

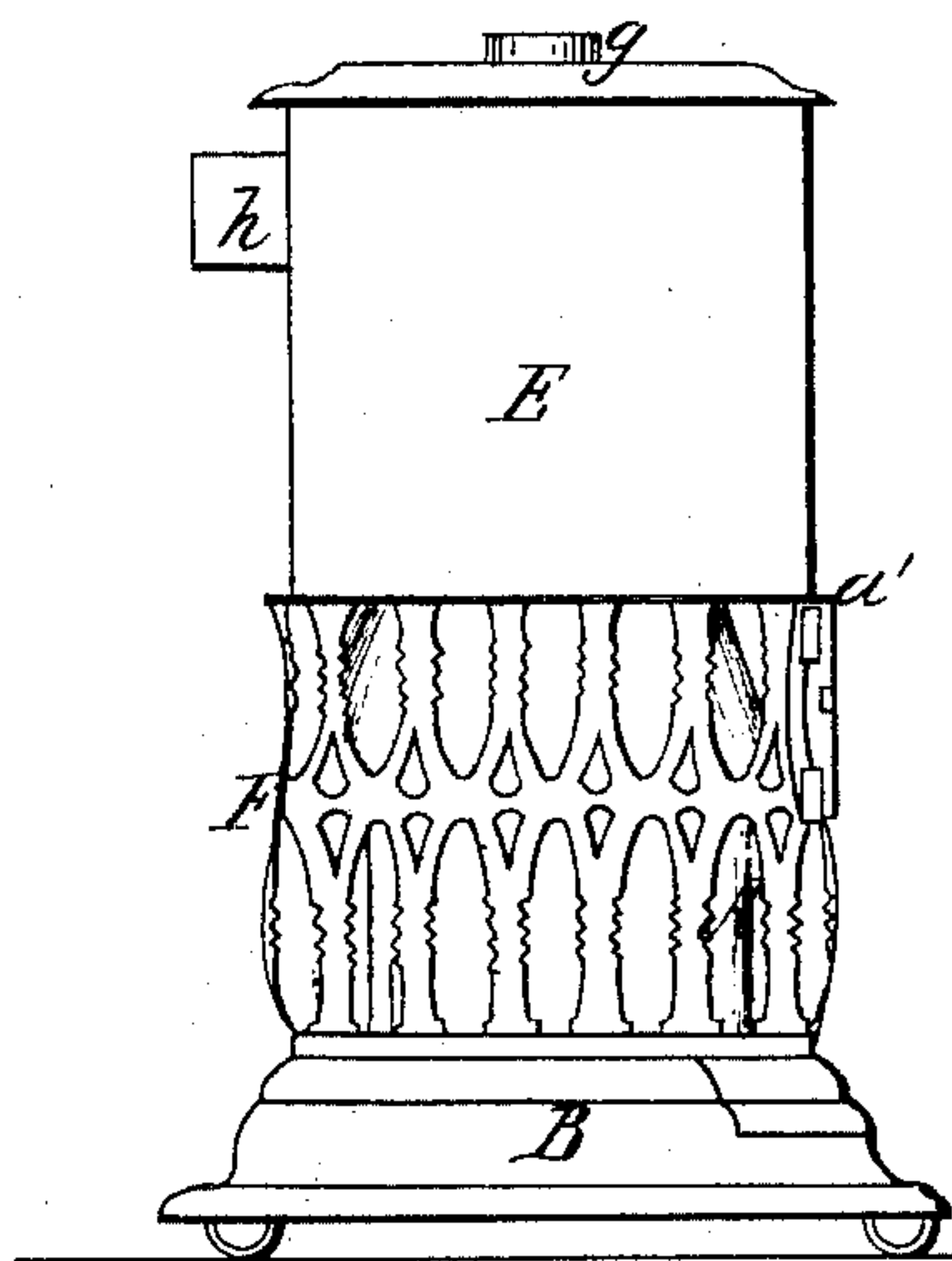
*T. Cook.*

*Heating Stove.*

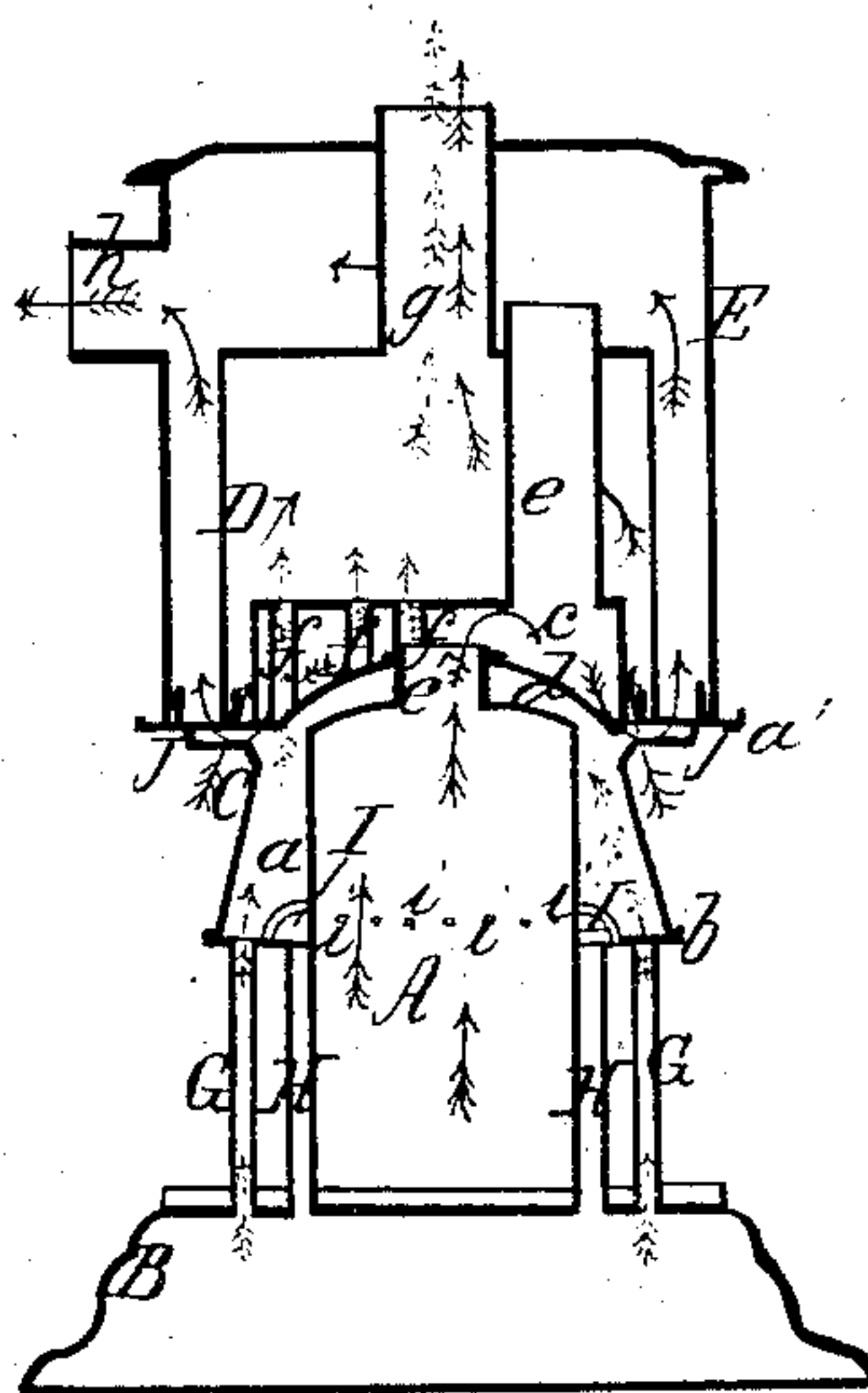
*N<sup>o</sup> 16,268.*

*Patented Dec. 23, 1856.*

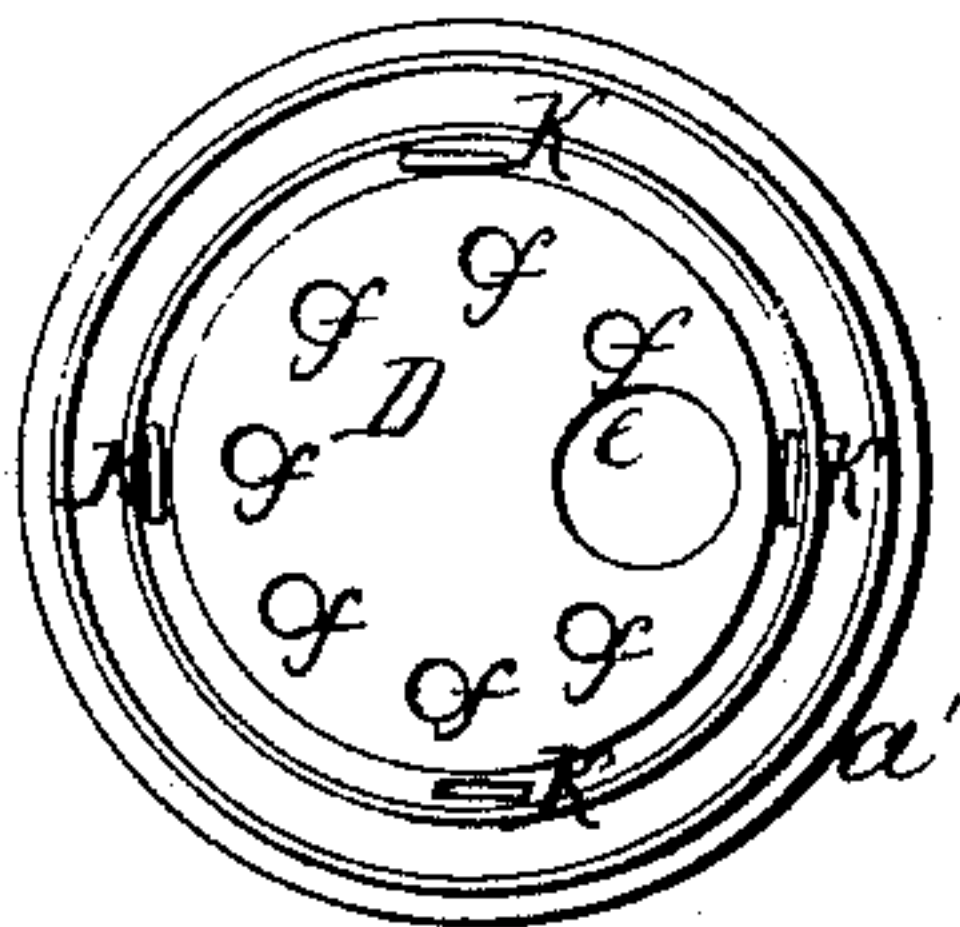
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

THEODORE COOK, OF SPRINGFIELD, MASSACHUSETTS.

## STOVE AND FURNACE.

Specification of Letters Patent No. 16,268, dated December 23, 1856.

*To all whom it may concern:*

Be it known that I, THEODORE COOK, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and Improved Air Heating and Radiating Stove; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an external view of my improvement. Fig. 2 is a vertical section of the same. Fig. 3 is a detached plan or top view of the innermost chamber which encompasses the upper part of the fire chamber.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in the peculiar construction of the stove, the arrangement of the parts etc., as will be hereinafter fully shown and described, whereby the heat is radiated in a perfect manner, and also cold air heated to be conveyed to other apartments besides the one in which the stove is placed.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the fire chamber or pot which is placed on a suitable base B.

C is a chamber the lower part (a) of which is of conical form, and rests upon a flanch (b) surrounding the fire pot. The upper part (c) of this chamber is of cylindrical form and is separated from the lower part (a) by a partition plate (d). The part (c) is provided with a vertical pipe (e) and vertical tubes (f) pass entirely through the part (c) communicating with the part (a) below, as plainly shown in Fig. 2—and the upper end of the fire chamber communicates by means of a pipe (e') with the part (e).

D is a cylindrical case which surrounds the part (c) of the chamber C. This case is somewhat larger in diameter than the part (c) and considerably higher and is provided with a vertical pipe (g) at its upper end. The lower end of the case D rests on a flanch (a') surrounding the chamber C.

E is a cylindrical case which encompasses the case D. The case E is larger in di-

ameter and height than the case D and is provided with a pipe (h).

The fire chamber or pot is encompassed by a cylindrical fender or guard F of open ornamental style as shown in Fig. 1.

G are vertical pipes, the lower ends of which pass through the base B, and the upper ends communicate with the lower part (a) of the chamber C.

H are vertical tubes the lower ends of which pass through the base B and the upper ends communicate with an annular chamber I which surrounds the fire chamber or pot A about half way between its upper and lower end. The chamber I communicates with the fire chamber by means of small openings (i) shown in Fig. 2.

The pipe (g) of the case D passes up through the top of the case E and the pipe (e) of the part (c) of the chamber C passes up through the top of the case D and communicates with the interior of the case E.

J are passages by which the part (c) communicates with the interior of the case E at its lower end and K are openings made through the flanch (a') see Fig. 3. The openings K allow the external air to pass into the case D.

From the above description of parts it will be seen that the heat from the fire chamber passes up through the pipe (e') into the part (c) of the chamber C and thence through the passages J into the case E and then into the pipe (h). This is the circuitous route as shown by the solid black arrows, but when a direct draft is required the heat passes up through the pipe (e) direct into the upper part of the case E and the pipe (e) may be provided with a damper. (The cold air to be heated passes up through the pipes G into the part (a) of the chamber C and through the pipes (f) into the case D, thence upward through the pipe (g). Cold air also passes directly into the case D through the openings K. The pipe (g) is connected with pipes which convey the heated air to the desired apartments.

By the above improvement the heat is radiated in a perfect manner and a large volume of air may be heated to be conveyed to different apartments.

The pipes H and annular chamber I keep the fire supplied with air at its upper sur-

face and consequently prevent inflammable gases from escaping unconsumed.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—

The fire-chamber or pot A, chamber C and cases D, E, provided with the necessary

pipes and arranged relatively with each other as shown and described for the purpose specified.

THEODORE COOK.

Witnesses:

N. A. LEONARD,  
A. H. MERRICK.