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W. A. BERKEY.

Improvement in Fire Proof Columns.

No. 122,797.

Patented Jan. 16, 1872.

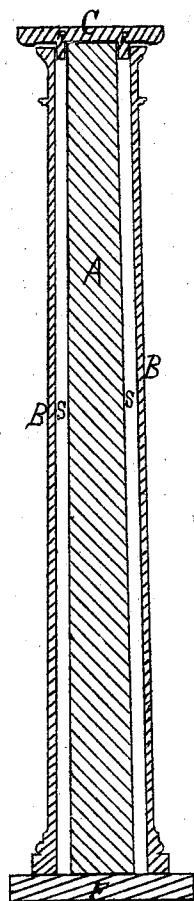


Fig. 1.

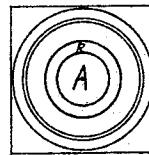


Fig. 2.



Fig. 3.

Witnesses.

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IMPROVEMENT IN FIRE-PROOF COLUMNS.

Specification forming part of Letters Patent No. 122,797, dated January 16, 1872.

Specification describing certain Improvements in Fire-Proof Columns, invented by WILLIAM A. BERKEY, of the city of Grand Rapids, county of Kent and State of Michigan.

My invention relates to a column so constructed as not to be expanded by the heat or contracted by the cold longitudinally, and so that, in case it is subjected to great heat, its strength will not be impaired.

In the drawing, Figure 1 represents a sectional view of a column constructed in accordance with my invention cut through the center longitudinally. Fig. 2 represents the cap inverted, which rests upon the top of the column, as hereinafter described; and Fig. 3 represents a sectional view of the column cut horizontally.

A is the inner or column proper, its foot resting upon the foundation F, and its upper end supporting the cap C, upon which cap C the weight of the building rests. The column A may be made of iron or of any suitable material, and of any desired shape, and may be either hollow or solid. Around the column A, and at a suitable distance from it, is placed the hollow cylinder B, which forms the outer side of the column. The cylinder B is made a little shorter than the inner column A, the difference being about two inches to sixteen feet. The outer cylinder also rests upon the foundation F. The cap C is provided with the flange R R, projecting downward on the outer side of column A and the inner side of column B, and acts as a support to the outer and inner columns. S S represent the space between the inner column A and the cylinder B. In practice this space may be filled with any suitable fire-proof substance, or may be left without filling; but I deem it better to have it filled.

When the outer side of a column constructed in accordance with my invention is subjected to intense heat it may expand and again contract longitudinally without affecting in the least the building resting upon the cap C,

which is supported by the inner or column proper; and as the inner column A is protected from external heat by the space S S, whether the space be empty or be filled with fire-proof material, the column may be subjected to intense and continued heat without being weakened, and without subjecting the building to injury from the expansion of the pillar or column.

The outer cylinder may be ornamented to suit the tastes of parties using the same, or the style of the building to which the column is applied.

I do not claim any particular kind of fire-proof filling; but I deem plaster Paris or stucco admirably adapted to the purpose. I do not claim, broadly, a column consisting of an outer and an inner cylinder, or an outer cylinder and an inner solid column with a space between them, as this thing is not new; but,

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

1. In a fire-proof column, consisting of an inner and an outer cylinder, the inner cylinder being provided at one end with a projecting flange or cap, I claim the outer column, shortened so as to leave a free space between its top and the base of the cap for a free longitudinal movement of the outer column by expansion or contraction, essentially as described.

2. In combination with an outer and an inner cylinder of a fire-proof column, of which the outer cylinder is shorter than the inner one, for the purpose set forth, I claim the independent cap C provided with the flange R projecting between the two cylinders to hold the shorter outer one in place vertically without interfering with its longitudinal expansion or contraction, essentially as described.

WILLIAM A. BERKEY.

Witnesses:

P. T. PASSOSKEY,
EDWARD TAGGART.

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