W. H. DRAKE & P. B. WIGHT.

Fire-Proof Columns.

No. 154,852. Patented Sept. 8, 1874.

Fig. 1.

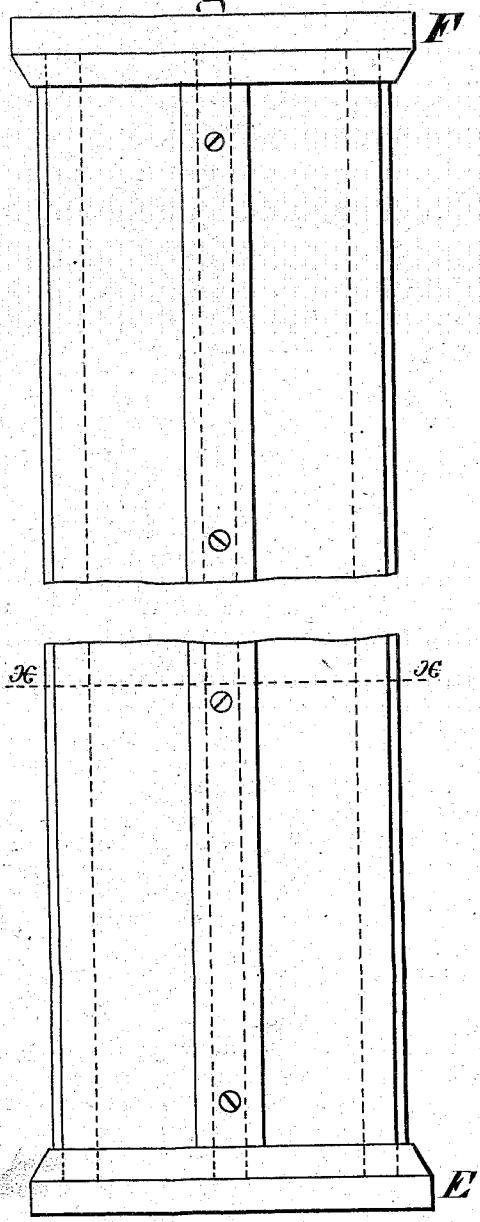


Fig. 2.

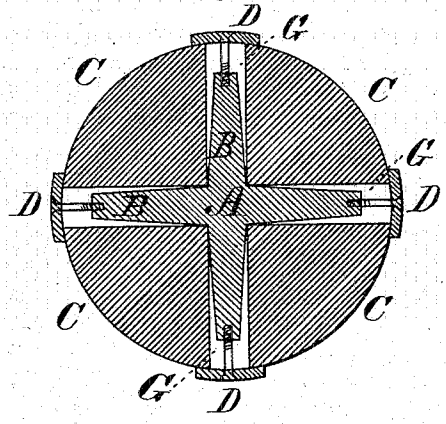
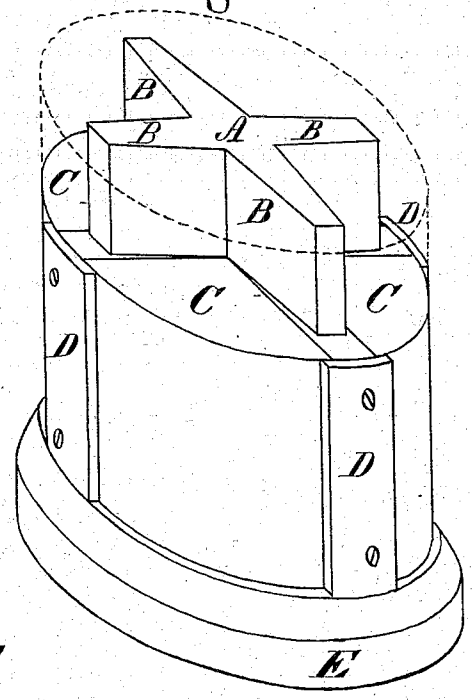


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM H. DRAKE AND PETER B. WIGHT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FIRE-PROOF COLUMNS.

Specification forming part of Letters Patent No. **154,852**, dated September 8, 1874; application filed August 10, 1874.

To all whom it may concern:

Be it known that we, WILLIAM H. DRAKE and PETER B. WIGHT, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Fire-Resisting Columns, of which the following is a specification:

The object of the present invention is to provide a column, post, or other architectural support for buildings, which shall have the combined advantages of wood and iron for withstanding fire, and the effect of water upon heated iron. The nature of the invention consists of an iron core of suitable length and size to support, or partially support, such a part of an edifice or building as may be desired.

The core, as shown, has a cruciform shape, but it may have any desired number of radial webs between which are placed closely-fitting gores of wood, which are held in place by iron battens secured to the webs of the core by screws, as hereinafter described and shown.

In the drawing, Figure 1 is a broken elevation of a column constructed on our improved plan; Fig. 2, a horizontal section on line *x*; Fig. 3, a perspective representation of the column in parts.

A represents the core of the column, which, in this case, consists of four webs cast solid in one piece, or its center may be of cylindrical form provided with radial webs or wings, and it may be made of wrought-iron of such length and strength as is necessary to support any desired part of a building or edifice, or to support it with the combined strength of the gores C. These gores are made of wood or other suitable material, and to fit the webs B closely, and to extend somewhat outwardly beyond them, as shown in Figs. 2 and 3, and they are held firmly in place by means of metal battens D, which are secured by screws to the outer edges of the webs B.

In this case the contour of a horizontal section is circular, the outer lines of the gores having the form of segments. They may, however, be made in different forms—as, for instance, their outer sides may be straight, making the column square, or they may be fluted or ornamented with any sort of plastic work. The base E is made of iron, and it may be molded, ornamented, or plain, to conform to the general style of surrounding architecture. The cap F is made of iron, and in this case plain, but it may be ornamented. The space G, between the outer ends of the webs B and battens D, may be filled in with concrete or any suitable non-heat-conducting material, to prevent heat from connecting with the core A.

It is well known that iron columns heated in the burning of buildings, are very liable to buckle, but if such columns are not thus rendered inadequate to carry their respective loads, water (used to extinguish fires) coming in contact with them will cause their destruction, or otherwise impair their strength, when heated, so as to cause the building to give way.

The wooden gores C in our columns, although subjected to the heat of a burning building, will consume so slowly that the contents of the structure will be burned before the iron cores A receive any material damage.

We claim and desire to secure by Letters Patent of the United States—

1. The core A, provided with radiating webs B, in combination with the gores C, as set forth.

2. The combination of the core A, provided with webs B, and battens D, as specified.

3. The combination of the core A B, gores C, battens D, and non-heat-conducting filling G, as and for the purpose set forth.

WILLIAM H. DRAKE.
PETER B. WIGHT.

Witnesses:
JOHN H. ELLIOTT,
G. G. BELLOWS.