

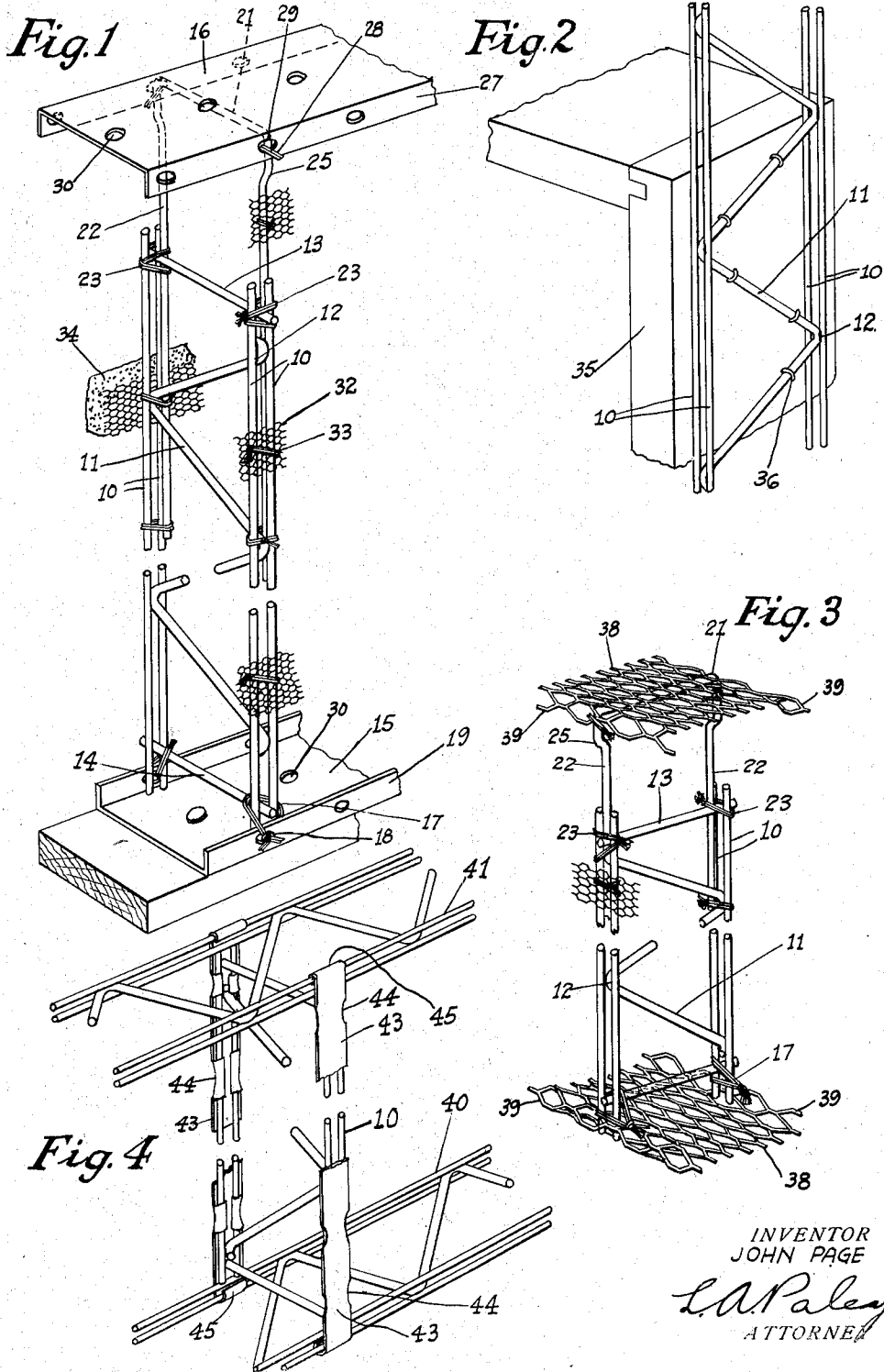
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2,289,989

PARTITION STRUCTURE

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# UNITED STATES PATENT OFFICE

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## PARTITION STRUCTURE

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3 Claims. (Cl. 72-115)

This invention relates to building constructions and has reference more particularly to partition structures in which metallic studs are employed and to details of construction of the studs.

In the construction of non-load bearing partitions it is desirable to utilize metallic studs of sufficient strength and rigidity to permit convenient assembly. The partition is usually completed by applying a plaster coating of substantial thickness to each face, and these plaster layers with metal lath or other plaster base, provide a high degree of strength and rigidity to the partition independently of the studs. I have found that metallic studs composed of wires spot welded together, provides a stud of low cost and comparatively high strength and rigidity.

An object of this invention therefore, is to provide an improved wire stud for use in non-load bearing partitions.

Another object of the invention is to provide an improved partition utilizing the wire stud; also to improve building and partition structures in other respects hereinafter specified and claimed.

Reference is to be had to the accompanying drawing forming a part of this specification, in which

Fig. 1 is a perspective elevation of my improved partition structure and wire stud,

Fig. 2 is a fragmentary perspective view of the improved stud in combination with a door jam,

Fig. 3 is a perspective view of the improved wire stud partition with modified forms of runner tracks, and

Fig. 4 is a perspective elevation of a modified form of stud and runner tracks.

Referring to the drawing by numerals, the improved stud is composed of four chord wires 10 arranged in pairs in spaced parallel relation. The chord wires of each pair are slightly spaced apart the thickness of a sinuous web wire 11 so that said web wire extends between the chord wires and is secured thereto by spot welds 12 at each apex of the wire. I preferably provide a horizontal connecting wire 13 at the top of the stud and a similar horizontal connecting wire 14 at the bottom of the stud. A channel runner 15 of sheet metal is provided adjacent the bottoms of the studs and a similar channel runner 16 is provided adjacent the top of the studs so as to line the studs up to form the framework for a partition. Diagonal wires 17 extend over the cross wire 14 and through apertures 18 formed in upstanding legs 19 of the runner 15 so as to pull the stud downwardly in rigid contact with

said runner 15 when said wire 17 is twisted tight.

In order to provide for variable spacing between the channel runners 15 and 16, I provide an extension member 21 of generally U-shaped form and having downwardly extending legs 22 which engage inside of the chord wires 10 against the cross wire 13. Suitable wires 23 serve to join the extension legs 22 to the stud in fixed position. The upper end of legs 22 are provided with an offset 25 which extends downwardly a sufficient distance from the legs 22 to bring the top of the extension 21 approximately in line with the chord wires 10. The upper end of the U-shaped extension 22 is received between the downwardly extending legs 27 formed on the runner track 16 and is secured thereto by wires 28 extending about said legs 22 and through apertures 29 formed in the legs 27. Nail holes 30 are formed in runner tracks 15 and 16 for attaching the tracks to the floor and ceiling, respectively. Metal lath 32 is secured to the chord wires 10 and extensions 22 by means of wires 33 and a coating of plaster 34 of substantial thickness is applied to said metal lath 32 to finish the partition. Instead of the metal lath 32, any other suitable type of plaster base may be used, such as a plaster board attached to the chord wires 10 by clips or other suitable means. Where it is desired to locate a door jam 35 or a window frame, they may be attached to the studs by means of staples 36 engaging the web wires 11.

In the form of the invention shown in Fig. 3, I provide as metallic runners, U-shaped channels 38 of expanded metal which have outstanding flanges 39 attached by wires 17 to the stud, as hereinabove described. In the form of the invention shown in Fig. 4, I utilize some of the wire studs as runner tracks 40 and 41. The chord wires 10 of the studs are provided at top and bottom with shoes 43 of strip metal crimped at points 44 about said chord wires to rigidly attach said shoes 43 to the studs. The outwardly extending ends 45 of shoes 43 are bent about the chord wires of runners 40 and 41 at the time of erection so as to securely attach the studs to the runners 40 and 41.

I would state in conclusion that while the illustrated examples constitute practical embodiments of my invention, I do not wish to limit myself precisely to these details, since manifestly the same may be considerably varied without departing from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A building stud comprising a plurality of chord wires arranged in spaced pairs of spaced wires connected by a sinuous web wire to form substantially a skeleton I-beam, a U-shaped wire extension member having legs adapted adjust- 5 ably to engage the inside of said chord wires snugly adjacent said web, means securing said legs to said chord wires, and an offset section formed on each leg adjacent the closed end and extending into the plane of the outer surface of 10 said chord wires, the closed end of said extension being adapted for securing to a runner.

2. In a hollow wall structure comprising a stud supporting the usual spaced wall covering secured thereto to provide an air space between 15 said coverings, said stud comprising spaced pairs of spaced chord wires, and a zigzag web wire having its crests interposed between the wires of opposed chord wires and secured thereto, the spans of said web being widely spaced so that a substantially unobstructed passage is provided 20 between said wall coverings and through said stud for conduits and the like.

3. In a hollow non-load bearing partition comprising studs supporting the usual spaced wall coverings secured thereto to provide an air space between said coverings, said studs comprising 5 spaced pairs of spaced chord wires connected by a sinuous web wire with the crests of said web wire interposed between the wires of opposed pairs of chord wires and secured thereto to form substantially a skeleton I-beam, and a wire stud 10 extension element secured to the said stud within the confines of said spaced pairs of chord wires and extending in a loop beyond the end of said stud for attachment to a runner, the spans 15 of said web wire and the elements of said extension being widely spaced so that a substantially unobstructed passage is provided between said wall coverings and through said stud and said 20 extension for the passage of conduits and the like.

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