I. B. SPAULDING.

CONCRETE CHIMNEY.

APPLICATION FILED SEPT. 2, 1909.

963,402. Patented July 5, 1910.

Fig. 1.

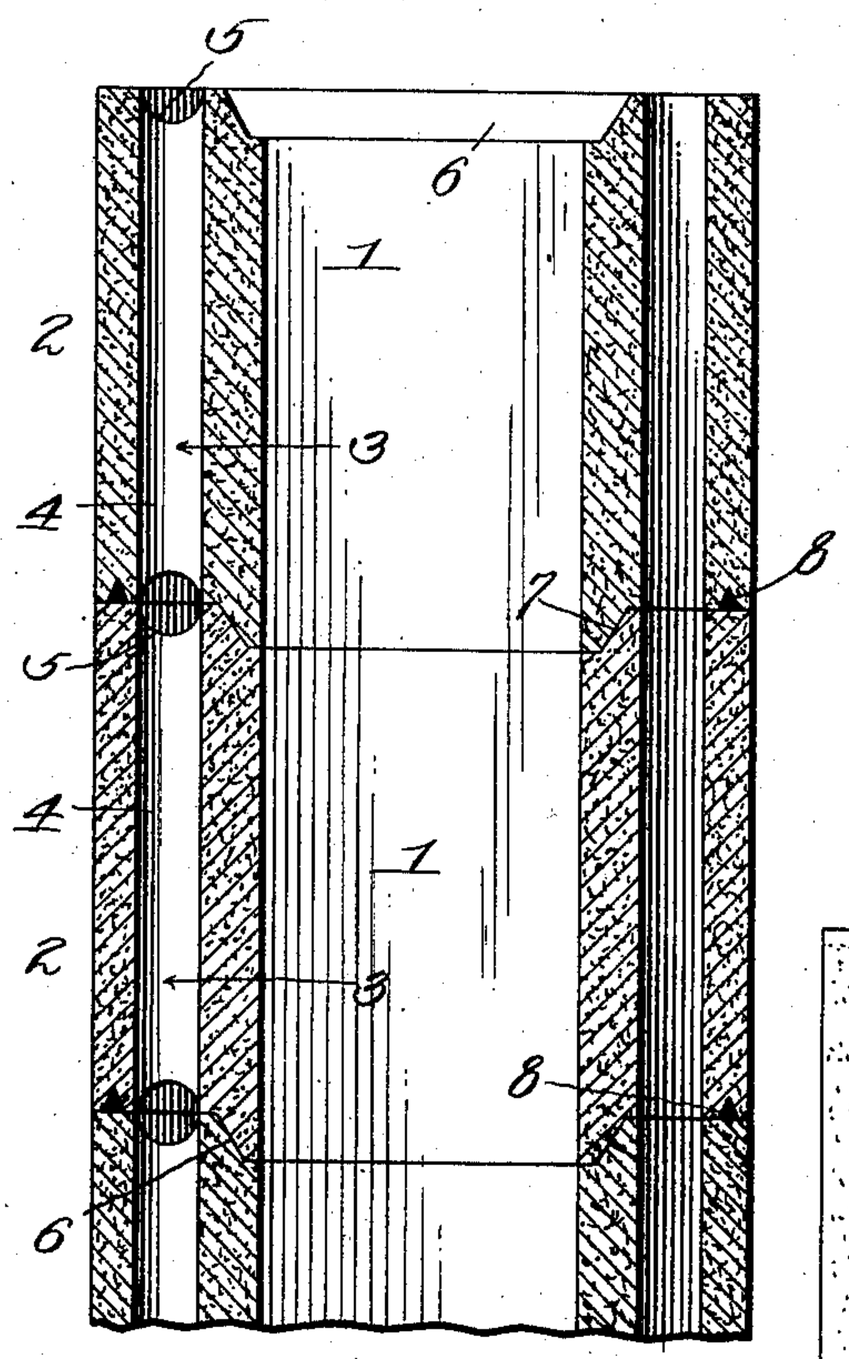
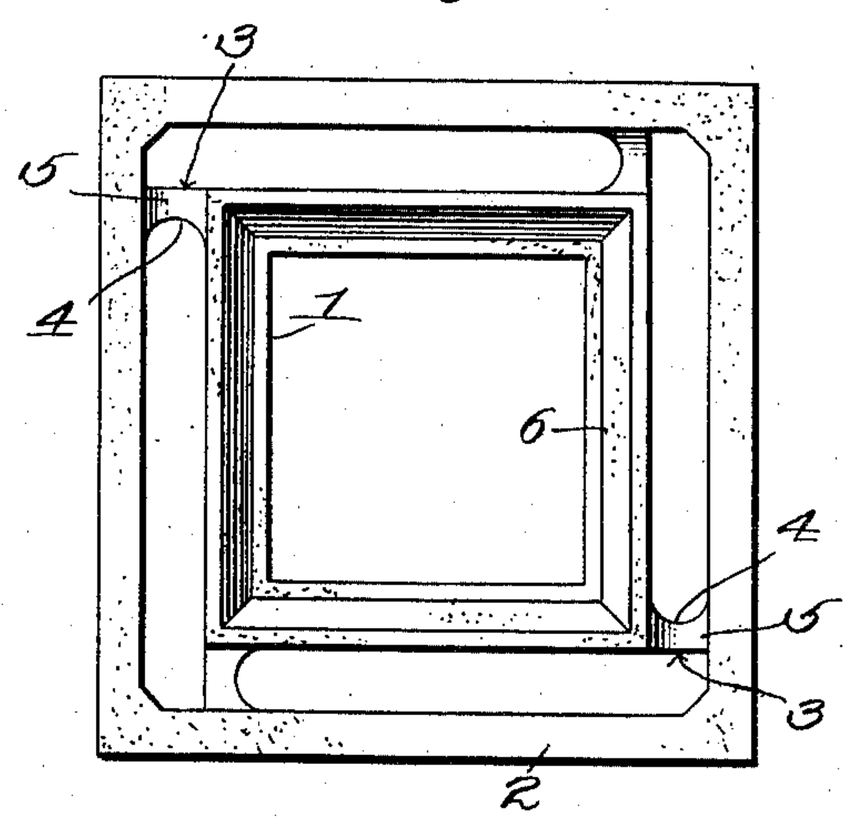


Fig. 2



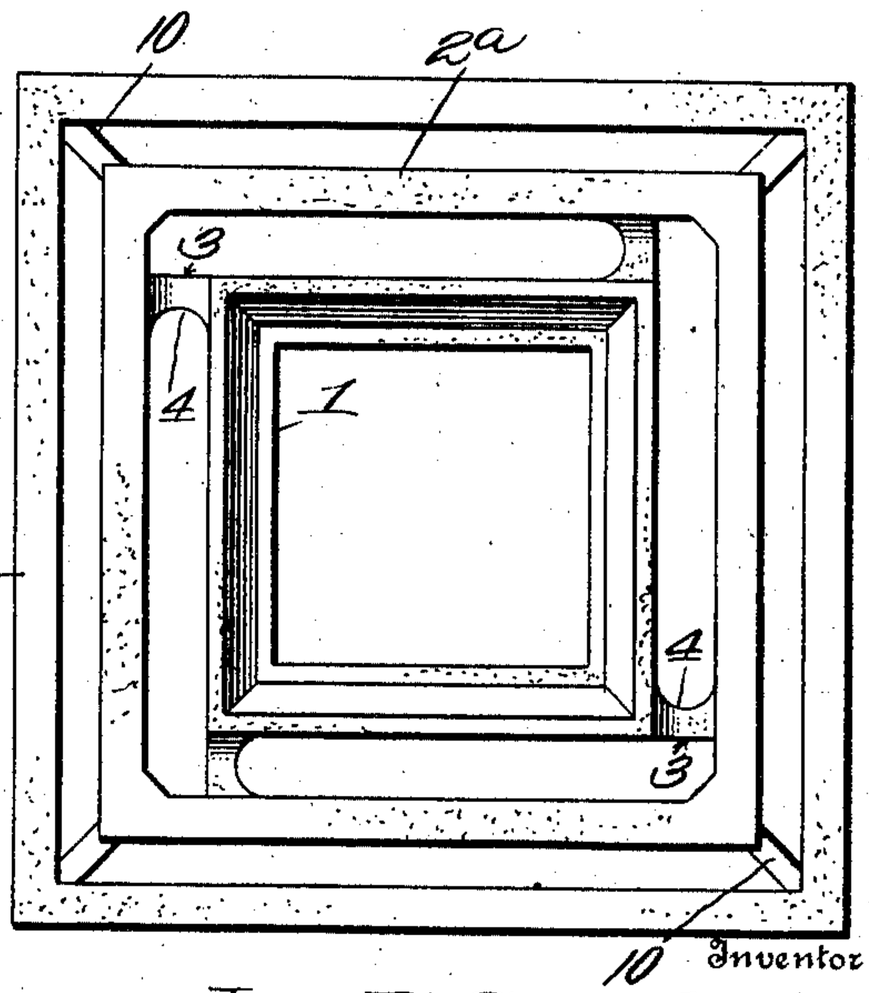


Fig. 3.

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Witnesses

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IRA B. SPAULDING, OF SOUTH ROYALTON, VERMONT.

CONCRETE CHIMNEY.

963,402. Specification of Letters Patent. Patented July 5, 1910.

Application filed September 2, 1909. Serial No. 515,921.

To all whom it may concern:

Be it known that I, IRA B. SPAULDING, a citizen of the United States, residing at South Royalton, in the county of Windsor and State of Vermont, have invented a new and useful Improvement in Concrete Chimneys, of which the following is a specification.

This invention relates to an improvement upon patent granted to me March 16, 1909, and bearing number 915,123.

In the patent above referred to a concrete chimney was shown provided with inner and outer walls and with partitions connecting the said walls at their corners. Experience has shown that in a chimney having inner and outer walls there is during the winter a very great difference between the temperature of the inner face of the inner wall and the exterior face of the outer wall. The result of this difference is that while there is contraction of the outer wall there is expansion of the inner wall, and where the said walls are joined by cross partitions of equal or greater strength than the walls themselves, the cracking of the outer wall at times is the result.

The present improvement is intended to obviate the above difficulty by changing the construction of the partitions so that in case the extremes of temperature are such that any portion would be liable to crack the partition itself would be the part affected thus leaving the walls solid.

In the accompanying drawings: Figure 1 is a vertical section through a portion of a chimney showing the improved construction. Fig. 2 is a plan view. Fig. 3 is a plan view of the chimney provided with three concentric walls.

In these drawings, 1 represents the inner, 2 the outer walls and 3 represents the connecting vertical partitions. These partitions instead of running from corner to corner extend transversely across the space separating the inner and outer walls, connecting a corner of the inner wall with the opposite side of the outer wall, one face of said partition being flush with a side of the inner wall. The other face of the partition is concaved as shown at 4 thereby reducing in thickness the central vertical portion of the partition and weakening it at this place. These partitions are also cut away at top and bottom as shown at 5. The blocks of which the chimney is formed have the inner walls inwardly beveled at the top as shown at 6 and outwardly beveled as shown at 7 at the bottom, the inner walls at the bottom of the blocks projecting downwardly below the lower end of the outer walls. The outer walls have their lower edge grooved as shown at 8, which groove forms a seat for a key of mortar or cement and serves to prevent exposure to the weather washing said mortar or cement out from between the blocks.

In Fig. 3 I have shown a construction in which a third wall 9 was employed and as there would be no great difference in temperature between the outer wall 9 and the wall 2^a which corresponds to the wall 2 in Figs. 1 and 2, partitions 10 similar to those shown and described in the patent above referred to are employed between the walls 2^a and 9. In this form the partitions 3 are employed between the inner wall 1 and the wall 2^a.

What I claim is:—

1. A concrete chimney having two concentric walls spaced apart, of a vertically arranged concrete transverse partition connecting said walls, said partition being weakened along its longitudinal central line.

2. In a concrete chimney having concentric walls, a vertical partition connecting said walls, said partition extending from the corner of one wall to a side of the other wall, one vertical face of said partition being concaved, as and for the purpose set forth.

3. In a concrete chimney having concentric walls spaced apart, four vertical partitions connecting the inner and outer walls, the said partitions having each a face flush with a side of the inner wall, and having their opposite face concaved, and having their upper and lower ends cut out, as and for the purpose set forth.

4. A chimney formed of concrete blocks, each block consisting of inner and outer walls spaced apart, the inner wall of each block being interiorly beveled at its upper

end and exteriorly beveled at its lower end, the lower end projecting below the bottom of the outer wall, the lower edge of said outer wall being grooved, and partitions connecting the inner and outer walls, said partitions being concaved upon one face, thereby weakening the central portion of said partition, as and for the purpose set forth.

IRA B. SPAULDING.

Witnesses:
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