

No. 716,486.

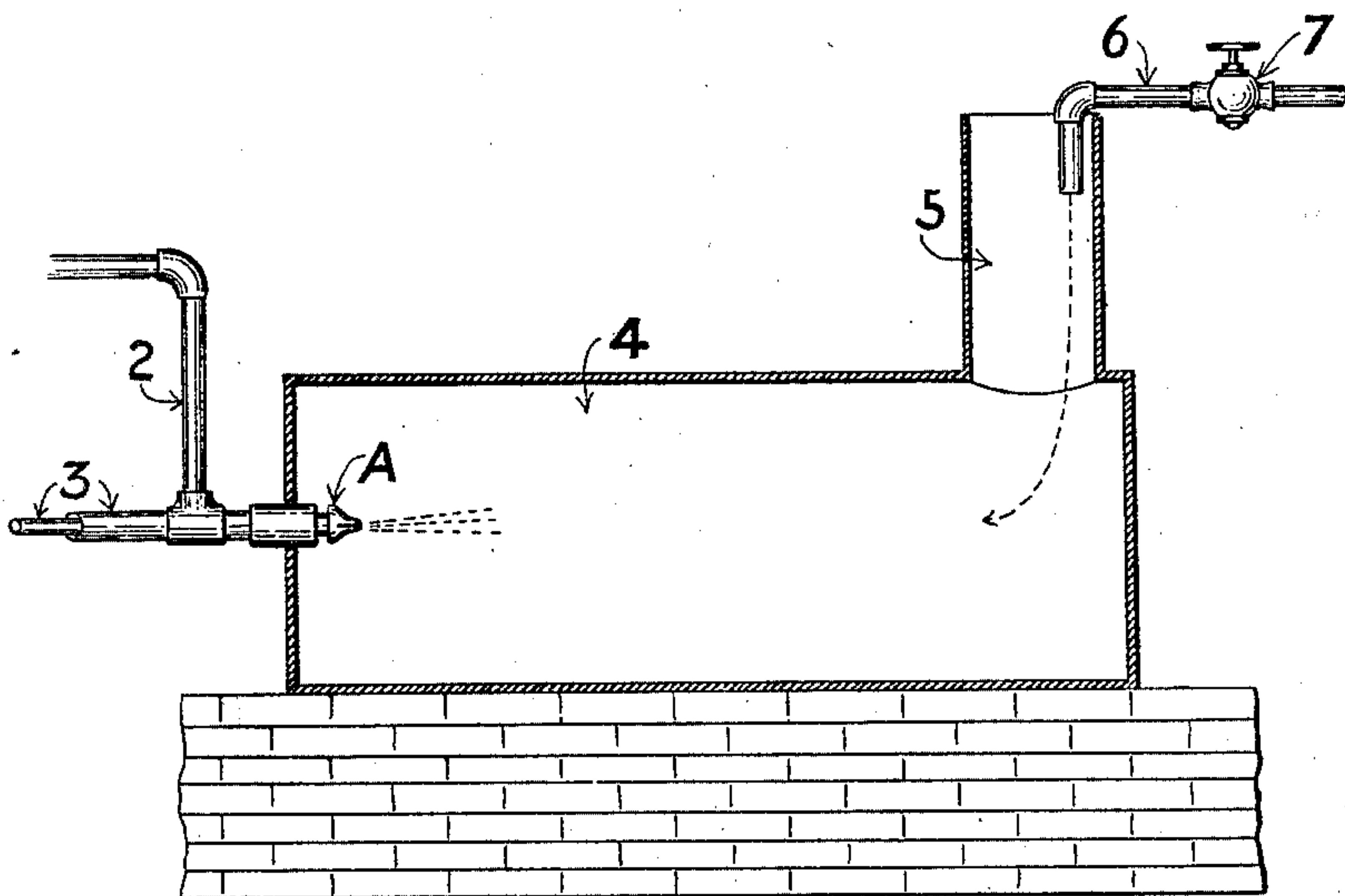
Patented Dec. 23, 1902.

J. R. SCOTT.

OIL BURNING FURNACE ATTACHMENT.

(Application filed Sept. 8, 1902.)

(No Model.)



Witnesses,

*F. F. S. Kelsey*

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# UNITED STATES PATENT OFFICE.

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## OIL-BURNING-FURNACE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 716,486, dated December 23, 1902.

Application filed September 8, 1902. Serial No. 122,498. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN RAMALEY SCOTT, a citizen of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Oil-Burning-Furnace Attachments; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an attachment for furnaces of all descriptions in which oil is employed as a fuel; and it consists in a means for injecting a body of steam or air, or both, to meet the products of combustion before the escape through the chimney of the furnace.

The accompanying drawing illustrates a means for carrying out my invention.

In oil-burning furnaces the oil is usually admitted to a burner, as at A, by means of a pipe 2. Air or steam, or both, is admitted under pressure through the pipes, as at 3, to mingle with the oil, and together they are injected into the furnace 4 in a state of minute subdivision, which facilitates the ignition and burning of the oil. Ordinarily the products of combustion escape freely through a chimney, as at 5; but I have found that a large proportion of the heat-giving elements of the oil escape through the chimney before being completely burned, and this is a source of considerable loss.

In my invention I inject steam or air through a pipe 6, which admits it into the furnace in such a manner as to meet the products of combustion on the way to the chimney and to check their movement in that direction. The action of the jet of air or steam thus introduced meeting the on-wardly-flowing products of combustion is to return them toward the front and cause a swirl of vapor, which is thus retained within

the furnace and in contact with the flame, so as to thoroughly consume the ignitable product before it can escape through the chimney.

The jet introduced through the pipe 6 may be regulated to any degree by a control cock or valve, as at 7, so that the products of combustion and the draft moving toward the chimney by reason of the jet at the burner will be checked and retained long enough to be fully consumed, but they are not thrown back with such force as to be discharged through the furnace-front.

A sufficient space is provided within the chimney to allow the escape of the products of combustion, which will be reduced in this manner to a minimum.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with an oil-burning furnace and the burner-jets discharging into the front thereof, of a counter jet of air or steam discharging into the chimney or outlet of the furnace in a direction opposite to the outflow of products of combustion, substantially as herein described.

2. The combination with an oil-burning furnace, burner-jets discharging into the front and the escape flue or chimney of a jet-tube to conduct air or steam, said tube discharging into the chimney and against the outflow of the products of combustion and a cock to regulate the current thus introduced.

In witness whereof I have hereunto set my hand.

JOHN RAMALEY SCOTT.

Witnesses:

GEO. W. SPINK,  
EARL L. COOK.