

T. HYATT.
Fire-Proof Columns.

No. 145,180.

Patented Dec. 2, 1873.

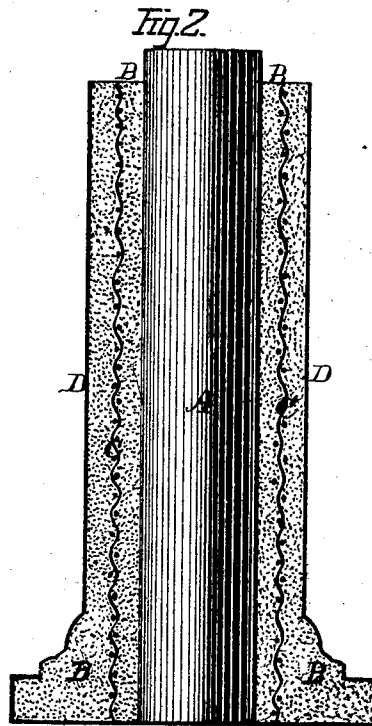
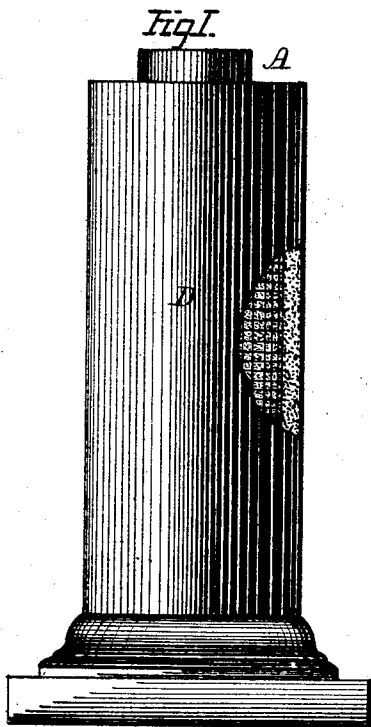
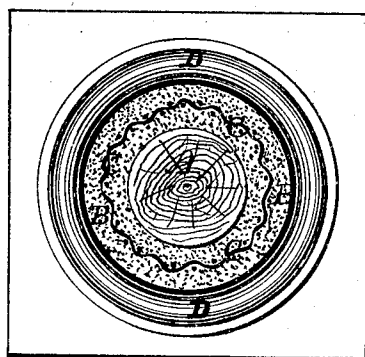


Fig. 3.



WITNESSES.

*Jas. C. Hutchinson
 John R. Young*

INVENTOR.

*Theodore Hyatt, by
 Prindle & Co., his Attys*

UNITED STATES PATENT OFFICE.

THEODORE HYATT, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-PROOF COLUMNS.

Specification forming part of Letters Patent No. **145,180**, dated December 2, 1873; application filed August 21, 1873.

To all whom it may concern:

Be it known that I, THEODORE HYATT, of New York city, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Building Columns, Beams, &c.; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of a column constructed in accordance with my improved method. Fig. 2 is a vertical central section of said column, and Fig. 3 is a horizontal section of the same.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to combine in one column or beam strength, lightness, small cost, and perfect ability to resist the action of fire; to which end it consists, principally, in a wooden column or beam protected from the action of heat by means of an envelope or coating of asbestos combined with plastic or earthy material, substantially as and for the purpose hereinafter specified. It consists, further, in a wooden column or beam enveloped within a coating of asbestos combined with earthy or plastic material, when said coating is strengthened and secured in place by means of a cylinder of wire-netting, substantially as and for the purpose hereinafter shown. It consists, further, in a wooden column or beam coated exteriorly with asbestos combined with earthy or plastic material, and the whole covered with an ornamental casing or jacket, substantially as and for the purpose hereinafter set forth.

As the principle of construction is the same whatever the form of the wood or the use to which it is to be applied, it will be sufficient to describe a column containing my improvements.

In the annexed drawing, A represents a wooden column having any suitable size or shape, upon and around the surface of which is placed a coating, B, of asbestos combined with earthy or plastic material, which possesses in a great degree the property of withstanding the transmission of heat so as to

protect said column from the injurious effects of fire. The fibers of the asbestos interlace with each other and with the earthy material, and the whole forms a strong, compact mass, while either used separately would possess too little strength to render their use practicable. In order that the plastic covering B may be securely confined in place and prevented from becoming cracked, a cylinder, C, of wire-netting or reticulated sheet metal is placed around or within said covering, for which it performs substantially the same office that is rendered to mortar by the interstices of a lathed partition and by the hair mixed with said mortar. If the plastic covering is to form the finish of the exterior of the column, the wire-netting should be placed near its surface, but if other protection is to be afforded, said netting may be placed at or near the radial center of said covering. The column thus constructed is capable of resisting the action of fire for any length of time, provided its covering is not broken away by accident, which latter may be effectually prevented by covering the whole with a casing of thin sheet metal, D.

If desired, the sheet-metal covering may be so constructed as to present an ornamental appearance, or, in place of metal, a covering of artificial stone, papier-maché, wood-veneer, &c., may be employed so as to afford any variety of finish.

In the event of a fire, the exterior or ornamental covering of the column would be destroyed, but the heat-resisting qualities of the plastic covering will effectually shield the wood and prevent its strength from being impaired.

This method of construction possesses the following advantages: First, it enables wood to be employed with safety in any place where an iron column or beam is applicable, whereby a material saving in cost is effected; second, the wooden column or beam is easily adapted to any position or to any place, while in case of iron columns or beams a new pattern is necessary in each instance when an unusual size or length is required; third, the wooden column or beam may be constructed and protected in sections of the country where it would be

entirely impracticable to procure iron work; fourth, the wooden column or beam is more reliable than one constructed from iron, is less liable to hidden defects, and can be furnished at a materially lower rate.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A wooden column or beam protected from the action of heat by means of a coating or envelope of asbestos combined with plastic or earthy material, substantially as is specified.

2. A wooden column or beam enveloped with a coating of asbestos, combined with earthy or plastic material, when the latter is strength-

ened and secured in place by means of a cylinder of wire-netting, substantially as and for the purpose shown.

3. A wooden column or beam coated exteriorly with asbestos combined with earthy or plastic material, and the whole covered with an ornamental casing or jacket, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of August, 1873.

THEODORE HYATT.

Witnesses:

GEO. S. PRINDLE,
EDM. F. BROWN.