N. P. KINGSLEY.

Cooking Range.

No. 2,310.

Patented Oct. 11, 1841.

Fig. 3.

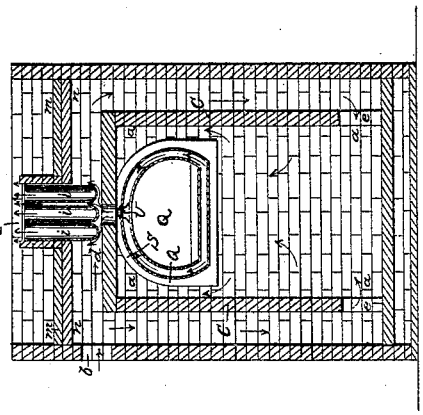


Fig. 6.

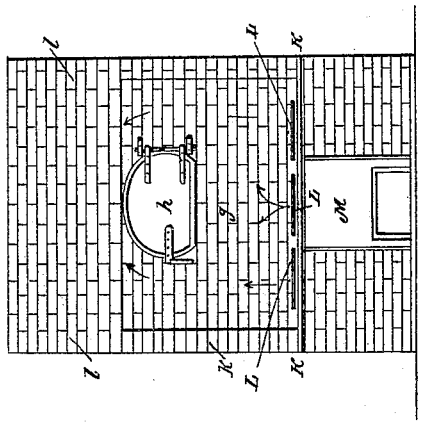


Fig. 2.

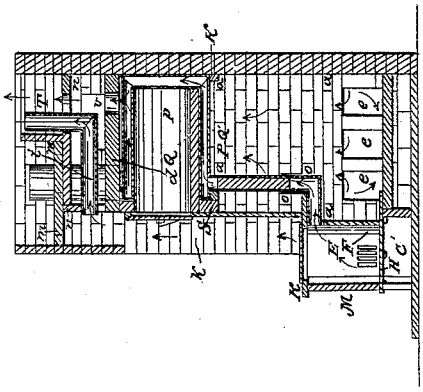


Fig. 5.

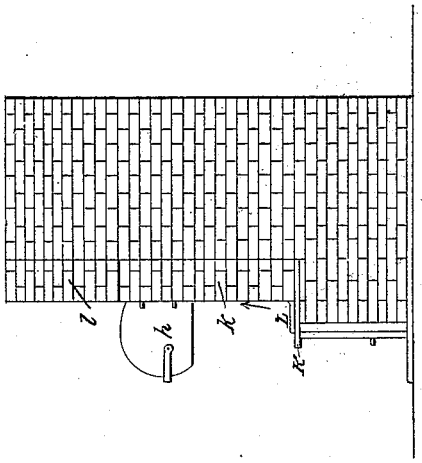


Fig. 1.

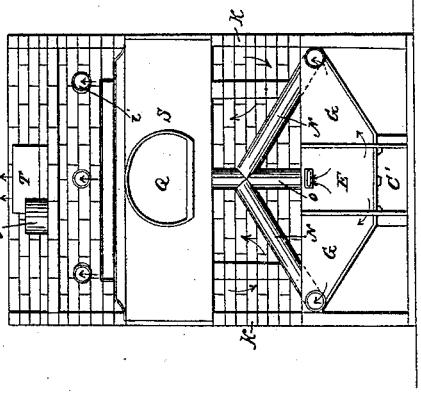
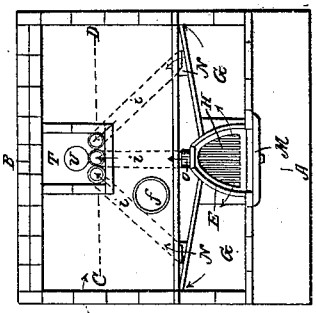


Fig. 4.



UNITED STATES PATENT OFFICE.

NATHAN P. KINGSLEY, OF BOSTON, MASSACHUSETTS.

CONSTRUCTION OF COOKING-RANGES.

Specification of Letters Patent No. 2,310, dated October 11, 1841.

To all whom it may concern:

Be it known that I, NATHAN P. KINGSLEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Cooking-Ranges, and that the following is a full and exact description of the same, reference being had to the accompanying drawings, which, taken in connection herewith, form my specification, wherein I have set forth the principles of my said improvements, by which they may be distinguished from other inventions of a similar character, together with such parts, improvements, or combinations as I claim and for which I solicit an exclusive property to be secured to me for fourteen years by Letters Patent.

Figure 1, is an elevation of the range with the front plates removed. Fig. 2, is a vertical cross section on the line A B Fig. 4. Fig. 3 is another vertical section taken on the line C D, and at right angles to the former. Fig. 4 is a plan, with the top plates removed. Fig. 5 is a side elevation and Fig. 6 a front elevation.

The object of my improvements is, to so combine the parts of a cooking range, as to secure conveniences for effectually performing the several culinary operations of roasting, baking, boiling, &c., and at the same time to warm the building by generating and diffusing hot air through the apartments, which air shall not be charged or mingled with the effluvia, which are necessarily produced by the various cooking operations.

E, Figs. 1, 2, 4 represents a fire pot of semicylindrical form as shown in Fig. 4. The periphery and front of the fire pot are cast solid, (with the exception of a portion on each side to be herein after specified), having no grating at the front as is usual, which makes the fire pot operate in a similar manner to the cylinder stove, giving it a very powerful draft and keeping the coal or other fuel always well ignited. Each side of the fire pot has a small grating F Fig. 2 communicating with the two flue apartments G, G shaped as seen in Figs. 1 and 4, having their back plates beveled inward, instead of parallel with the front one so that a considerable portion of the fire pot may be in the hot air chamber, which will be described hereafter. There is likewise a proper grate H at the bottom of the fire chamber directly over the ash chamber C′, which may be supported in any of the usual ways, which will permit it to drop down and clear the fire pot of coal. A plate K K is fitted over the fire pot E, and the apartments G G and has circular holes formed therein, in which when the covers L, L, L, Fig. 6, are removed any of the various kinds of boiling or cooking apparatus may be arranged, and the plate M of the fire pot being nearly always red hot will effectually roast or cook anything which may be placed before it.

The smoke and heated products of combustion from the fire pot divide and circulate through the flue apartments G, G, by means of the side gratings F, thence passing through the metallic pipes N N, which conduct from the same at the corners thereof to the main flue pipe O, which pipe is divided for a little distance by the partition O O Fig. 2, so that the currents from the pipes N N, may not meet, where these pipes enter the main pipe, and destroy the draft. Just above the partition O O, the quantities which have passed through the pipes N, N, meet that portion which has passed directly from the fire chamber, the whole then passes to the flue space P P about the oven Q, which is situated and supported as seen in Figs. 1, 2, 3, in the plates R, S at front and rear of the same.

The oven is composed of two chambers Q and Q′, one inserted within the other as shown in Figs. 1, 2, 3 leaving the flue space just above mentioned between the same. The plate R is attached to the back of the apparatus and the plate S is supported at its ends in the side walls as shown in Fig. 1. After circulating about and heating the oven, so that the required results may be here secured, the smoke, &c., passes out through the discharge pipe U, which may conduct to the chimney T or the open air. The passage or route of the smoke, &c., is more particularly denoted by the red arrows in the several drawings.

It will be seen by an inspection of Figs. 1, 2, 3, 4 that there is considerable space beneath and about the oven and back of the fire chamber, &c. This space denoted at *a*, *a*, *a*, *a*, Figs. 1, 2, 3, serves as a hot air apartment, the cold air being introduced to the same through the side opening *b* Fig. 3, passing around the partitions *c*, *c*, and stove plate *d*, as represented by the blue arrows, through the openings *e*, *e*, *e*, at the bottom of the partitions *c*, *c*, into the main part of

the hot air chamber, where the smoke pipes, &c., are arranged. Here it becomes heated by coming in contact with these pipes, the back of the fire chamber E, and flue apartments G G and likewise the exterior casing of the oven, and may be drawn off through the metallic pipe *f*, (passing through the top plate of the hot air chamber), and conducted to any part of the building. The steam and effluvia arising from the several cooking operations are entirely excluded from the hot air chamber, and passes up in front of the brick wall *g*, in which the oven door *h* is set or arranged, through the three steam pipes *i i i*, resting on the plate *d*, into the chimney T, the course of the same being shown by black arrows in Figs. 2, 3, 4, 5. The steam pipes are simple metallic tubes resting on the top of the plate *d* and having right angular elbows as seen in Fig. 2, which turn up into the chimney T.

The sides and back of the apparatus are built of brick as are also the partitions *c*, *c*, in the hot air chamber as shown in the drawings. The front is likewise brick above the plate K, K, having two little side walls *k k* projecting outward and a projecting face wall *l*, *l*, between which and the front plates of the oven, &c., as shown in Figs. 1, 2, 3, 5, 6, the steam, &c., passes and is received into the pipes *i*, *i*, *i*, being prevented from passing upward by the top plate *m m* of mica slate which rests directly upon the stone plate *n n* above the steam pipes *i*, *i*, *i*, both of said plates being supported in brickwork at the sides as shown in Fig. 3.

Having thus described my improvements I shall claim—

1. Forming two side gratings in the fire pot, of a cooking range, communicating with two flue apartments on the sides of the same, through which gratings, the smoke, &c., may pass to the said apartments, the whole being arranged and operating substantially in the manner and for securing the effects herein before specified.

2. The method of combining the semi-cylindrical fire pot, (having grated openings), with the flue spaces on either side of it, by arranging the flat surface of the fire pot on a line with the plates constituting the fronts of said spaces, so as to form a part of the front of the range, and covering both the fire pot and flue spaces with a top plate so as to form a chamber on either side of the fire pot, the surface of the fire pot forming a portion of said chambers as described.

In testimony that the foregoing is a true description of my said invention I have hereto set my signature this twenty seventh day of August in the year eighteen hundred and forty one.

N. P. KINGSLEY.

Witnesses:

R. H. Eddy,

Ezra Lincoln, Jr.