

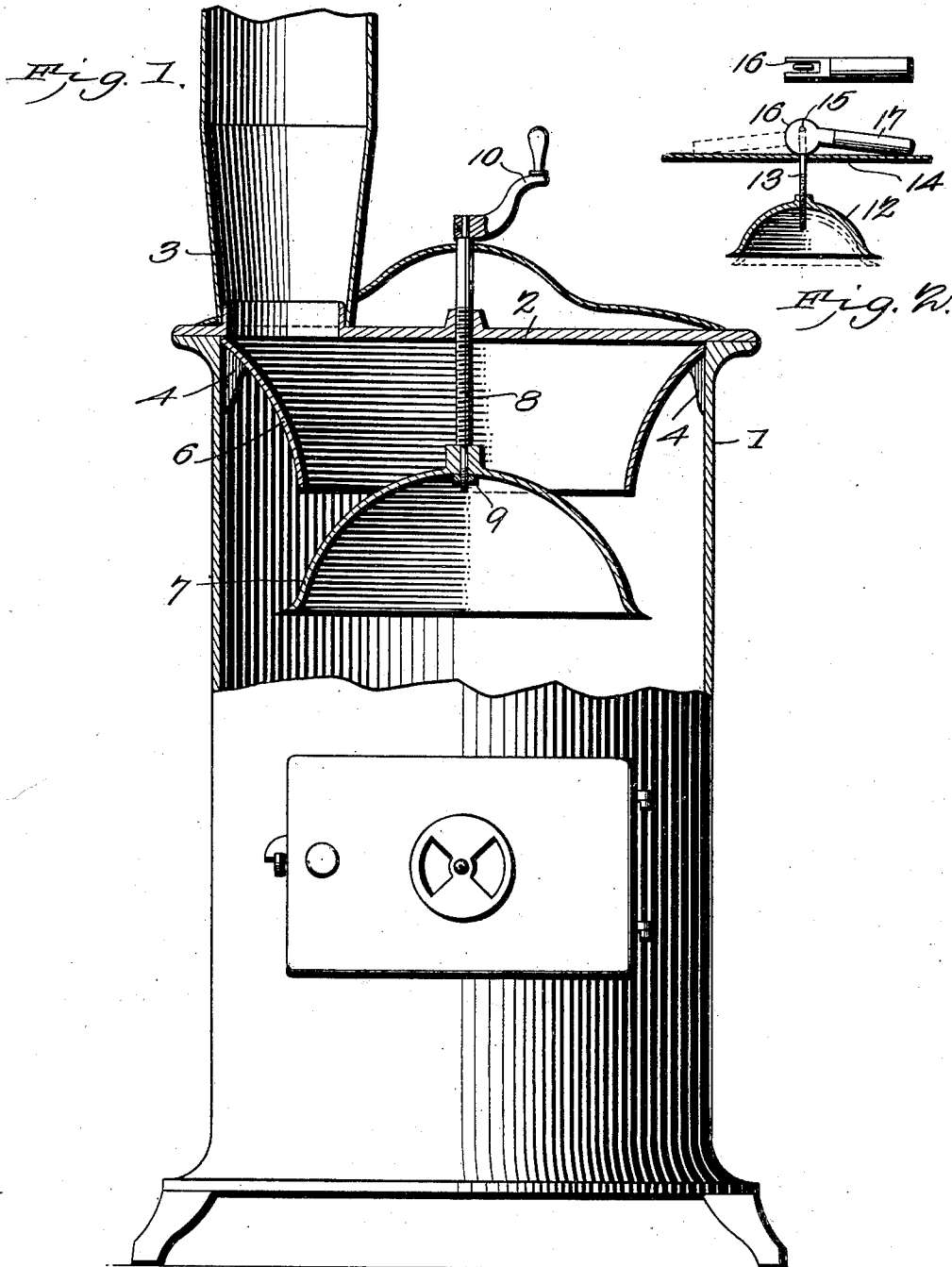
No. 706,996.

Patented Aug. 12, 1902.

B. C. OBLINGER & A. H. C. BEATTY.  
HEAT REFLECTOR FOR STOVES.

(Application filed Aug. 18, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## HEAT-REFLECTOR FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 706,996, dated August 12, 1902.

Application filed August 19, 1901. Serial No. 72,547. (No model.)

*To all whom it may concern:*

Be it known that we, BARRETT C. OBLINGER and ALBERT H. C. BEATTY, citizens of the United States, residing at Independence, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Heat-Reflectors for Stoves, of which the following is a specification.

Our invention relates to heat-reflectors for stoves; and the objects of our invention are, first, to cause the gases rising from the fire to be consumed within the stove instead of passing up the chimney, and, second, to reflect outwardly and downwardly the heat generated by such combustion of the gases.

With these objects in view, we carry out our invention by placing an annular reflector, having downwardly-converging sides in the top of the stove, and arranging a vertically-movable bell below and within the bottom opening in the reflector, with means for lowering and raising the bell, so that when the bell is drawn up into contact with the lower edge of said reflector the interior of the stove is thereby cut off from the stovepipe, and the amount of draft through the stovepipe may be regulated by adjusting the bell from or toward the reflector.

Our invention will now be fully described with reference to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of our invention applied to a stove; the stove being broken away to expose the same. Fig. 2 shows a modified means for adjusting the bell.

1 designates the wall of a stove of the kind which is fed with fuel from a door in the side.

2 designates the top plate, to which the stovepipe 3 is connected. Beneath the plate 2 is an annular casting 6, referred to hereinafter as a "reflector." This reflector is supported by lugs or brackets 4, which are riveted to the stove-wall 1. The walls of said reflector incline downwardly and inwardly and are curved, as shown in Fig. 1. The diameter of the lower edge thereof should be about two-thirds of the inside diameter of the stove. The upper edge of the reflector fits the wall of the stove.

Within the circular opening in the bottom of the reflector 6 is hung a cast-iron bell 7,

which serves the double purpose of a cut-off or damper and a reflector for reflecting some of the heat of the fire downwardly. The bell is supported by a screw-threaded stem 8, which extends through a threaded hole in the top plate 2. We prefer to secure the stem 8 rigidly and tightly to the top of the bell 7, and one means for doing so is by a nut 9, as shown. A crank 10 is rigidly secured to the upper end of the stem 8 for turning the same, and thereby changing the height of the bell 7.

A modified device for moving the bell 7 up and down is shown in Fig. 2, in which 12 designates the bell, supported by a screw-threaded stem 13, passing through a threaded hole in its top. The stem 13 passes through a hole in the stove-lid 14 and is connected to a cross-pin 15, secured eccentrically in a vertically-slotted cam 16, on which is a handle 17, by which the cam 16 may be turned half-way around, bringing the handle to the position shown in dotted lines. This movement lowers the pin 15, stem 13, and bell 12 to the position shown in dotted lines. The finer adjustment of the bell 12 is effected by turning the handle 17 horizontally, thereby rotating the stem 13 and raising or lowering the bell, the latter being held against rotation.

The operation of the entire device is as follows: In ordinary stoves the draft carries up the gases of combustion before they are burned or consumed. In this device the bell 7 and the side reflector 6 become highly heated, and the rising gas is partly confined in the annular space below the side reflector, in which the gas will have a circular movement. The heat of the bell and the reflector ignites the gas, which then burns continuously and raises the temperature of said parts still higher. When the fire is started in the stove, the bell 7 is lowered to give the fire a full draft. As the fire gains headway the bell may be raised to give any desired draft, as the products of combustion must pass between the bell and the side reflector to reach the chimney.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. A stove having a smoke escape-opening in the top of its combustion-chamber, a re-

flector depending from its top and extending  
 around its sides, said reflector being at its  
 upper edge tightly joined to the top of the  
 stove, having downwardly-converging sides  
 5 and being open on its lower side, the smoke  
 escape-opening being within the radius of  
 the reflector and at one side thereof, and a  
 bell of approximately the same diameter as  
 the mouth of the reflector and disposed mouth  
 10 downward below the reflector, whereby the  
 bell and reflector become highly heated, re-  
 tard the escape of unconsumed combustible  
 gases and ignite the same, substantially as  
 described.  
 15 2. A stove having a smoke escape-opening  
 in the top of its combustion-chamber, a re-  
 flector depending from its top and extending  
 around its sides, said reflector being at its  
 upper edge tightly joined to the top of the  
 20 stove, having downwardly-converging sides  
 and being open on its lower side, the smoke  
 escape-opening being within the radius of  
 the reflector and at one side thereof, a bell  
 of approximately the same diameter as the  
 25 mouth of the reflector and disposed mouth

downward below the reflector, whereby the  
 bell and reflector become highly heated, re-  
 tard the escape of unconsumed combustible  
 gases and ignite the same, and means to ad-  
 30 just the bell vertically to vary the width of  
 the space between the same and the reflector,  
 and thereby regulate the draft, substantially  
 as described.

3. In combination with a stove, an annu-  
 lar heat-reflector supported therein, its pe- 35  
 riphery fitting within the stove-wall, the top  
 plate of the stove having a screw-threaded  
 hole therein, a vertical screw-threaded stem  
 passing through said hole and extending  
 through the top of the stove, means for rotat- 40  
 ing said stem, and a bell supported by said  
 stem, within and below the lower edge of said  
 annular reflector; substantially as described.

In testimony whereof we affix our signa-  
 tures in the presence of two witnesses.

BARRETT C. OBLINGER.  
 ALBERT H. C. BEATTY.

Witnesses:

O. M. VAN DORSTON,  
 M. L. LANGE.