

No. 675,096.

Patented May 28, 1901.

L. JACOBSON.
HEATING DRUM.

(Application filed Feb. 23, 1901.)

(No Model.)

Fig. 1

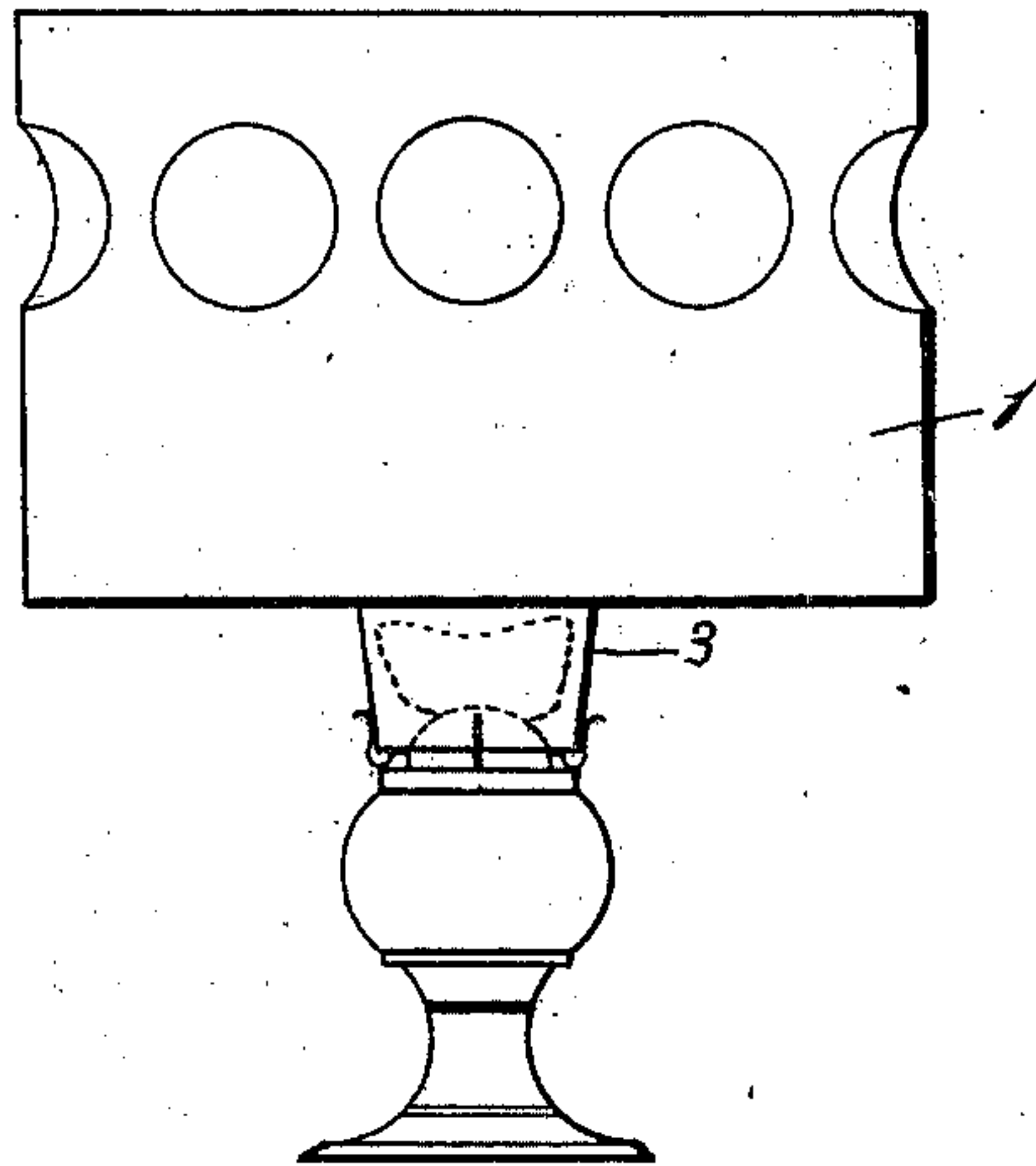


Fig. 2

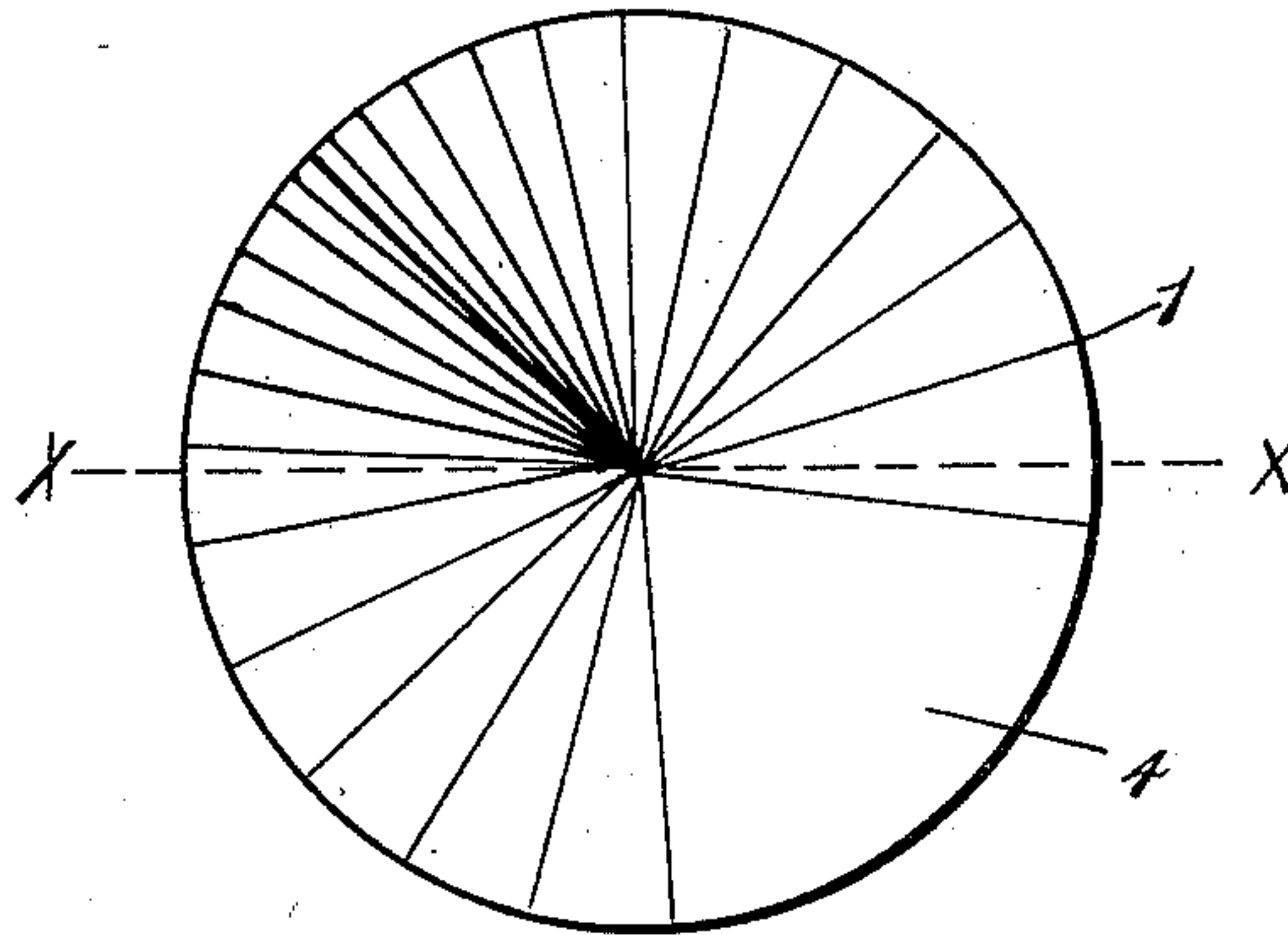
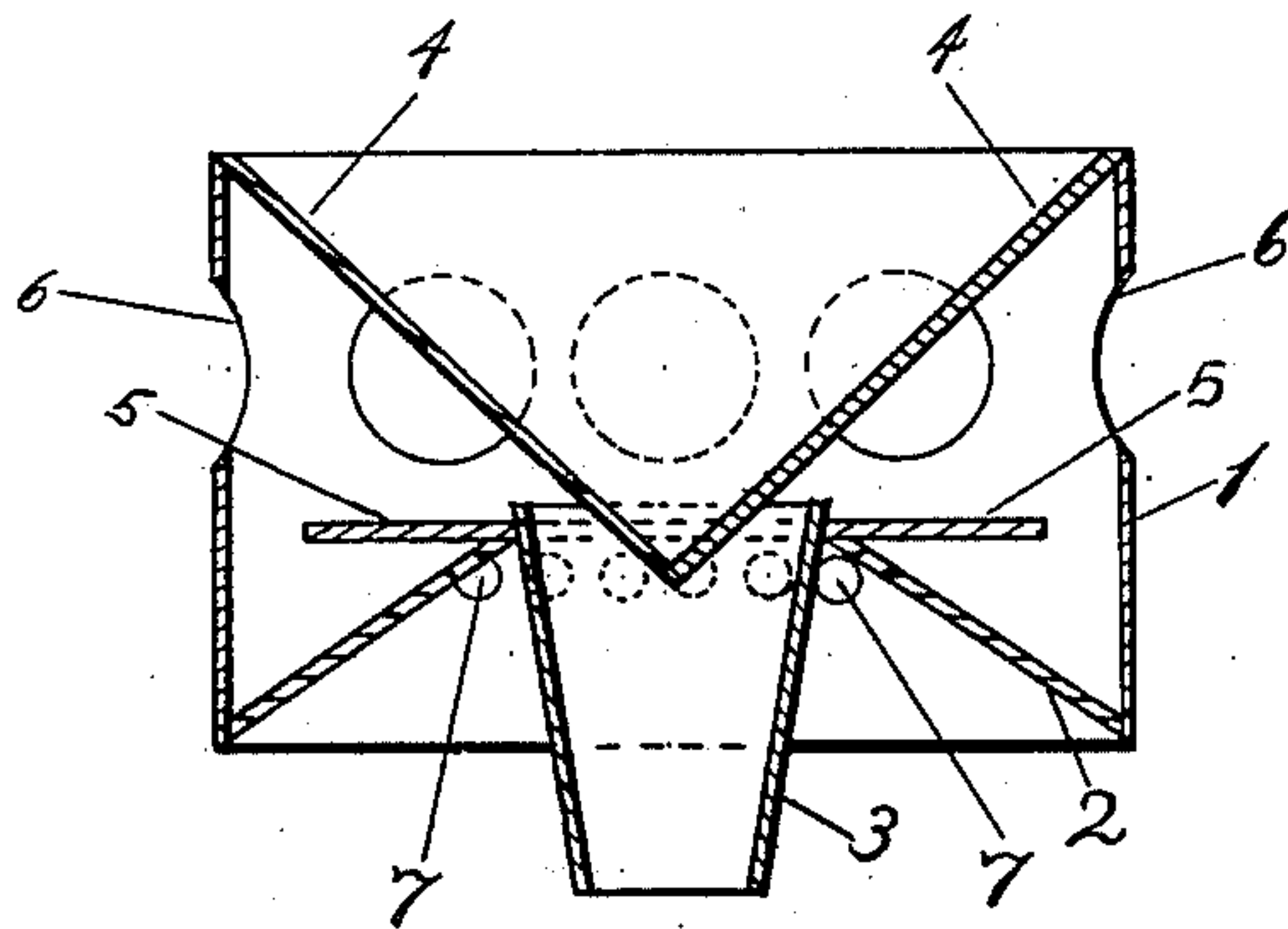


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

LOUIS JACOBSON, OF CAMBRIDGEPORT, MASSACHUSETTS.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 675,096, dated May 28, 1901.

Application filed February 23, 1901. Serial No. 48,445. (No model.)

To all whom it may concern:

Be it known that I, LOUIS JACOBSON, a citizen of the United States, and a resident of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Heating-Drums, of which the following is a specification.

The object of my invention is to produce a heating-drum for a lamp or other small oil or gas burner which will act to radiate and discharge the heat into a room more advantageously than has been the case with heating-drums which have been produced prior to my invention, so far as I am aware. I accomplish this object by producing a heating-drum in which I materially increase the heat-radiating surface by means of an inwardly-projecting conical top and in which I draw in and mix the air of the room with the air or gas which is discharged from the burner of the lamp, so that the volume of heated air which is discharged from the drum is materially increased, the result being that all parts of the room will be heated to a medium temperature instead of some parts being excessively heated and other parts hardly heated at all.

For an understanding of my invention attention is directed to the accompanying drawings, in which—

Figure 1 is a side elevation of my heating-drum applied to an ordinary lamp. Fig. 2 is a plan view thereof, and Fig. 3 is a cross-section on the line X X of Fig. 2.

In the drawings the outside casing 1 of the drum is made circular in form, although it may be made elliptical or rectangular, approximately, according to the shape of the burner in connection with which it is used. The lower end of said casing is provided with an inwardly and upwardly projecting bottom 2, which is in the form of a truncated cone. A chimney 3 is secured in the aperture formed in the apex of bottom 2. Said chimney is smaller at the bottom than at the top, so that ample room for the expansion of the heated gases is provided in the upper end thereof. A downwardly-extending conical top 4 extends from the upper end of casing 1, and its apex is located in the upper end of the chimney 3. A laterally-extending flange 5 is con-

nected to the bottom 2 at the edge of the hole in which the chimney 3 is located, said flange extending about half-way to the casing 1. A series of apertures 7 are formed in the bottom 2 adjacent and below the point where the flange 5 is connected thereto, and a series of apertures 6 are formed in the side of casing 1 about midway of its height.

The operation is as follows: The chimney 3 having been placed on the burner of a lamp, as shown in Fig. 1, the heated products of combustion will be discharged up said chimney against the conical top 4 and will be deflected thereby and discharged into the chamber formed by the side walls 1, bottom 2, and top 4. The heated gases will circulate about said chamber and be finally discharged through aperture 6. At the same time fresh air from the room will be drawn in at the apertures 7 and then carried out under the flange 5 and upwardly, where it will mix with the heated gases which are discharged into the chamber just before the gases are discharged through the apertures 6.

I have found in practice that my device not only greatly assists in heating a room, but that by introducing fresh air from the room into the chamber of the drum and thoroughly mixing this fresh air with the products of combustion from the lamp before the latter are discharged from the chamber the disagreeable odor of the usual oil-stove is wholly neutralized, so that when the heated air is discharged from the casing into the room it is practically odorless.

Certain changes from the above-described construction may be made without departing from the spirit of my invention. For example, the flange 5 may be omitted, so that the cold air which passes through the apertures 7 will mingle with the hot air as soon as it passes out of the upper end of chimney 3 and will cause a greater volume of cold air to be drawn in the drum in proportion to the volume of hot air which is discharged up the chimney. However, I consider the use of the flange preferable, for it will cause the cold air to mingle with the hot air just before the latter is discharged through the holes 6, so that the main volume of air in the chamber above the flange will not be appreciably cooled, and the heat-radiating conical top 4

will be kept at a higher degree of heat and will therefore radiate more heat into the room than if the flange were not present. As the cold air will be mixed with the hot air just before the latter is discharged into the room, the temperature of the hot air will be reduced, destroying its odor, and the volume of heated air discharged into the room will be greatly increased, as before explained.

10 All parts of the heating-drum are made of sheet metal, as is customary in devices of this kind.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

15 1. A heating-drum comprising a chamber having upright sides, with a series of apertures therein below the top thereof, an imperforated, inverted, conical-shaped top, an upwardly-extending conical-shaped bottom 20 having a series of apertures therein and an enlarged aperture at its apex, and an upright tube or chimney which is fitted in said enlarged aperture, whereby the products of combustion may be discharged against the apex 25 of said conical top and outside air drawn into said chamber and mixed therewith before they are both discharged therefrom.

2. A heating-drum comprising a chamber 30 having upright sides, with a series of apertures therein below the top thereof, an imperforate, inverted, conical-shaped top, an

upwardly-extending conical-shaped bottom having a series of apertures therein, and an enlarged aperture at its apex, an upright tube or chimney which is fitted in said enlarged aperture, and a laterally-extending flange inside said chamber which is connected to said bottom above the apertures therein, as and for the purposes set forth.

3. A heating-drum comprising a chamber having upright sides with a series of apertures therein below the top thereof, an imperforated, inverted, conical-shaped top, an inwardly-extending bottom which is connected to said sides near the lower edges thereof, and has a series of apertures therein and an enlarged aperture which is centrally arranged therein directly below the apex of said top, and a chimney which is arranged in line with said centrally-arranged aperture, whereby the products of combustion may be discharged against the apex portion of said conical top and outside air be drawn into said chamber and mixed therewith before they are both discharged through the apertures in the sides thereof.

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

LOUIS JACOBSON.

Witnesses:

LOUIS H. HARRIMAN,
HARRY E. PERKINS.