E. M. BENT.

CHIMNEY APPARATUS.

APPLICATION FILED FEB. 21, 1912.

1,178,050. Patented Apr. 4, 1916.

Fig. 1.

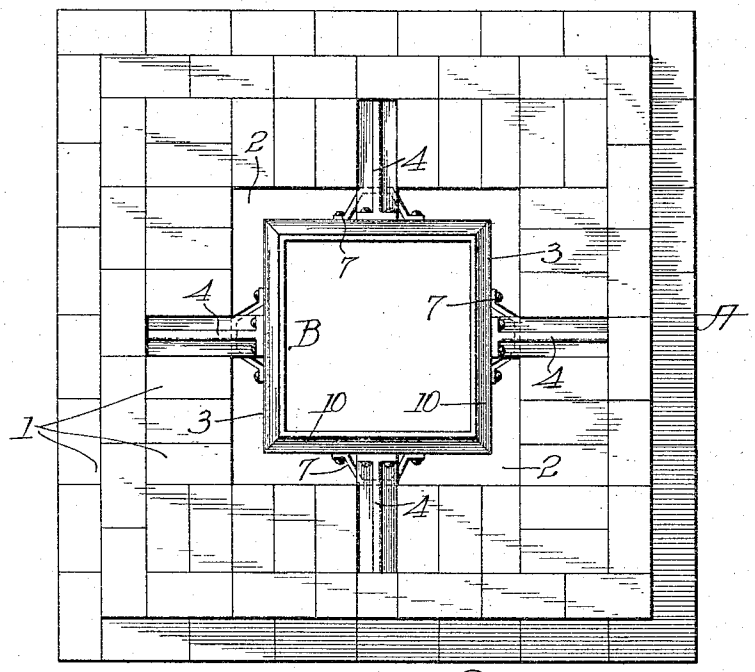
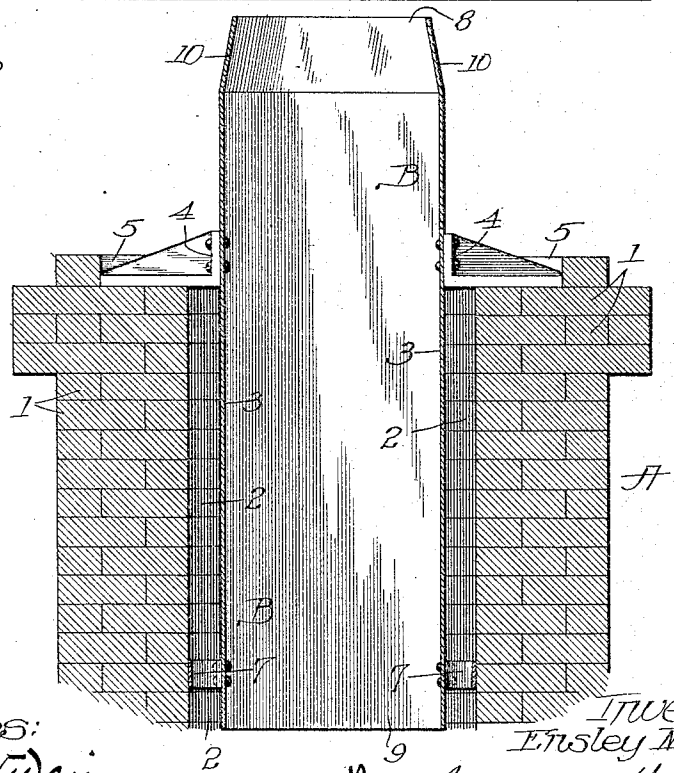


Fig. 2.



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CHIMNEY APPARATUS.

1,178,050. Specification of Letters Patent. Patented Apr. 4, 1916.

Application filed February 21, 1912. Serial No. 679,002.

To all whom it may concern:

Be it known that I, ENSLEY M. BENT, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Chimney Apparatus, of which the following is a specification.

My invention relates to apparatus for increasing or intensifying the draft in chimneys, and my object is to provide an improved device of simple and durable construction, which may be positioned in the upper portion of the chimney and which will effect the currents and pressure of air and gases in such manner as to intensify the general upward draft in the chimney and thereby aid in the proper combustion of fuel.

To the attainment of these ends and the accomplishment of other new and useful objects, my invention consists in the features of novelty disclosed in the construction, combination and arrangement of parts herein described and claimed, and shown in the accompanying drawings which illustrate one embodiment of my invention, and in which—

Figure 1 is a top plan view of a structure embodying my invention, shown in operative position in a chimney; and Fig. 2 is a vertical section thereof on line 2—2 of Fig. 1.

In order that an understanding of my invention may be had, I have illustrated my invention as embodied in a structure which I find best adapted for use in connection with square chimneys of brick construction, but it is to be understood that my invention may be embodied in other structures arranged to meet the requirements and conditions of different types of chimneys than the type herein illustrated and described.

The drawings illustrate the upper portion of an ordinary chimney A composed of bricks 1 suitably arranged and plastered together. This chimney is practically square in section and has the usual air and gas passage 2 centrally disposed and substantially square in section. In the upper portion of this passage I place a device or structure B which as shown in the drawing is preferably square in section to conform to the chimney passage. The walls 3 may be composed of any suitable material, preferably material which will withstand the weather and deterioration by the gases. This tubular member B preferably is so positioned that about one-third of its length projects above the top of the chimney, as shown in Fig. 2, and it is concentrically spaced from the walls of the passage. The most satisfactory results are obtained by making the area of this outer space between the member B and the walls of the passage, substantially equal to the sectional area of the inner space inclosed by the tubular member. Any suitable manner of suspending or supporting the tubular member B may be used. A simple method is to fasten a number of brackets or arms 4 to the walls 3 of the member B, these being long enough to rest in spaces 5 conveniently provided on the upper edge of the chimney by the removal of several bricks. The lower end of the member need only be held in spaced relation from the walls of the passage, as, for instance, by spaced lugs or members 7 secured to the walls 3 of the member B as shown.

Both the upper and lower ends 8 and 9 of the member B are open. The lower end 9 communicates with the interior of the chimney so that the smoke and gases may pass upward through the hollow member B. The portions of the walls 3 of the member B which project beyond upper end of the chimney, act as deflecting surfaces to direct the currents of air downwardly in the outer space between the member B and the walls of the chimney passage 2. These air currents pass downwardly through this space until they reach the lower end of the member B, and then enter the said member and pass upward therethrough with the gases and smoke and produce an increased or intensified draft in the chimney. I have found by experiment that by tapering the upper portion 10 of said member as shown, a better draft may be obtained, although this taper is not necessary.

What is claimed as new is:

1. The improvements herein described, being a chimney having a main passage, and having an internal wall dividing said passage at its upper portion into an inner and an outer passage, said internal wall being arranged to protrude from the top of the chimney and deflect air currents downwardly into said outer passage, the latter communicating with the atmosphere at its upper end and with the inner passage and

the lower portion of the chimney at its lower end, and means for supporting said internal wall in position.

2. The combination of a chimney open at its top, a tube partly disposed within the chimney and spaced from the walls thereof and partly extending above the top of the chimney, the space between the tube and chimney walls being in communication with the atmosphere at its top and in communication with the interior of the chimney and tube at its lower end.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of February A. D. 1912.

ENSLEY M. BENT.

Witnesses:

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CHARLES H. SEEM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."