March 18, 1930. L. L. BLANCHARD 1,751,026

CHIMNEY

Filed July 2, 1929

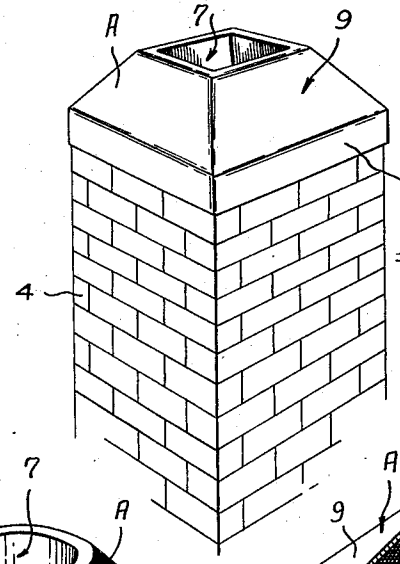


Fig. 1.

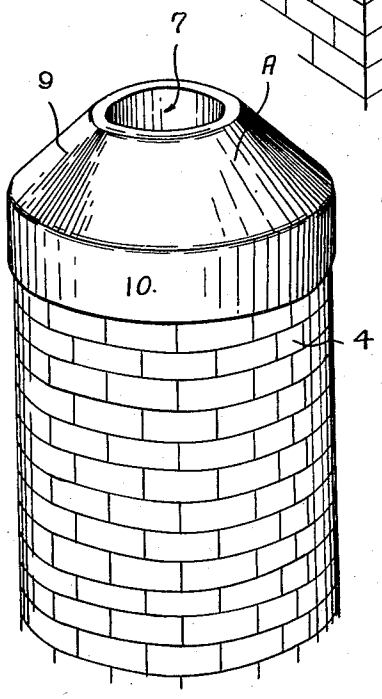


Fig. 3.

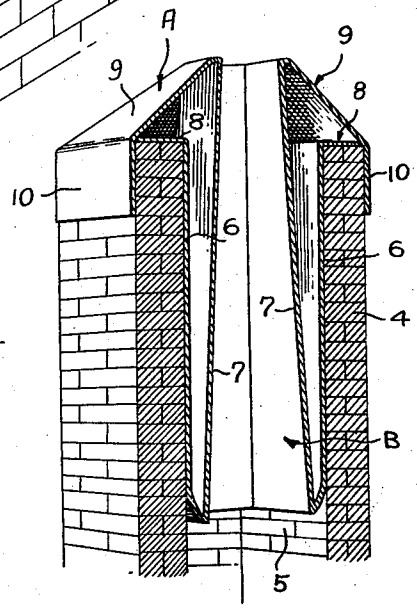


Fig. 2.

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UNITED STATES PATENT OFFICE

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CHIMNEY

Application filed July 2, 1929. Serial No. 375,402.

This invention relates to new and useful improvements in caps for chimneys and more particularly to a cap of the character which will serve to eliminate the bad conditions, once prevalent in chimney stacks.

An object of this invention is to provide a cap of the character described, having a dead air space between the walls thereof, which air becomes spontaneously heated by the products of combustion within the chimney, with the result that the temperature within the stack is uniformly maintained, even to the discharge opening, preventing condensation within the stack and consequent deposit of creosote, which insures increased draught and quick elimination of carbonaceous gases which are the enemies of heat.

Another object is that by providing such a cap of the character described, which evens and increases the degree of heat within the flue so that the volatility of the gases therein is increased to cause suction at the discharge, which permits the discharge opening of the flue to be reduced in area, reducing the opening for the cold air to effect the temperatures with the flue and yielding increased space within the cap for a greater amount of heated air to counteract the cold, outside air, meaning increased efficiency.

A further object is that by having a chimney capped with this heated thermo-cap which is provided with a frustro-pyramidal top to shed all moisture from the flue opening.

Other objects and many of the attendant advantages of this invention will become apparent as the invention becomes better known by a consideration of the illustrative embodiments of the same and for which purpose such descriptive drawings have been hereunto appended, wherein:

Fig. 1 is a perspective view of a chimney equipped with a thermo-cap, the embodiment of this invention.

Fig. 2 is a sectional view through the chimney stack and thermo-cap.

Fig. 3 is a perspective view of a chimney equipped with a thermo-cap, the embodiment of this invention.

Referring now more in detail to the drawings in which similar reference numerals designate corresponding parts throughout the several views—

It will be seen that the chimney 4 is provided with the usual flue 5. The thermo-cap which comprises this invention is composed of a hollow cap A of frustro-pyramidal or frustro-conical proportions, having a depending, hollow conduit B, integral therewith, which conduit comprises an outer shell 6 and an inner shell 7. This conduit is designed to depend into the chimney flue and is of such proportions as to fit snugly therein with its outer shell 6 depending down the face of the flue. The outside shell of the conduit is outturned at the top, forming a lateral flange which constitutes the base wall 8 of the cap A. The outside shell 9 of the cap A is conjoined with the outer edge of the base-wall 8 or rather the upper margin of the conduit's outer shell, and from this conjunction, the shell 9 vertically depends to constitute the depending rim 10 and also upwardly extends at an inclined degree to constitute the frustro-pyramidal or frustro-conical cap A as the case might be, whereat it is frustrated by its merging and conjunction with the upper and smaller end margin of the tapered, inner shell 7 of the conduit B, which inner shell constitutes an extension and outlet of the chimney flue.

The lower margin of the outer shell 6 of the conduit is preferably incurved whereat, it merges and is co-joined with the lower and larger end, margin of the tapered, inner shell 7 of the conduit B. In this manner a continuous, hollow shell is produced with a dead air space therein. The inner shell 7 substantially converges toward the top or rather towards the discharge opening of the flue section which it constitutes, in a manner to reduce the area of discharge to a minimum, which reduction is made possible by the efficiency of this device and which efficiency is further increased by the reduction.

It will be obvious that in operation, the heat of the gases in the lower chimney flue will effect and heat the air within the conduit shell and this will heat the entire space within the shell of the thermocap with the

result that the temperature within the stack is raised even to the discharge opening, causing greater volatility of the gases which means quicker discharge and allows for the area of the flue opening to be reduced with the reduced chance for cold air to enter the flue and increased capacity within the shell of the cap, for heated air, the counteracting force. With this improved condition at the top of the chimney stack there is no condensation within the flue with the result that no creosote forms therein, which insures increased draught, and quick elimination of carbonaceous gases, the enemies of heat and combustion.

It will be obvious from the foregoing description, that this invention constitutes a great improvement in the art and while the preferred embodiments have been described, yet it must be understood that minor changes in the construction and combination of the co-acting elements may be resorted to within the scope of what is claimed without departing from the spirit of the invention.

What I claim is:

1. A thermocap for chimneys, comprising a hollow cap, a hollow conduit integrally depending from said cap, an outer shell comprising outer wall of said conduit, an inner shell of tapering proportions comprising inner wall of said conduit, and constituted a central, converging flue section, said outer shell having its upper edge outwardly turned to yield a lateral flange which constitutes the base wall of the cap, and its lower edge incurved, to merge and conjoin with the lower and larger edge of the said inner shell, which inner shell extends upwardly and convergingly from this conjunction, a cap shell of frustro-conical proportions, said shell being conjoined near its lower edge with the outer edge of said base wall and with its lower margin depending beyond such conjunction to constitute a vertically, depending rim, and extending upwardly from said conjunction at an inclined degree, forming the conical cap which is frustrated by the merging and conjunction of its upper edge with the smaller, upper edge of the said converging inner shell all as and for the purpose specified.

2. A thermocap for chimneys, comprising a hollow cap, a hollow conduit integrally depending from said cap, an outer shell comprising outer wall of said conduit, an inner shell of tapering proportions comprising inner wall of said conduit and constituting a central converging flue section, said outer shell having its upper edge outwardly turned to yield a lateral flange which constitutes the base-wall of the cap, and its lower edge incurved, to merge and conjoin with the lower and larger edge of the said inner shell which inner shell extends upwardly and convergingly from this conjunction, a cap shell of frustro-pyramidal proportions, said shell being conjoined near its lower edge with the outer edge of said base-wall and with its lower margin depending beyond such conjunction to constitute a vertically, depending rim, and extending upwardly from said conjunction at an inclined degree, forming the pyramidal cap which is frustrated by the merging and conjunction of its upper edge with the smaller, upper edge of the said converging inner shell, all as and for the purpose specified.

In testimony whereof I affix my signature.

LESTER L. BLANCHARD.