

No. 705,507.

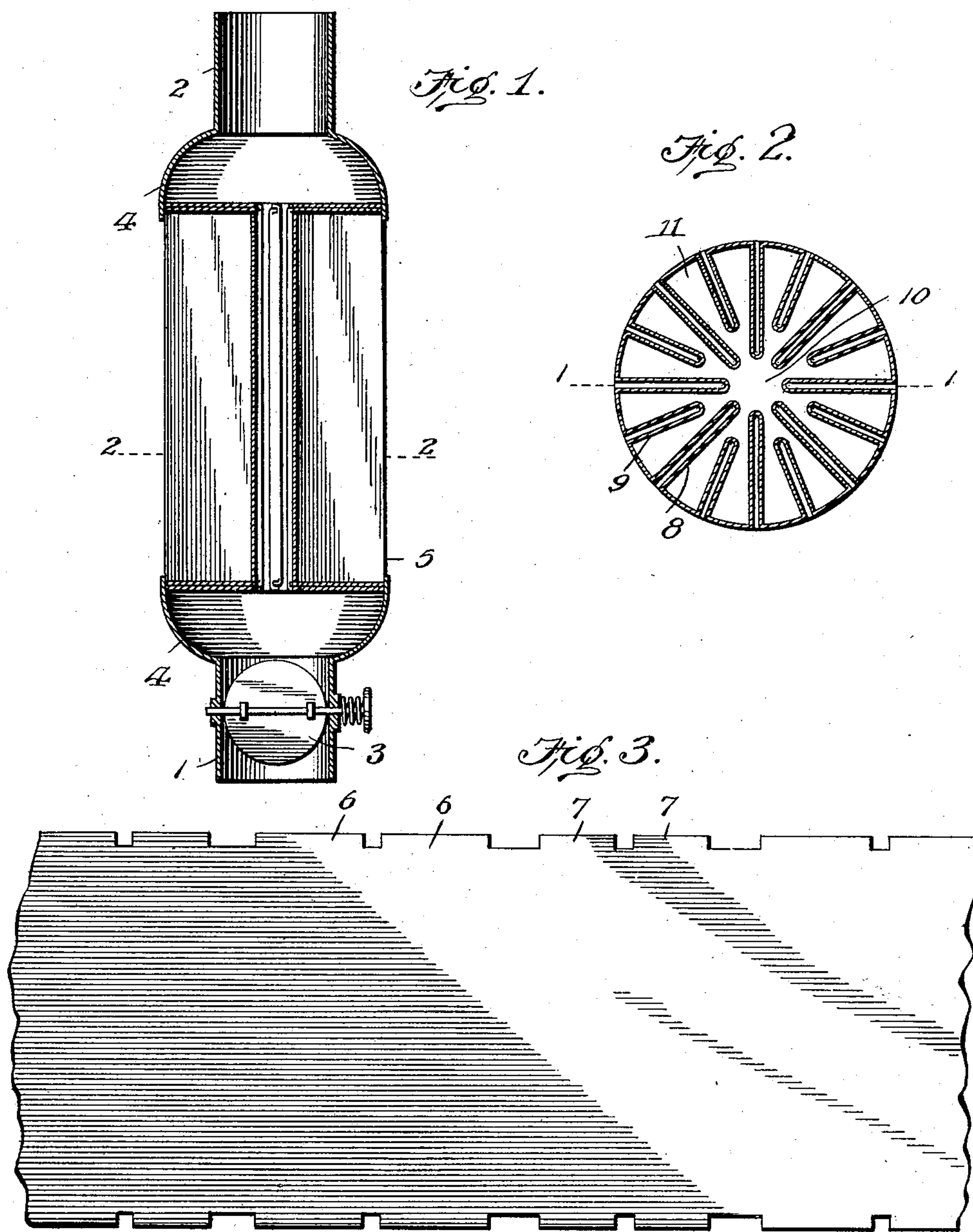
Patented July 22, 1902.

B. A. WILLIAMSON.

STOVEPIPE.

(Application filed Jan. 24, 1902.)

(No Model.)



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

BERT A. WILLIAMSON, OF MAITLAND, MISSOURI.

STOVEPIPE.

SPECIFICATION forming part of Letters Patent No. 705,507, dated July 22, 1902.

Application filed January 24, 1902. Serial No. 91,126. (No model.)

To all whom it may concern:

Be it known that I, BERT A. WILLIAMSON, a citizen of the United States, residing at Maitland, in the county of Holt and State of Missouri, have invented new and useful Improvements in Stovepipes, of which the following is a specification.

This invention relates to stovepipes, and particularly to means forming a part thereof for heating the surrounding air.

The present invention is essentially a pipe-drum, and the purpose of the improved construction is to provide simple and effective means for permitting the surrounding air to circulate through portions of the drum without interfering with the passage of the products of combustion therethrough and to permit the drum attachment to be formed of sheet metal.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is transverse vertical section of a pipe-section embodying the features of the invention, the section being taken in the plane of line 1 1, Fig. 2. Fig. 2 is a horizontal section in the line 2 2, Fig. 1. Fig. 3 is a plan view of a portion of the blank from which the improved attachment is formed.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numerals 1 and 2 respectively designate lower and upper stovepipe-sections, which may be of any length, the lower section being provided with a suitable damper 3. The upper terminal of the pipe-section 1 and the lower terminal of the pipe-section 2 are continued into and have secured thereon diametrically-enlarged inclosures 4, which embrace and are fastened to the upper and lower ends of an intermediate drum 5 particularly embodying the features of the invention. This drum 5 is bent into shape from a sheet-metal blank similar to that shown by Fig. 3, the said blank having its upper and lower edges cut to form contiguous pairs of lips or flanges 6 and 7, the flanges or lips 6 being longer than the flanges 7.

The blank shown by Fig. 3 is struck inwardly in lines centrally of the lips or flanges 6 and 7 to provide entrant air ducts or passages 8 and 9, the ducts or passages 8 being longer than the ducts or passages 9. These ducts or passages 8 and 9 are closed at their upper and lower terminals by bending the lips or flanges 6 and 7 inwardly toward each other, the length of the said lips or flanges in both instances being approximately equal to the inward extent or length of the ducts or passages 8 and 9, respectively. After the lips or flanges 6 and 7 are bent inwardly toward each other they are secured by any suitable means, such as rivets or solder, and the shorter ducts or passages 9 are alternately disposed between the ducts or passages 8, as clearly shown by Fig. 2. A clear flue-space 10 extends vertically through the center of the drum 5, and the compartments 11 between the ducts 8 and 9 communicate with said flue-space, said compartments being open at top and bottom. By having the ducts or passages 9 shorter than the ducts or passages 8 or other products of combustion are prevented from choking or clogging the spaces or throats between the inner terminals of the ducts or passages 8, as it is obvious that if the shorter ducts or passages 9 projected inwardly the same distance as the ducts or passages 8 the number of ducts or passages within a certain area would have to be reduced to avoid such choking or clogging of the same, whereas by the construction set forth a materially greater number of the ducts or passages can be formed within the same area in the manner set forth without liability of the danger arising from clogging and also obviate such tendency. The outer portions of all the ducts or passages are fully shown, and the air is free to circulate therethrough and become thoroughly heated in view of the extended surface provided by the opposite sides of the ducts or passages and without in the least interfering with the draft of a stovepipe.

It will be observed that the inclosures 4 provide chambers at the upper and lower ends of the drum 5, and the smoke and other products of combustion entering the chamber will be permitted to directly and fully enter or expand in the compartments 11, and

thereby more positively and effectively heat the opposite sides of the ducts or passages 8 and the air circulating in said ducts or passages. By this means the caloric of the smoke
5 and products of combustion will be almost fully utilized as a heating medium before such smoke passes into the chimney-flue, and a room or other inclosure in which the drum is located can be more quickly heated and
10 the degree of heat desired maintained therein with an economic use of fuel.

It is proposed to vary the proportions, size, and minor details of construction of the improved drum to suit different applications
15 and locations or inclosures to be heated, and one of the important advantages of the present construction is the practical utilization of sheet metal to form the drum in a simple and effective manner and avoid the usual or
20 ordinary drum constructions wherein are found upper and lower cut heads and connecting-flues, which to a greater or less extent interfere with the draft of the smoke-pipe. Another advantage of the present con-
25 struction is that the ducts or passages are disposed vertically or in the direction of the upward tendency or flow of the air within a room or inclosure. Many other advantages

will appear from time to time to those using the improved device.

Having thus described the invention, what is claimed as new is—

The combination with a stovepipe having upper and lower inclosures forming chambers, of a drum terminally secured to the said in- 35 closures and having a clear flue-space extending vertically through the center thereof, the said drum being also formed with inwardly-projecting radially-arranged ducts of alternate long and shorter extent, the said ducts 40 extending completely in a vertical direction from the lower to the upper end of the drum and opening out through the periphery of the latter, the alternate long and shorter arrangement of the ducts preventing clogging of the 45 throats between the latter communicating with the central flue-space, the upper and lower terminals of the ducts being closed and the spaces between said ducts opening into the upper and lower chambers. 50

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

BERT A. WILLIAMSON.

Witnesses:

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