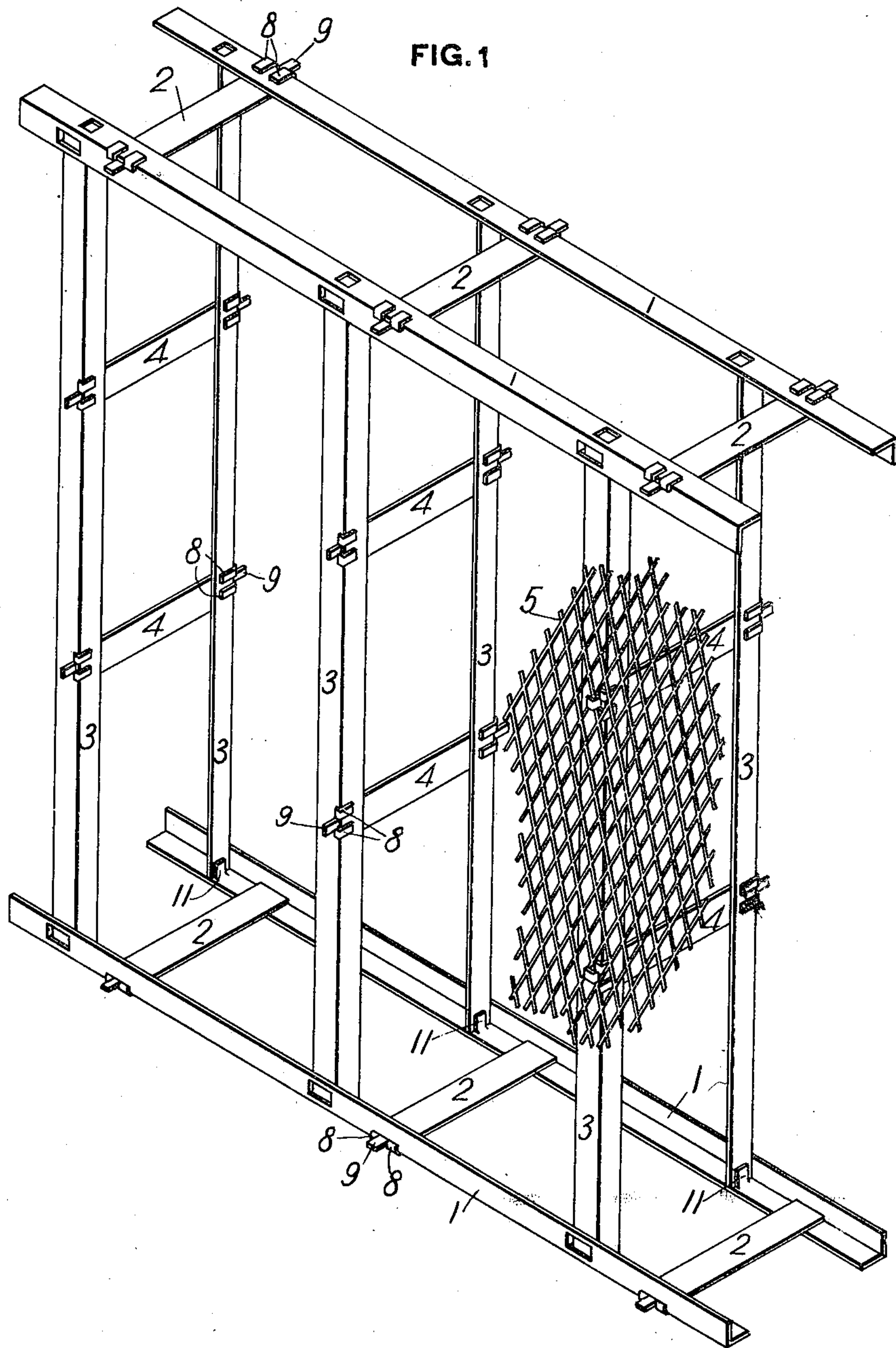


H. HILL.  
 PARTITION CONSTRUCTION FOR FIREPROOF BUILDINGS.  
 APPLICATION FILED AUG. 9, 1909.

975,426.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.



WITNESSES  
*Chas. Loderman*  
*Estelle W. Johnson*

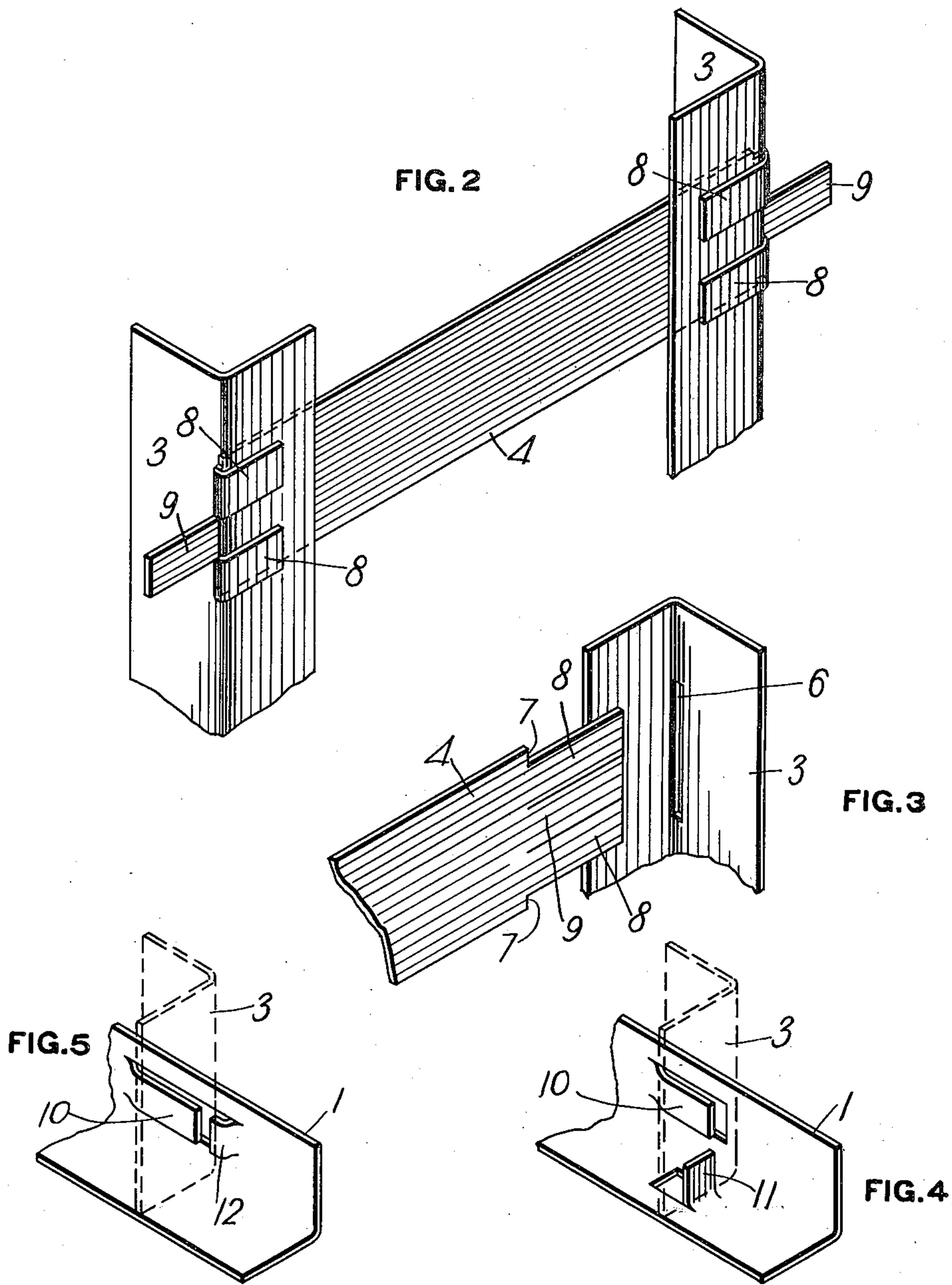
INVENTOR  
*Herman Hill*  
 By *Fred W. Winter*  
 Attorney.

H. HILL.  
 PARTITION CONSTRUCTION FOR FIREPROOF BUILDINGS.  
 APPLICATION FILED AUG. 9, 1909.

975,426.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 2.



WITNESSES  
*Chas. Fosterman*  
*Estelle M. Johnson*

INVENTOR  
*Hermann Hill*  
 By *Fredk W. Winter*  
 Attorney



# UNITED STATES PATENT OFFICE.

HERMANN HILL, OF WARWOOD, WEST VIRGINIA, ASSIGNOR TO STEEL FIREPROOFING COMPANY, OF WHEELING, WEST VIRGINIA, A CORPORATION OF WEST VIRGINIA.

## PARTITION CONSTRUCTION FOR FIREPROOF BUILDINGS.

975,426.

Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed August 9, 1909. Serial No. 511,913.

*To all whom it may concern:*

Be it known that I, HERMANN HILL, a resident of Warwood, in the county of Ohio and State of West Virginia, have invented a new and useful Improvement in Partition Construction for Fireproof Buildings, of which the following is a specification.

This invention relates to partition and wall constructions for fire proof buildings and other structures.

The object of the invention is to provide a steel construction for the purpose stated which requires no rivets or other separate fastening means in the assembling and erection thereof, which permits the wiring and piping to be freely and readily extended therethrough, which requires less metal and hence is cheaper while being just as strong as prior constructions for a similar purpose, and which is provided with strong means for the easy and secure attachment of the lathing thereto.

The invention comprises the construction and arrangement of parts hereinafter described and claimed.

In the accompanying drawings Figure 1 is a general perspective view of a portion of a partition construction embodying the invention; Fig. 2 is a similar view of a portion of a stud on an enlarged scale; Fig. 3 is a detail perspective view of a portion of one of the stud angles and the end of one of the lattice members prior to assembling; Fig. 4 is a similar view illustrating the manner of connecting the stud to the floor string; and Fig. 5 is a similar view showing a modification.

The invention is shown in the drawings as embodied in a partition construction. As shown the partition comprises floor and ceiling strings comprising angle members 1 cross connected by lattice members 2, and studs comprising angle members 3 cross connected by lattice members 4. The metal lath is shown at 5.

The angle members 1 and 3 may be either small rolled angle bars or formed from strips of sheet or thin plate metal, such as steel, bent into angle form. The latter construction is preferred since light gage metal can be used, so saving in stock and cost. The lattice members 2 and 4 preferably are strips of sheet or thin plate metal, such as steel.

One leg of each angle member 1 and 3 is provided with slots 6, preferably extending longitudinally of the angle member and located adjacent to the other leg of said member for receiving the end of a cross or lattice member 2 or 4. Each end of the cross or lattice member is provided with shoulders 7 to abut against the angle member and prevent further passage of the cross or lattice member through the slot 6. The projecting end of the lattice member is slit longitudinally to form a plurality of tongues, three such tongues being shown, to-wit, two side tongues 8 and an intermediate tongue 9. In assembling or erecting, the slit ends of the cross members are passed through the slots 6 until the shoulders 7 abut against the inner faces of the slotted legs of the angle members, and one or more of the tongues are then bent back upon themselves, or otherwise mutilated or deformed to hold the cross members from being withdrawn from the slots 6. The drawings show the two side tongues 8 bent back parallel to the plane of the cross strips 2 and 4, but obviously a single tongue so bent would answer the purpose. One of the tongues, such as the intermediate tongue 9, is left projecting outwardly for the attachment of the lathing to the partition.

The studs are secured to the floor and ceiling strings by providing the vertical legs or flanges of the string angles with punched out tongues 10 bent out of the planes of said legs or flanges and arranged to embrace the outside legs or flanges of the stud angles, as shown in Fig. 4. To prevent the stud angles from disengagement from the tongues 10 by movement longitudinally of the strings, the latter are provided with projections in position to contact with the stud angles and prevent such movement. As shown in the drawings these projections are punched out of the string angles, Fig. 4 showing a tongue 11 punched out of the horizontal leg of the string angle and bent normal thereto, while Fig. 5 shows a tongue 12 punched out of the vertical leg of the string angle. The construction described permits the studs to be disengaged from the strings only by moving the studs normal to the strings, and this movement obviously is



impossible when the partition is in place between floor and ceiling structures. In erecting, the strings and studs can be assembled in horizontal position and the structure as a whole then raised to vertical position between floor and ceiling.

The lath 5 is secured to the partition by forcing the meshes or openings therein over the projecting tongues 9 on the stud and string lattice members, and then bending said tongues against the side faces of the string and stud angles and thereby clamping the lath in place. The lath is thereby secured not only to the studs but the edges are also secured at the floor and ceiling to the strings. The tongues 9 projecting from the studs stand edgewise in vertical planes and hence offer maximum strength in supporting the lath.

The partition construction described comprises only four standard parts, viz: the string angles 1, the stud angles 3, the string cross member 2 and the stud cross member 4. These are fabricated at the factory and can be assembled at the place of erection by unskilled labor and by the use of very simple tools. The lath may be of any form of metal lath and can be very readily secured to the studs and strings. There are no separate fastening means to be applied, and which would not only add to the cost and labor but would be liable to become lost or misplaced. The lattice construction forms an open partition so that wires and pipes can be readily run in all directions. It also results in a material reduction in stock or tonnage over prior construction while being just as strong and very much less costly. The fastening means for the lath is arranged to give maximum strength in supporting the lath, and enables very light gage metal to be employed.

What I claim is:

1. A metallic partition construction comprising floor strings, ceiling strings, and studs connecting the floor and ceiling strings, said strings and studs each comprising a pair of longitudinal side members and cross connecting members extending transversely between the longitudinal members, said longitudinal members and cross connecting members of said strings and studs being interlocked by means of projections integral with said parts.

2. A metallic building construction comprising floor strings, ceiling strings, and studs connecting the floor and ceiling strings, said strings and studs each comprising a pair of side members and cross connecting lattice members, said parts being interlocked by means of projections integral therewith and being provided with lateral projecting portions for the attachment of the lath.

3. A metallic building construction comprising studs formed of flanged vertical members and cross-connecting members, and strings having vertical webs provided with tongues extending longitudinally of the said vertical webs and offset and spaced therefrom and arranged to embrace a flange on the vertical stud members.

4. A metallic building construction comprising metal studs provided with side flanges and a string having vertical flanges provided with tongues extending longitudinally of said vertical flanges and offset and spaced therefrom and arranged to embrace a flange of the studs, and having projections for preventing movement of the studs longitudinally of the strings.

5. A metallic building construction comprising metal studs of lattice construction having side flanges, and a string having vertical flanges provided with tongues extending longitudinally of said vertical flanges and offset and spaced therefrom and arranged to embrace the flanges of the studs, and projections integral with said strings and arranged to prevent movement of the studs longitudinally of the strings.

6. A lattice metallic building element, comprising a pair of longitudinal flanged members provided with slots through their parallel flanges, and separate cross connecting members having shouldered ends provided with a plurality of tongues projecting through the slots in the flanged members, one of said tongues being deformed to secure the members together and another of said tongues projecting beyond the flanged members.

7. A metallic stud comprising two flanged vertical members provided with slots arranged longitudinally thereof, and cross connecting members having ends provided with a plurality of tongues extending through the slots in the vertical members, one of said tongues at each end being deformed to connect the cross and vertical members and another tongue at each end projecting outwardly and serving as a means for securing lath to the stud.

8. A metallic stud comprising vertical angle members provided with slots arranged longitudinally thereof, and cross members of flat strips provided with shoulders near the ends and a plurality of tongues projecting beyond said shoulders and extending through the slots in the vertical members, a tongue at each end being deformed to unite the vertical and cross members and another tongue projecting outwardly and serving as a means for securing the lathing.

9. A metallic wall construction comprising floor strings, ceiling strings, and studs connecting the floor and ceiling strings, said

studs and strings each comprising longitudinal members provided with openings therethrough and connecting members, said connecting members having end portions  
5 projecting through the openings in the longitudinal members and projecting beyond the same for securing lathing.

In testimony whereof, I have hereunto set my hand.

HERMANN HILL.

Witnesses:

R. E. BYRUM,

H. E. MARKS.