described, I am enabled to heat both ovens with great uniformity and advantage, when the stove may be in use.

Furthermore, by my arrangement of the "hot closet," and the air-heating flues about it, with the ash-chamber and the fireplace, and with the ovens and the front of the lesser oven, I am enabled to effectually heat such hot closet and the air passing through the air-flues.

I make no claim to the arrangement of one oven above another in a stove.

What I do claim as my invention in the stove above described, is as follows:

I claim the arrangement of the hot closet H, the ash-chamber F, the air-heating chamber I, the fireplace C, the two ovens A B, and their smoke-flues, provided with dampers, as described.

Also, the combination and arrangement of the auxiliary air-heating chamber D with the fireplace C, the air-receiving and heating chamber I, the ash-chamber F, and the hot closet H.

Also, the arrangement and combination of the air-heating chambers D I, the hot closet H, the ash-chamber F, the fireplace C, the two ovens A B, and their flues, provided with dampers, as described.

CHAS. WILLIAMS.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.