

(No Model.)

N. B. ACHESON.

STOVE DRUM.

No. 271,758.

Patented Feb. 6, 1883.

Fig. 2.

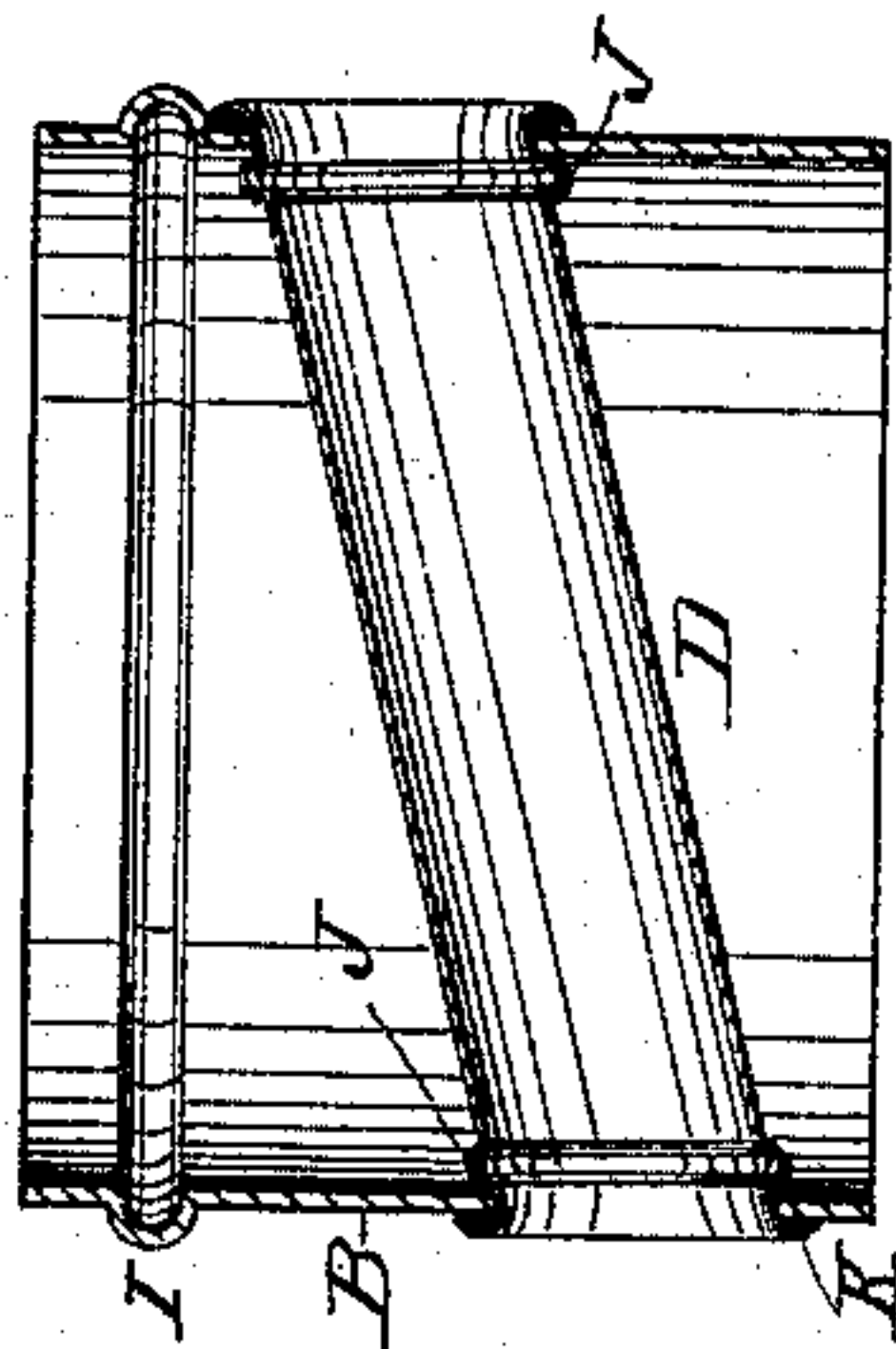


Fig. 3.

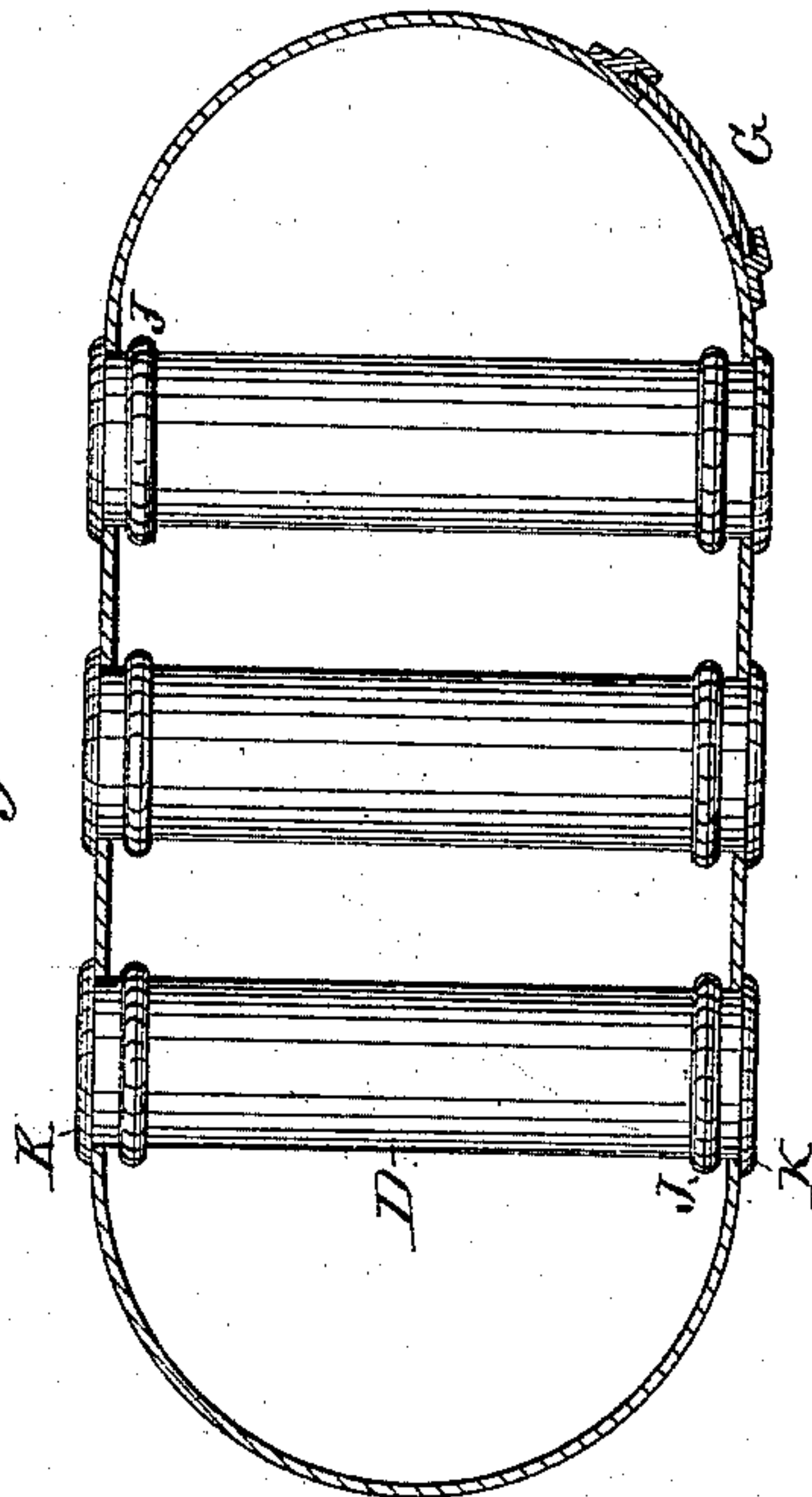
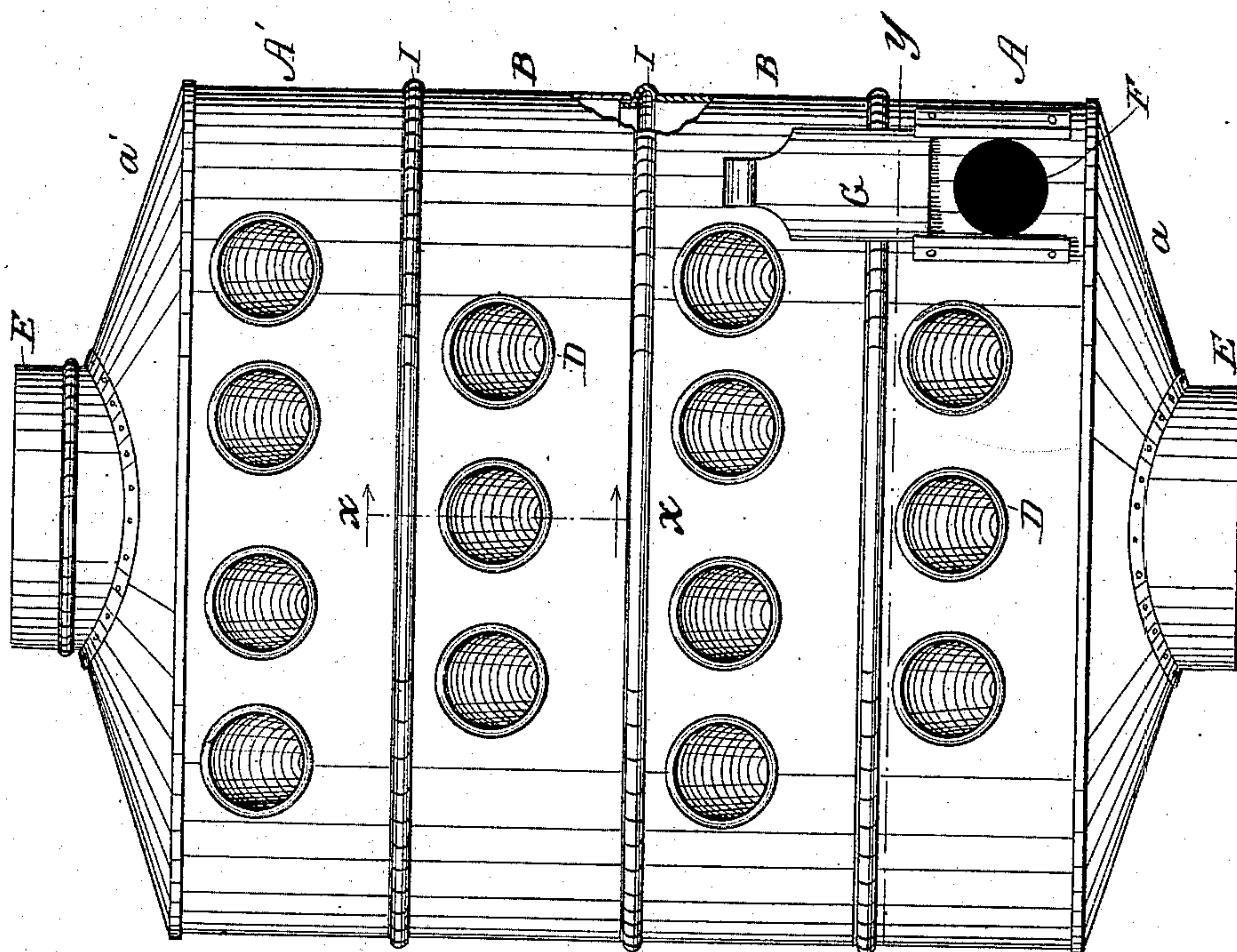


Fig. 1.



Witnesses;
A. M. Tanner
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UNITED STATES PATENT OFFICE.

NATHAN B. ACHESON, OF YOUNGSTOWN, OHIO.

STOVE-DRUM.

SPECIFICATION forming part of Letters Patent No. 271,758, dated February 6, 1883.

Application filed April 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, NATHAN B. ACHESON, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Stove-Drums; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention belongs to that class of heat-radiators or drums for stoves which are adapted to be attached to the stove or introduced at any convenient point in the line of stove-pipe, and also to that class which are provided with tubes through the drum from side to side for the passage of currents of air.

The object of the present invention is to simplify and improve the construction of said drum-heaters and to produce one that will more effectually save the waste heat than any heretofore in use.

To these ends my invention consists of the construction and arrangements of parts hereinafter described, and set forth in the claims.

Figure 1 is a side elevation of my improved stove-drum. Fig. 2 is a vertical section on the line *x x*, and Fig. 3 is a horizontal section on the line *y y*.

The drum is made in sections A B, having flat parallel sides and rounded ends. The end sections, A A', are made with a bottom and top, respectively, *a a'*, which constitute the ends of the drum, and each has a pipe attachment, E, for connection with the stove and stove-pipe. Of the middle sections, B, there may be any number, depending upon the size of the stove. In the present case two middle sections are shown, making with the ends four sections, the number I prefer to use for stoves of a medium size, as it makes a drum of good proportions and gives a sufficient number of air-circulating tubes. Each section has a ridge, I, raised a short distance below its upper edge, so that they can set into each other in the same manner as stove-pipes are usually put together. Each section is provided with a line of tubes, D, running through the drum from side to side, and placed at an inclination, as clearly shown in Fig. 2. These tubes are

permanently attached to the sides of the drum, after the fashion of the boiler-tubes in a steam-engine. A ridge, J, formed on the tube near each end, bears against the inside of the heater, and the edge of the tube is bent down to form a flange, K, on the outside of the heater. The tubes in the several sections are arranged so that those in one section will alternate with the spaces between the tubes of the adjacent sections. The bottom section is provided with an opening, F, placed near one end, which is closed by a slide, G. This opening is for the purpose of introducing paper or light kindlings to burn off the soot that may collect on the tubes.

The operation of the drum is the same as others of its class. The smoke and products of combustion enter through the bottom *a*, pass up through between the pipes, and out at the top *a'*. The air within each tube becomes heated, and, ascending, passes out at the elevated end of the tube, causing a steady current of air through the tubes. It will be noticed that not only the tubes of each section have the same inclination, but also the tubes of all the sections. The currents of air thus all set in one direction and form one strong broad current, which is more potent for diffusing the heat through a room than the same currents would be if they were conflicting and opposite in directions.

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

1. A heat-radiator for stoves, consisting of the top and bottom sections, A' A, having stove-pipe connections E and inclined air-tubes D, and the intermediate section, B, also provided with inclined air-tubes and detachably connected with the top and bottom sections, as and for the purpose set forth.

2. A heat-radiator for stoves, consisting of a drum having end stove-pipe connections and an opening closed by a slide or door and made in sections, each section having a row of inclined tubes passing through the drum, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NATHAN B. ACHESON.

Witnesses:

EDWARD RITTER,
EUGENE D. CARUSI.