No. 812,614. PATENTED FEB. 13, 1906.

C. T. TAYLOR & G. L. CLARK.

STOVE.

APPLICATION FILED JUNE 19, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

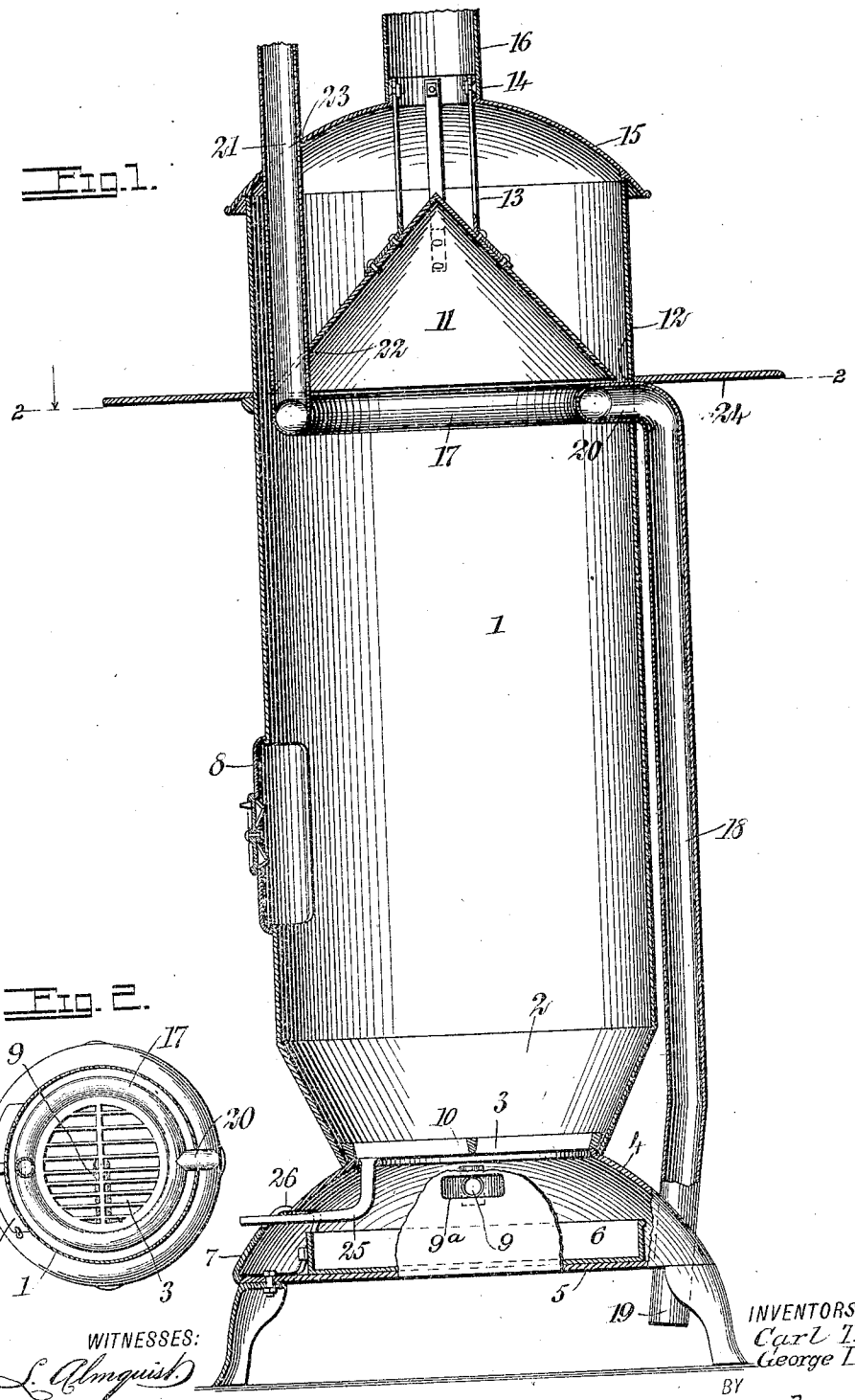
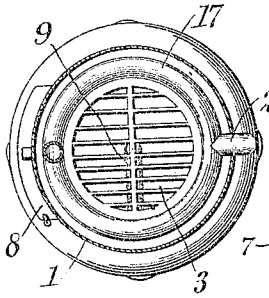


Fig. 2.



WITNESSES:

L. Almquist

F. D. Cummer

INVENTORS

Carl T. Taylor.

George L. Clark

BY

Munn & Co

ATTORNEYS

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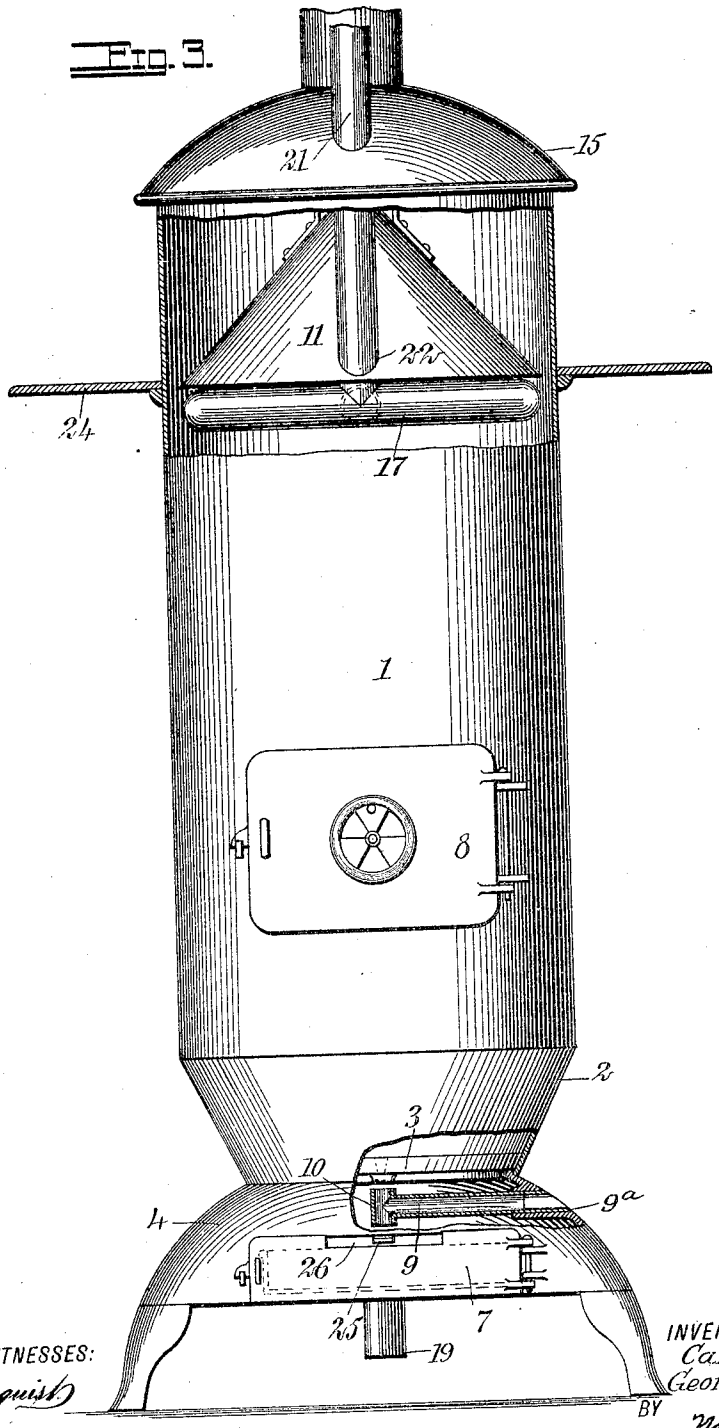
2 SHEETS—SHEET 2.

Fig. 3.



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ATTORNEYS

UNITED STATES PATENT OFFICE.

CARL TRUE TAYLOR AND GEORGE LEO CLARK, OF MOUNT STERLING, ILLINOIS.

STOVE.

No. 812,614. Specification of Letters Patent. Patented Feb. 13, 1906.

Application filed June 19, 1905. Serial No. 265,856.

To all whom it may concern:

Be it known that we, CARL TRUE TAYLOR and GEORGE LEO CLARK, citizens of the United States, and residents of Mount Sterling, in the county of Brown and State of Illinois, have invented a new and Improved Stove, of which the following is a full, clear, and exact description.

This invention relates to stoves; and the object of the invention is to produce a stove in which the combustion will be improved and equalized at all parts and to provide the stove with improved means for heating air for the purpose of warming living apartments or rooms.

The invention consists in the construction and combination of parts to be more fully hereinafter described, and definitely set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a central vertical section through a stove embodying our invention. Fig. 2 is a horizontal section upon a reduced scale and taken on the line 2 2 of Fig. 1; and Fig. 3 is a front elevation of the stove, the upper portion and a part of the base thereof being broken away and shown in section.

Referring more particularly to the parts, 1 represents the body of the stove, which is of a common cylindrical form contracted below, as at 2, and provided with a grate 3. Beneath the grate 3 the stove is formed with a base 4, having a bottom 5, supporting an ash-pan 6. The interior of this base 4 constitutes an ash-box, and access is had to the interior thereof through a hinged door 7. The type of stove illustrated is especially intended for burning soft coal, and the fuel would be fed to the fire at the fire-door 8. In applying our invention in order to improve the combustion of the coal we provide a tubular air-duct 9, which passes in through a bell-mouth 9^a at the side of the base. This tubular air-duct extends to a point beneath the center of the grate 3, as indicated, at which point is formed a T-head 10, the axis of the head being substantially vertical and opening above and below, as indicated. The tubular duct 9 constitutes the only air-inlet to the burning coal. It affords means for delivering air at substantially the central point of the grate. From this point the air will of course find its way upwardly through all parts of the fire-bed. This arrangement has not the disadvantage of an ordinary draft-opening, because by the latter arrangement the air has a tendency to follow the shortest path or the path of least resistance.

In order to increase the heating capacity of the stove, we provide in the upper portion of the body thereof a reflector 11, which is of conical frrm, the axis of the same being in a vertical position. This reflector is disposed centrally in the body of the stove, and its greatest diameter is slightly less than the interior diameter of the stove, whereby an annular passage-way or opening 12 is formed thereabout, as will be readily understood. This reflector is preferably supported upon vertical hangers 13, which depend from a collar 14 on the dome or cover 15 of the stove, the said collar 14 being arranged around an opening through which the smoke escapes, and this collar affords means for attaching the stove-pipe 16, as indicated. Just beneath the reflector 11 there is mounted a heating-coil 17, which is of annular form, as indicated most clearly in Fig. 2. This coil 17 is of less diameter than the reflector, so that the lower edges of the reflector project beyond the same, as will be readily understood. Air is admitted to the coil 17 through an inlet-pipe 18, which passes vertically upward at the rear of the stove-body. Its lower extremity terminates in an inlet mouth or snout 19, adapted to take air from a point near the floor and under the base 4 of the stove, and the upward extremity of the pipe is formed with a laterally-disposed neck 20, which passes through an opening in the wall of the body, as indicated, connecting with the coil 17 on the interior. At a point opposite to the neck 20 an outlet-pipe 21 is arranged, which leads vertically upward from the coil 17, as shown. This outlet-pipe passes through a recess or opening 22, formed in the lower edge of the reflector, and passes out through the dome 15 at an opening 23. On the outer side of the stove-body an annular heating-shelf 24 is arranged, the same being supported at substantially the height of the lower edge of the reflector.

In the operation of the stove the heated gases and gases of combustion which pass upwardly in the body of the stove are reflected

downwardly by the reflector. In this way the reflector operates to concentrate the heat just beneath it, at which point the heating-coil 17 is located. In this way the air which passes through the stove is very highly heated in the coil. After passing through the stove this air may be allowed to escape in the room in which the stove is placed, or it may be passed through heating-pipes running to other rooms. The conical form of the reflector is not only conducive to the concentration of the heat beneath it, but also operates to prevent the accumulation of ashes or soot upon its upper side.

With a stove constructed as described a very complete combustion of the coal is effected and the heating power of the stove is much increased by the reflector.

In order to enable the grate 3 to be shaken, we provide the same with a downwardly-offset arm 25, which projects through an opening 26 in the ash-door 7.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A stove having a vertically-elongated body, a substantially conical reflector supported in the upper portion of said body, an air-ring disposed in the upper portion of said body and beneath the edge of said reflector, an inlet-pipe at the side of said body and leading air to said ring, and an outlet-pipe adapted to conduct air from said ring.

2. A stove having a substantially cylindrical body including a cover, a substantially conical reflector supported from said cover, an air-ring disposed within said body beneath the edge of said reflector, an inlet-pipe leading at the side of said body from a point near the floor and communicating with said air-ring, and an outlet-pipe leading from said air-ring and passing upwardly within said body and through said cover.

3. A stove having a substantially cylindrical body surmounted by a cover having a centrally-disposed opening therein, a collar projecting upwardly at said opening, a plurality of hangers attached to said collar and depending into the interior of said body, a substantially conical reflector attached to said hangers and supported thereby, an air-ring disposed under said reflector, an inlet-pipe leading to said air-ring, and an outlet-pipe leading therefrom.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CARL TRUE TAYLOR.
GEORGE LEO CLARK.

Witnesses:
HARRY G. TAYLOR,
WALTER I. MANNY.