

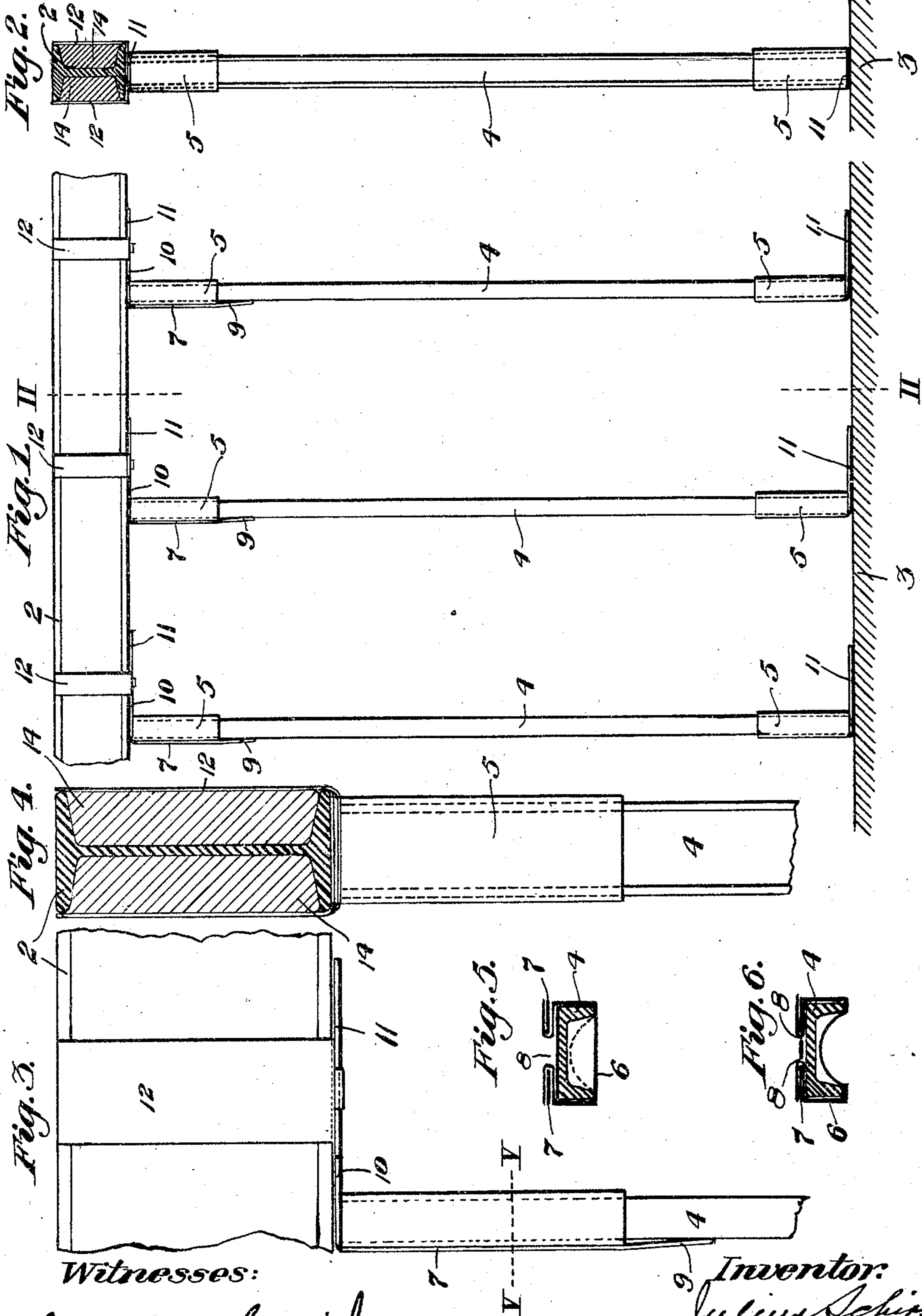
No. 785,579.

PATENTED MAR. 21, 1905.

J. SCHIRRA.  
FIREPROOF BUILDING CONSTRUCTION.

APPLICATION FILED JUNE 18, 1904.

2 SHEETS—SHEET 1.



Witnesses:

Geo. W. Mackenzie  
Chas. S. Lyle

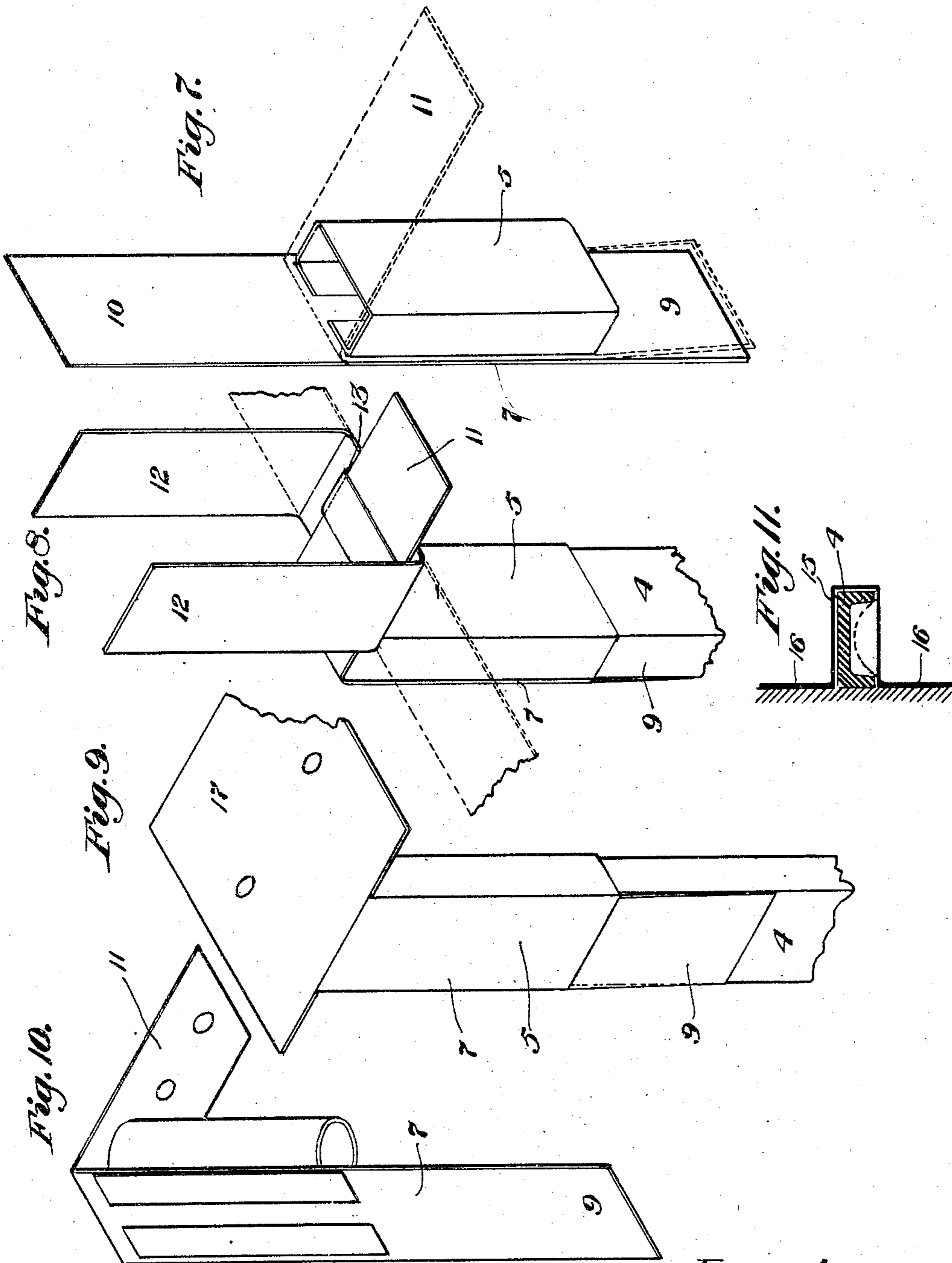
Inventor:

Julius Schirra  
By O. M. Clarke  
his attorney

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2 SHEETS—SHEET 2.



Witnesses:  
Geo. W. Mackenzie Jr.  
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# UNITED STATES PATENT OFFICE.

JULIUS SCHIRRA, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE S. WILSON, OF PITTSBURG, PENNSYLVANIA.

## FIREPROOF BUILDING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 785,579, dated March 21, 1905.

Application filed June 18, 1904. Serial No. 213,057.

*To all whom it may concern:*

Be it known that I, JULIUS SCHIRRA, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fireproof Building Construction, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a view in side elevation of several of my improved studding members in position. Fig. 2 is an end view thereof. Figs. 3 and 4 are enlarged detail views. Figs. 5 and 6 are cross-sections indicated by the line V V of Fig. 3. Fig. 7 is a perspective view of the adjustable connecting device. Fig. 8 is a similar view showing the attaching-plate bent up. Fig. 9 is a similar view showing a modification. Fig. 10 is a similar view showing the device as applied to the top cylindrical column. Fig. 11 is a cross-section similar to Fig. 5, provided with an attaching-clip.

My invention refers to improvements in fireproof building construction; and it has for its object to provide structural wall and partition elements with means whereby they may be easily and quickly adjusted and connected with the main structural portions of a building, as the floor and ceiling members.

The invention consists in providing an adjustable shoe adapted to be mounted upon one or both ends of a studding or partition member, the shoe being arranged to be set to proper position upon the studding and then attached to those portions of the structure with which the studding is incorporated. I secure these results in a satisfactory and workmanlike manner, while avoiding the necessity of accurate cutting or fitting of the studding and avoiding cutting away of concrete or flooring or disturbing of any portion of the building to which my invention or improved partition member is applied.

Referring now to the drawings, 2 represents a floor-beam of I, channel, or any other suitable cross-section, between which and the next lower floor 3 are inserted the studding members 4, also of any suitable structural form,

as I-beam, channel, T, angle, &c. Ordinarily studding of this character of fireproofing construction is cut to a fixed length and fitted between the floor and the under side of the next upper course of floor-beams, being secured thereto by wiring or tying, it being obvious that other means—as nailing, &c.—are not available by reason of the metallic construction. Ordinarily I have found that studding cut to length is either too long or too short to be accurately adjusted, owing to the variations in floors or ceiling-levels, thereby necessitating either cutting off of the different pieces of studding or of cutting or recessing the floor, which is frequently of concrete, or else requiring splicing or blocking up of the studding underneath.

My invention consists in providing the studding with one or more adjustable extensible shoes 5 at one or both ends, provided with terminal bearing portions adapted to be fitted against the under side of the beam or upon the floor, or both, and secured thereto in any suitable manner. The shoe 5 is conveniently made of sheet metal 6, bent around in the form adapted to embrace the studding 4, as shown in Fig. 5, and secured to the back plate 7 by passing through a single or two independent slots 8, being turned outwardly at each side thereof. The plate 7 extends downwardly and upwardly beyond the shoe, the lower portion 9 being bent inwardly toward the studding-face, so as to provide a vertical spring-bearing to hold it in any position during erection. The upper portion 10 is bent over at right angles to the vertical portion and provides a flat tongue 11, which abuts directly against the under side of the beam or upon the floor. In this manner it will be seen that the shoe is slidingly adjusted upon the studding and may be adjusted upwardly or downwardly to lengthen or shorten it to fill the required space. For the purpose of securing the shoe to the floor-beam 2 I provide a supplemental plate 12, having slots 13, through which the tongue 11 is passed, as shown in Fig. 8, the end plate 12 being bent up around the sides of the beam, as shown,

and secured thereto by nailing through the plate into the wood filling 14 in the position shown in Fig. 2. The plate 12 may also be laid flat against the under side of the beam and secured thereto by wrapping or wiring, if desired, and it may also be used for attachment to the floor, although ordinarily the tongue 11 is sufficient for this purpose.

After the shoe 5 has been adjusted to its position it is tightened around the structural studding by clamping or pressing the plate 6 inwardly underneath the web, as indicated in dotted lines in Fig. 5 and in full lines in Fig. 6, thereby providing a tight binding hold upon the studding, of whatever form, so as to prevent displacement of the shoe. Supplemental attaching-clips 15, also formed of sheet metal, provided with flanges 16, are adjustably set upon the studding, as shown, adapted to be located at any position along its length and to be secured either to the side of the floor-beam or upon any other wall-surface, such clips being also capable of being fixedly secured by compressing or bending the metal inwardly, as shown in dotted lines and as already described.

Various modified constructions of the device may be utilized to suit varying conditions or requirements of use—as, for instance, the shoe 5 may be provided with a somewhat wider terminal portion 17, as shown in Fig. 9, the shoe in such case being conveniently formed of a single sheet of metal of approximately the same width as the original width of the shoe 5 and bent around the flanges of the studding and secured thereto by bending or clenching. The shoe may also be made in cylindrical form, as is shown, being provided with the securing-tongue 11 and in other respects made and used in the manner already described.

Other changes and variations may be made in the design, proportion, or other details of the construction by the skilled mechanic to adapt the invention to various local conditions, as will be readily understood; but all such changes and variations are to be considered as within the scope of the following claims

What I claim is—

1. A structural studding member provided with a longitudinally-adjustable shoe consisting of a surrounding ferrule member, and a supplemental plate extending upwardly and downwardly therefrom, substantially as set forth.

2. A structural studding member provided with a longitudinally-adjustable shoe consisting of a surrounding ferrule member, and a supplemental plate extending upwardly and downwardly therefrom, and bent over at the top at right angles to itself, substantially as set forth.

3. A structural studding member provided with a longitudinally-adjustable shoe having a

laterally-extending tongue and a spring-clip adapted to bear against the studding member, substantially as set forth.

4. A structural studding member provided with a longitudinally-adjustable shoe having a laterally-extending tongue, and a strip connected with said tongue adapted to be folded around and secured to an adjacent structural member, substantially as set forth.

5. The combination with a metallic studding, of a surrounding shoe of sheet metal adapted to be adjusted longitudinally of the studding member, and provided with a lateral bearing-tongue and a spring extension adapted to bear frictionally against the stud member, substantially as set forth.

6. The combination with a structural studding member having a recessed portion, of a longitudinally-adjustable shoe formed of sheet metal bridging said recessed portion adapted to be tightened upon the studding member by bending it inwardly toward said recessed portion, substantially as set forth.

7. The combination with a structural studding member having a recessed portion, of a longitudinally-adjustable clip entirely surrounding said member provided with lateral flanges and bent inwardly toward said recessed portion, substantially as set forth.

8. A structural studding member provided with a longitudinally-adjustable shoe consisting of an embracing rectangular ferrule, one portion of which consists of an upwardly and downwardly extending supplemental plate, substantially as set forth.

9. A structural studding member provided with a longitudinally-adjustable shoe consisting of an embracing rectangular ferrule, one portion of which consists of an upwardly and downwardly extending supplemental plate, constituting an upper attaching portion and a lower resilient friction portion, substantially as set forth.

10. An adjustable shoe for studding consisting of a surrounding ferrule member, and a supplemental plate secured thereto and extending upwardly and downwardly therefrom, substantially as set forth.

11. An adjustable shoe for studding consisting of a surrounding ferrule member, and a supplemental plate secured thereto extending upwardly and downwardly therefrom, and provided with deflected terminals, substantially as set forth.

12. An adjustable shoe for studding consisting of a surrounding ferrule member, and a supplemental plate secured thereto extending upwardly and downwardly therefrom, and provided with deflected terminals, said ferrule member being connected with the supplemental plate by its terminal edges passing through a slot in the plate and bent thereon, substantially as set forth.

13. A longitudinally-adjustable shoe for structural studding consisting of a sheet-metal

body portion having embracing wings arranged to be clamped around the studding and to be tightened thereon, and provided with a spring-clip adapted to bear against the studding member, substantially as set forth.

14. A longitudinally-adjustable shoe for structural studding consisting of a sheet-metal body portion having embracing wings arranged to be clamped around the studding and to be tightened thereon, and provided with a

laterally-extending tongue and a spring-clip adapted to bear against the studding members, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JULIUS SCHIRRA.

Witnesses:

JAS. J. McAFEE,  
C. M. CLARKE.