P. K. MAGRUDER & J. MOREY.

FIREPROOF SYSTEM.

APPLICATION FILED OCT. 7, 1910.

985,189. **Patented Feb. 28, 1911.**

2 SHEETS—SHEET 1.

Fig. 1.

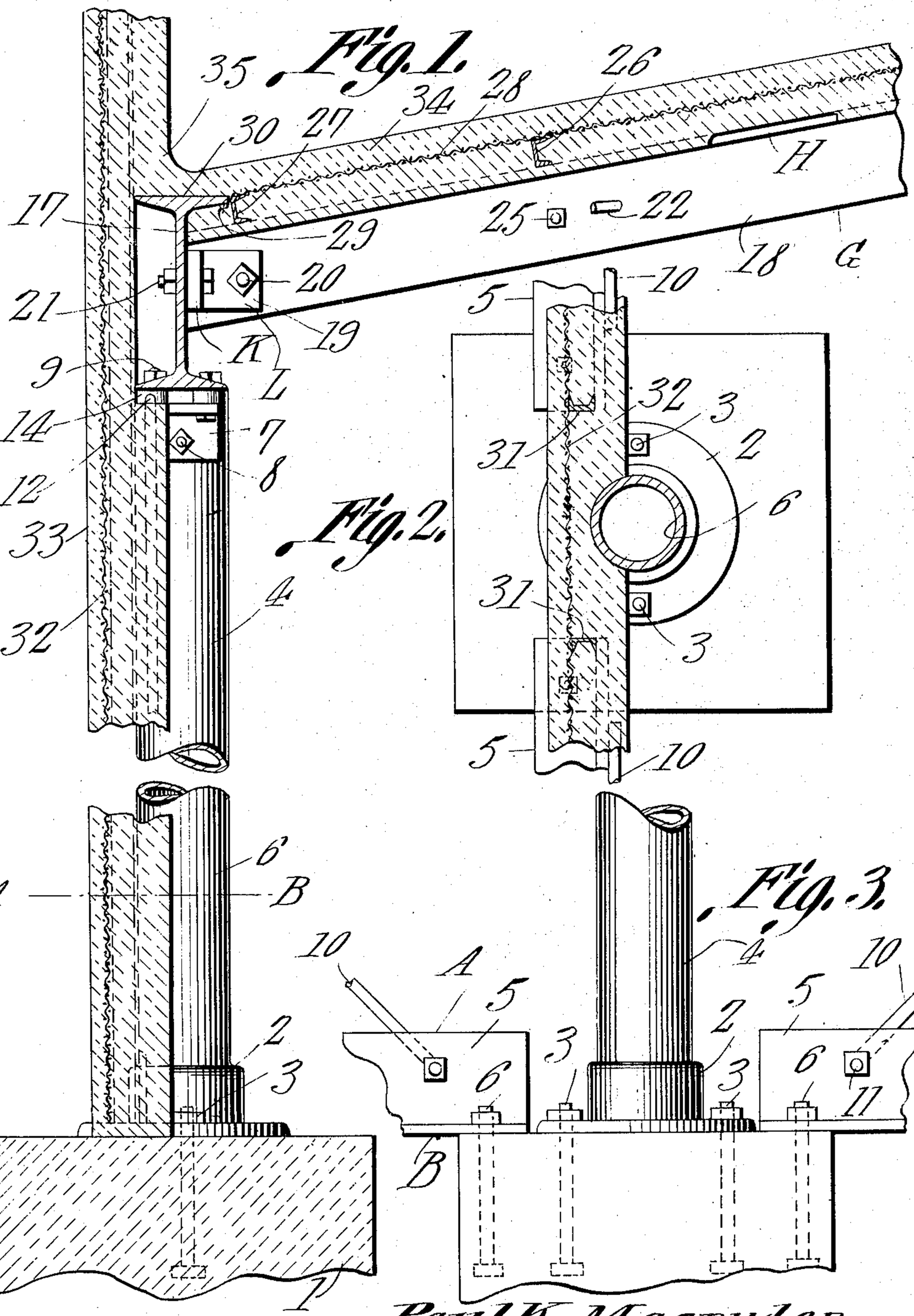

Fig. 2.

Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

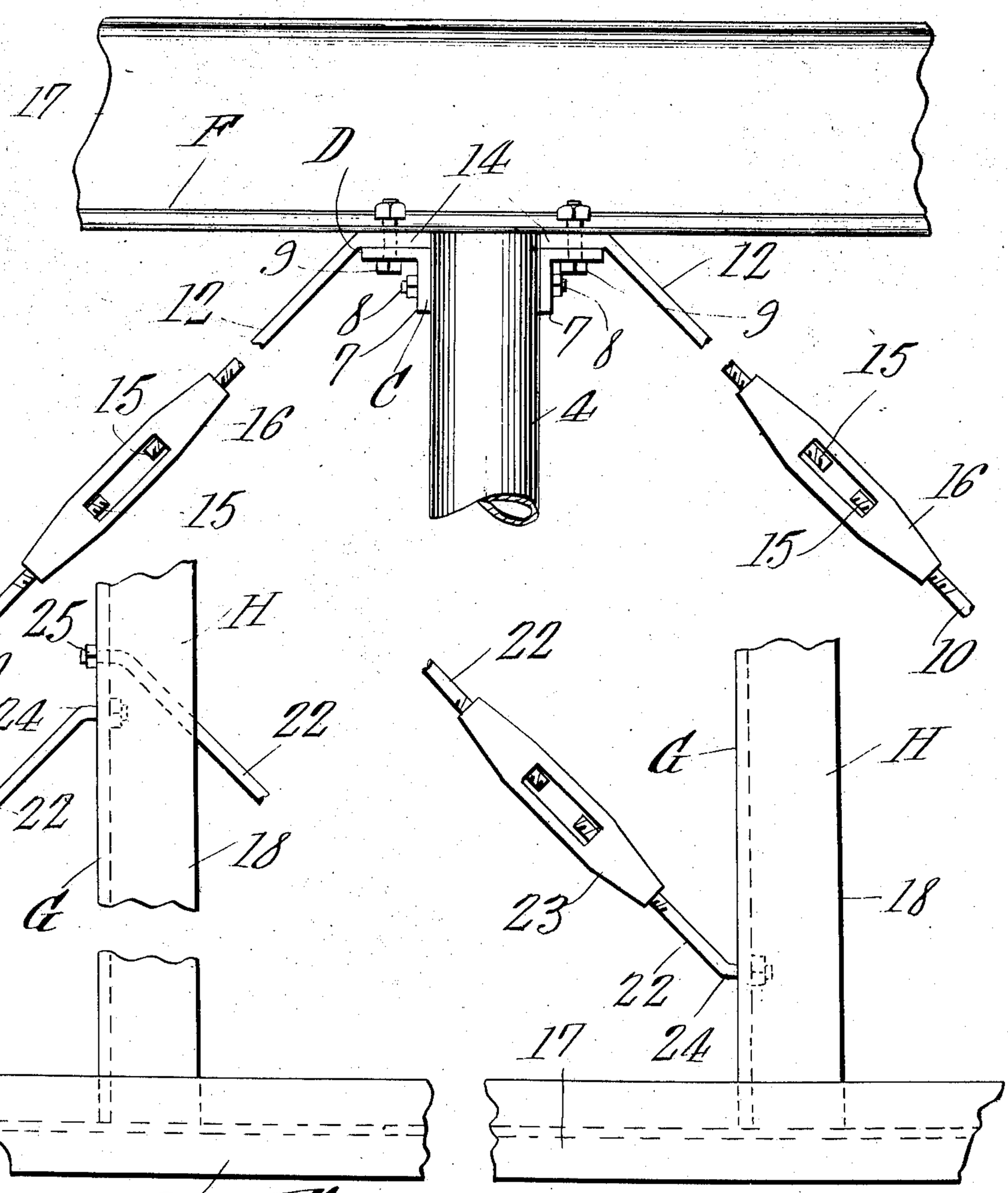

Fig. 5.

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UNITED STATES PATENT OFFICE.

PAUL K. MAGRUDER AND JAY MOREY, OF SAN ANTONIO, TEXAS.

FIREPROOF SYSTEM.

985,189. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed October 7, 1910. Serial No. 585,874.

To all whom it may concern:

Be it known that we, PAUL K. MAGRUDER and JAY MOREY, citizens of the United States, residing at San Antonio, in the county of Bexar, State of Texas, have invented a new and useful Fireproof System, of which the following is a specification.

It is the object of this invention to provide a fire proof construction for buildings, which may readily be constructed, at comparatively small expense, the constituent elements of the device being assembled in a novel and improved manner, to promote the strength of the building, and to enhance the fire resisting qualities thereof.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 is a vertical section, parts being broken away and shown in elevation; Fig. 2 is a horizontal transverse section on the line A—B of Fig. 1; Fig. 3 is a side elevation, showing certain details of the construction, portions of the device being removed, in order that details may more clearly appear; Fig. 4 is an elevation showing the upper end of one of the supporting posts, and illustrating the manner in which the counters are connected with the posts and with the eye-beam which rests thereon; and Fig. 5 is a top plan of a portion of the roof construction, parts being broken away.

The sub-structure may consist of a plurality of piers 1, ordinarily fashioned from concrete. Pedestals 2 rest upon the piers 1, the pedestals being bolted, as at 3, or otherwise secured to the piers 1. The pedestals 2 serve to support vertical posts 4.

Resting upon the piers 1, are the floor beams 5, these floor beams 5 consisting of a vertical flange A and a horizontal flange B. These flanges A and B of the floor beams 5 are rectangularly disposed with respect to each other, the horizontal flanges B being bolted as at 6, or otherwise secured to the piers 1.

The posts 4 are preferably fashioned from iron pipes, and to the sides of the posts 4, are secured, adjacent the tops of the posts, angle brackets 7, each consisting of a vertical flange C, and a horizontal flange D, rectangularly disposed. By means of bolts 8 or the like, the vertical flanges C of the angle brackets 7 are secured to the posts 4. An eye-beam 17, horizontally positioned, rests upon the posts 4.

A plurality of diagonally disposed counters are provided, the same consisting of lower members 10, and upper members 12, the upper members 12 being provided with angularly disposed heads 14. These angularly disposed heads 14 are, as clearly seen in Fig. 4, disposed between the flanges D of the angle brackets 7 and the eye-beam 17. A bolt 9, or like securing element, is extended through the lower flange F of the eye-beam 17, through the head 14 of the upper member 12 of the counter, and through the horizontal flange D of the angle bracket 7, the bolt 9 thus constituting a means for holding the eye-beam 17 to the post 7, and likewise constituting a means for retaining the heads 14 of the portions 12 of the counters upon the angle brackets 7. By means of bolts 11, or other securing elements adapted to a like end, the lower ends of the lower members 10 of the counters, are secured to the vertical flanges A of the beams 5. The adjacent ends of the members 11 and 12 of the counters, are threaded, as shown at 15, to receive turn buckles 16.

The rafters 18 are fashioned from angle members comprising a vertical flange G, and a rectangularly disposed flange H. To the intermediate portion of the eye-beam 17, angle brackets 19 are secured. These angle brackets 19 consist of flanges K and L, disposed at right angles to each other, the flange K being secured to the intermediate portion of the eye-beam 17 by means of a bolt 21, the flange L of the angle bracket being secured by means of a bolt 20 to the vertical flange G of the rafter 18.

The rafters 18 are braced, as shown in Fig. 5, by counters, consisting of separate members 22. The remote ends of these members 22 are angularly bent as shown at 24, to extend through the flanges G of the rafters 18, the ends of the members 22 being threaded to receive nuts 25, whereby the members 22 are held assembled with the flanges G of the rafters 18. The adjacent ends of the members 22 of the counters, are

threaded, to receive turn buckles 23. Disposed transversely of the rafters 18 and secured to the horizontal flanges H thereof, in spaced relation, are channel members 26 and 27 (see Fig. 1). Resting upon these channel members 26 and 27 is a metallic sheet lath 28, this lath, adjacent one edge, being bound, as shown at 29 in Fig. 1, between the upper head 30 of the eye-beam 17 and the channel member 27. Vertically disposed channel members 31 (see Figs. 1 and 2), rest upon the horizontally disposed flanges B of the lower beams. To the outer faces of these channels 31, a metallic sheet lath 32 is applied. The lath 32, the channels 31, the counters (consisting of the elements 10, 12, and 16), and the posts 4 throughout a portion of their diameters, are embedded in a monolithic wall structure 33. The roof is likewise a monolithic structure, shown at 34, and in this roof structure 34, the channels 26 and 27, the lath 28, and a portion of the upper flange or head 30 of the eye-beam 17 are embedded, as clearly shown in Fig 1, the roof 34 resting upon the horizontal flanges H of the rafters 18. Above the eye-beam 17, the roof structure 34 merges into the wall structure 33, as denoted by the numeral 35 in Fig. 1.

The device is so constructed that it may be erected at trifling cost, and when once in place, will present a fire proof building construction of unusual strength and of great fire resisting qualities, it of course being understood that the wall structure 33 and roof structure 34 are refractory.

Referring particularly to Fig 4 it will be seen that the eye-beam 17 rests, not only upon the upper end of the post 4, but, as well, upon the heads 14 of the members 12 of the counters, these heads 14 resting, in their turn, upon the flanges D of the angle brackets 7. The counters are thus bound in place by the weight of the eye-beam 17, and the brackets 7 and the heads 14 serve to broaden the effective bearing area upon which the eye-beam 17 rests.

Having thus described the invention, what is claimed is:

In a device of the class described, a sub-structure; posts resting thereon; horizontal angle members resting upon the sub-structure to form floor supports; angle brackets secured to the sides of the posts adjacent their tops; counters consisting of separate members, one of which is secured at an end to one of said angle members, the other of which is provided with an angularly disposed head resting upon one of said brackets; a turn buckle connecting the adjacent ends of the counter members; an eye-beam resting upon the posts and upon the heads of some of the counter members; a securing element extended through one flange of the eye-beam, through the head of a counter member, and through one flange of an angle bracket; rafters supported by the eye-beam channels resting upon the rafters; a sheet lath resting against the channels; and a monolithic wall inclosing the lath, the channels, the counters, and a portion of the posts.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

PAUL K. MAGRUDER.
JAY MOREY.

Witnesses:
M. C. Driscoll,
A. S. Child.