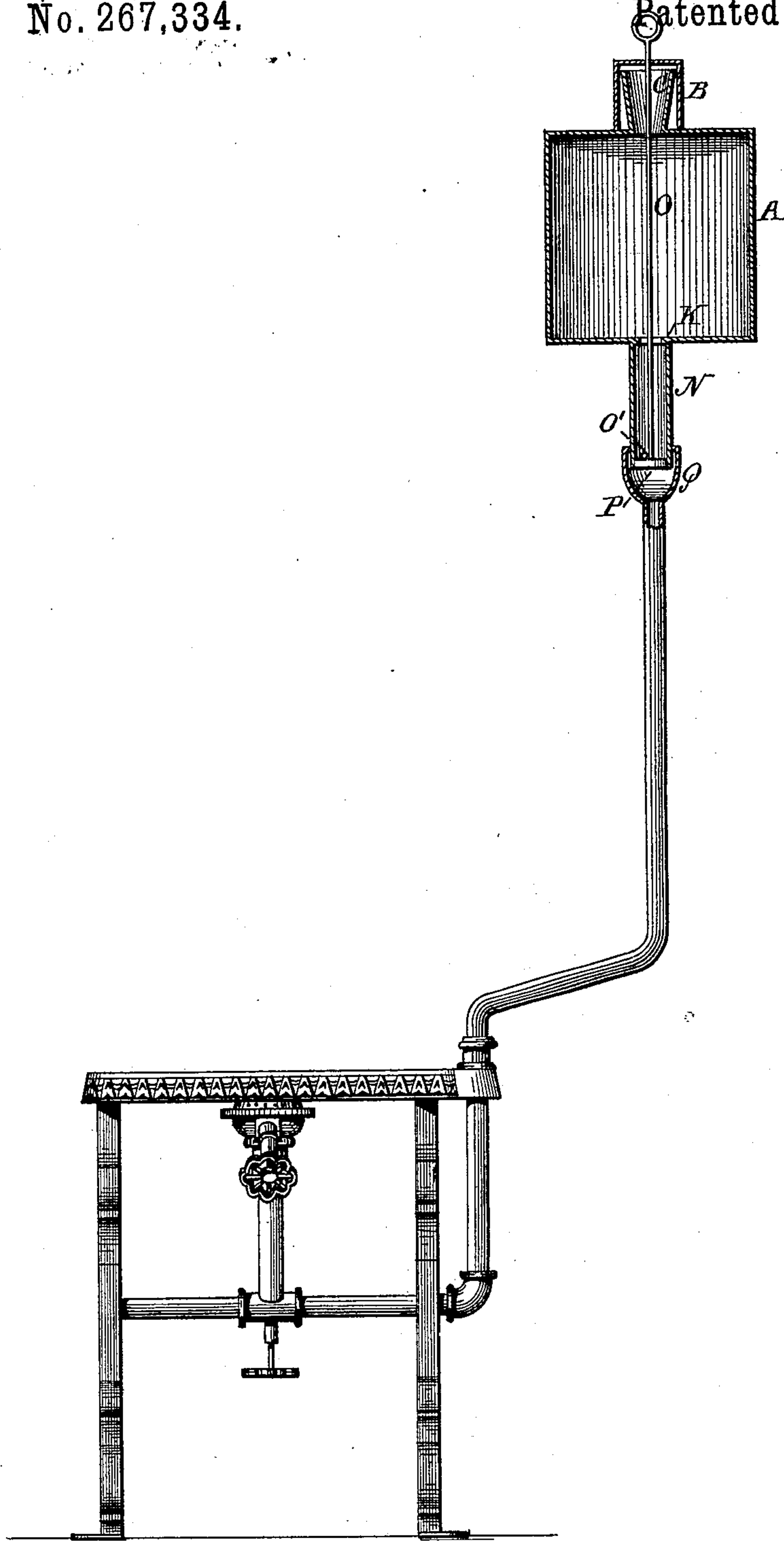


(No Model.)

Z. DAVIS.  
VAPOR STOVE.

No. 267,334.

Patented Nov. 14, 1882.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ZEBULON DAVIS, OF CANTON, OHIO.

## VAPOR-STOVE.

SPECIFICATION forming part of Letters Patent No. 267,334, dated November 14, 1882.

Application filed July 21, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, Z. DAVIS, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Vapor-Stoves; 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

The present invention has relation to certain new and useful improvements in that class of vapor-stoves provided with a safety-reservoir, in which is employed means for drawing the gasoline or oil from the burners previous to filling said reservoir, and thus prevent serious accidents, which frequently occur when the reservoir or other vessel is being filled while the burners are lighted.

Previous to my invention, in this class of vapor-stoves the reservoir was provided with a movable plunger of somewhat less diameter than the interior diameter of the reservoir, so that the plunger would work loosely therein and allow the oil or gasoline to pass in its course between the interior sides of the reservoir and exterior of the plunger. Although this plunger, in its action, draws the oil or gasoline from the burners, when raised to the top of the reservoir it in no way could act in the same capacity as a tightly-fitting piston, as the gravity of the oil or gasoline alone is depended on to draw it away from the burners when the plunger is raised.

It is the object of my invention to provide means whereby a greater certainty of action is obtained, and more perfect in its results in extinguishing the burners, and instead of a loosely-fitting plunger, operating as above specified, I employ a tightly-fitting piston located at any suitable point between the reservoir and the burners, and adapted to draw the oil or gasoline away from the burners by creating a vacuum, and thus instantly extinguish the flame.

It further consists in the combination of the oil-reservoir and cover therefor, with a piston and piston-rod, the piston being connected to the cover, so that the removal of the cover for the purpose of filling the reservoir will cause

the flames to be instantly extinguished, as will be more fully described hereinafter.

The object of my invention is to provide a safety attachment to vapor-burners, so as to extinguish the flames from every burner whenever the cover is removed from the reservoir for the purpose of filling it.

The accompanying drawing represents a vertical section of my invention.

A represents an oil-reservoir of any suitable shape or construction, and into which the oil is poured for the purpose of feeding the burners in the usual manner. Upon the top of this reservoir is formed a funnel or mouth, C, of any suitable form, so that the reservoir can be readily filled from a can or vessel of any kind. The cover B, which covers this mouth, is intended to close it sufficiently to prevent any evaporation of the fluid, and yet to allow sufficient air to flow through into the reservoir to insure a steady supply of oil to the burners. This cover B is here shown as being made simply cup-shaped, so as to fit down over the mouth; but I do not limit myself to this particular construction, for any other that may be preferred may be used.

To the under side of the reservoir is attached in any suitable manner the cylinder N, in which the piston P moves. Connected to this piston is the piston-rod O, which extends up through and is fastened to the cover B, so that whenever the cover is removed for the purpose of filling the reservoir the piston will be drawn upward in the cylinder N, so as to cause a vacuum in the lower portion of the cylinder, and through this vacuum a suction upon each of the burners of the stove. The upper end of this cylinder is contracted, as shown at K, so that the piston cannot be accidentally pulled up too far, and thus allow a sudden rush of oil from the reservoir through the pipes. Through the lower end of the cylinder, just above the lowest point at which the piston rests, is made a suitable opening, O', through which the oil flows from the reservoir to the burners.

Outside of the lower end of the cylinder is made a suitable enlargement, Q, through which the oil flows around the lower end of the cylinder down into the supply-pipe.

I do not limit myself to the precise location



of the piston and cylinder, for they will operate  
equally as well when placed below the level of  
the burners as when placed above them. If so  
desired, a coiled or other suitable spring may  
5 be secured to the bottom of the piston, so as  
to draw it back into position as soon as the  
piston-rod is released. One great source of  
danger with vapor-burners is that people, not  
knowing the danger, will attempt to fill the reser-  
10 voir while the burners are lighted. Explosions  
and accidents are almost sure to happen, and  
hence the object of my invention is to extin-  
guish the flames in the very act of raising the  
cover, and thus make accidents impossible.  
15 Having thus described my invention, I  
claim—

1. The combination, with a vapor-burner, oil-  
reservoir, and supply-pipe thereof, of a tightly-  
fitting piston adapted to operate substantially  
as and for the purpose specified. 20

2. The combination, with a vapor-burner  
and an oil-reservoir, of a supply-pipe, the pis-  
ton, the piston-rod, and the cover for the reser-  
voir, whereby the removal of the cover of the  
reservoir will cause the burner or burners to 25  
be extinguished, substantially as specified.

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

ZEBULON DAVIS.

Witnesses:

ABNER MCKINLEY,  
A. C. TONNER.