Jan. 6, 1942. A. V. SPINOSA 2,269,384

METAL BASE FOR WALL CONSTRUCTION

Filed Sept. 14, 1939 2 Sheets-Sheet 1

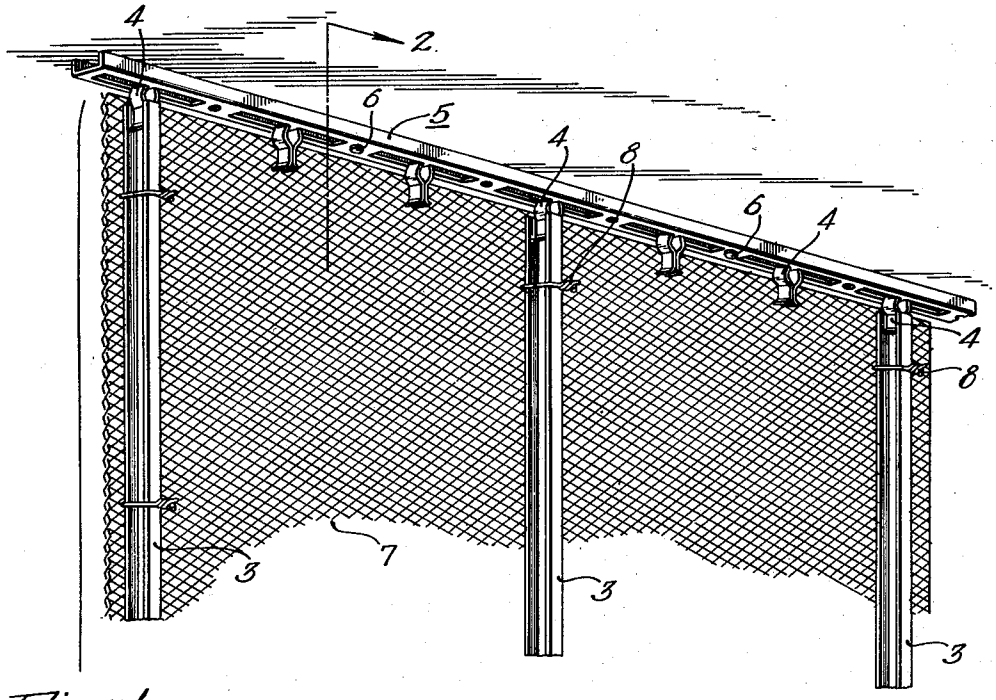
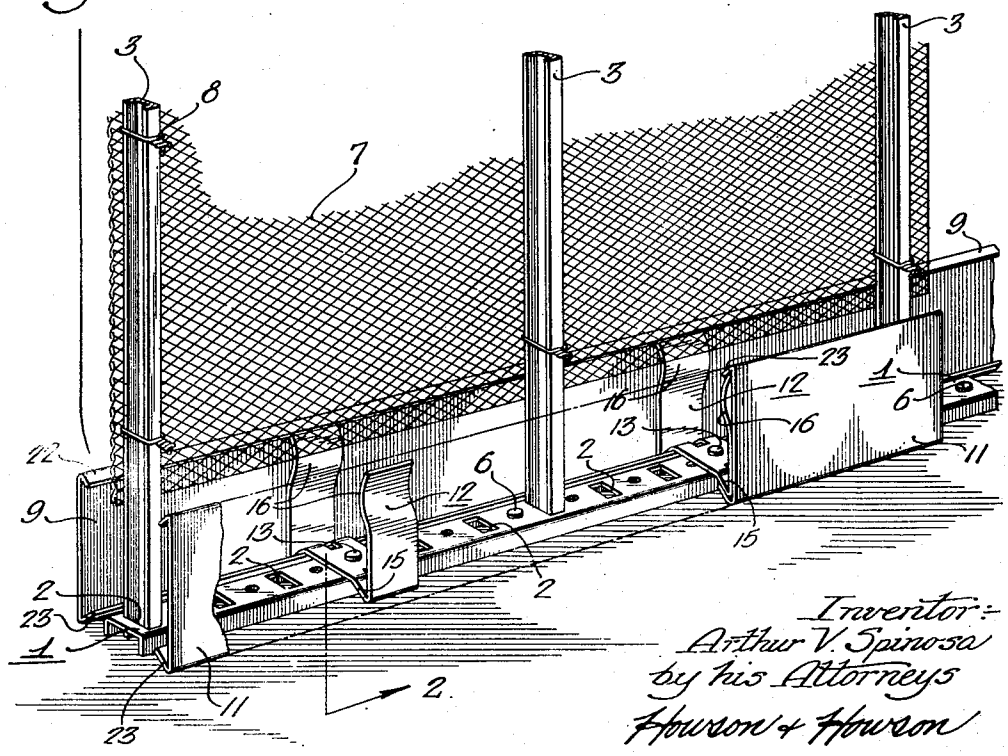


Fig. 1.



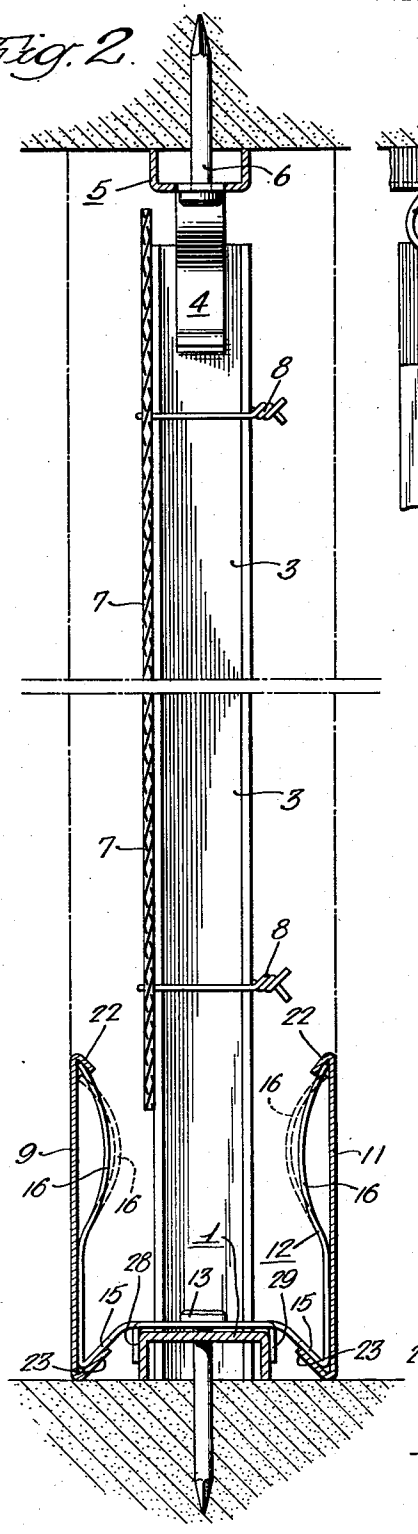
Inventor:
Arthur V. Spinosa
by his Attorneys
Howson & Howson

Jan. 6, 1942. A. V. SPINOSA 2,269,384

METAL BASE FOR WALL CONSTRUCTION

Filed Sept. 14, 1939 2 Sheets-Sheet 2

Fig. 2.



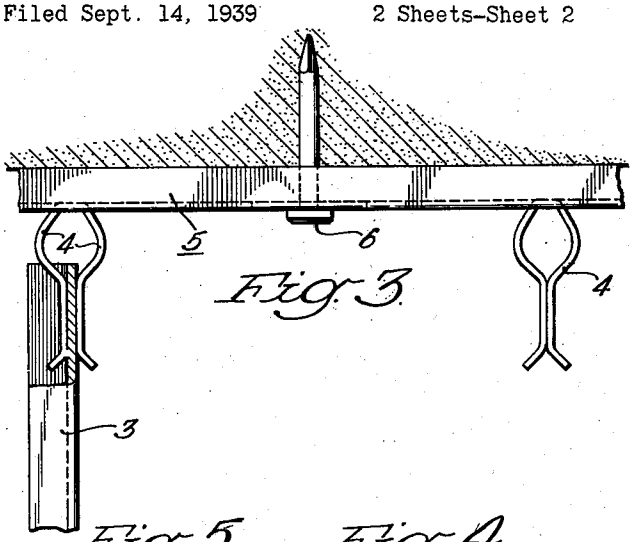


Fig. 3.

Fig. 5

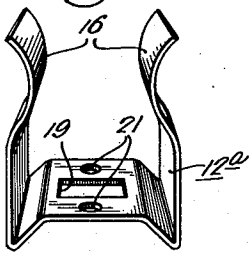


Fig. 4.

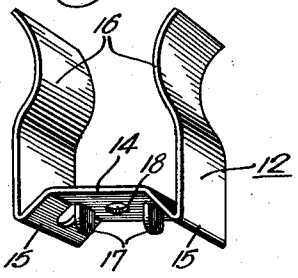


Fig. 6.

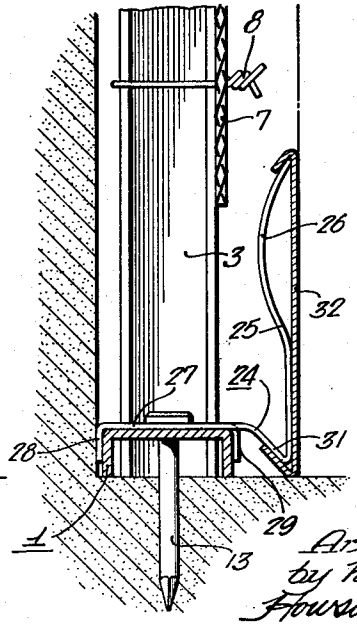
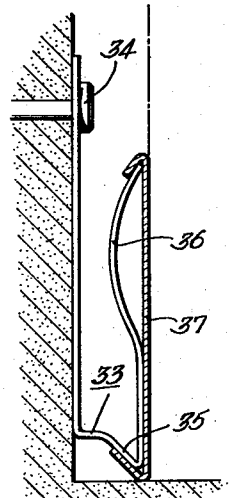


Fig. 7.



Inventor:
Arthur V. Spinosa
by his Attorneys
Howson & Howson

Patented Jan. 6, 1942 2,269,384

UNITED STATES PATENT OFFICE

2,269,384

METAL BASE FOR WALL CONSTRUCTION

Arthur V. Spinosa, Parkersburg, W. Va., assignor to Penn Metal Company, Inc., Parkersburg, W. Va., a corporation of Delaware

Application September 14, 1939, Serial No. 294,951

9 Claims. (Cl. 72—46)

This invention relates to improvements in metal bases for partitions and for wall structures in general, and more particularly in that type of metal base which is adapted to provide a metal base or wash plate which extends along the bottom of the wall or partition more or less flush with the wall surface.

One object of the invention is to provide a metal base of the type set forth of relatively simple and economical form which shall be adaptable, with only slight modification as to form, for use in the construction of partitions and in the finishing or surfacing of solid walls.

Another and more specific object of the invention is to provide a metal base construction which permits the setting up of a basic stud structure prior to the inclusion in said structure of the metal base plates previously referred to.

Still another object of the invention is to provide novel and improved means for securing metal base plates in a basic stud or other wall structure, said means including a novel clip or bracket and base plate combination which in principle is adapted for use not only in partitions but in other types of surfaced wall structures.

The invention resides further in certain novel structural details and arrangements hereinafter described and illustrated in the attached drawings, wherein:

Figure 1 is a fragmentary view in perspective of a partition structure incorporating a metal base made in accordance with my invention;

Fig. 2 is a section on the line 2—2, Fig. 1;

Fig. 3 is a fragmentary side elevational and partial sectional view showing details of the upper or ceiling portion of the partition shown in Figs. 1 and 2;

Figs. 4 and 5 are views in perspective showing two characters of metallic clip for use in the base structure forming the subject of the invention;

Fig. 6 is a fragmentary sectional view illustrating application of the metal base with metal lath and studding as used in providing a plaster finish to a brick or other solid wall structure, and

Fig. 7 is a corresponding sectional view illustrating an application of the metal clip and base plate combination as used in the application of a plaster surface directly to a brick or other solid wall structure.

With reference to Figs. 1 to 5, inclusive, of the drawings, the partition structure therein disclosed comprises a base or floor runner 1 in the form of an inverted channel, said channel being provided in its transverse web with a series of rectangular openings 2 shaped for reception of the lower ends of metallic channel studs 3. The studs 3 extend to the ceiling and are engaged at their upper ends in clips 4 which depend from a runner 5 secured to the ceiling in parallel alignment with the floor runner 1. In the present instance, both the floor runner 1 and the ceiling runner 5 are secured in place by means of nails 6, the holes for these nails in the floor runner 1 being provided between the adjoining openings 2 which receive the lower ends of the studs 3. For a solid partition of the type illustrated, metal lath 7 is secured to one side only of the studs 3 by means in the present instance of wire clips 8.

In addition to the basic framework described above, the partition in accordance with my invention comprises two base plates, 9 and 11, which extend respectively at opposite sides of the floor runner 1 and which are spaced apart to the extent that their outer surfaces may lie flush with the outer surface of the solid plaster wall which is built up upon the aforedescribed framework. The base plates 9 and 11 are held in place in the present instance by a plurality of clips 12, these clips being secured to the runner 1 and to the floor by nails 13 which are driven either through the stud openings 2 or through the nail holes provided between these openings, as previously described. The clips 12, as shown in Fig. 4, are U-shaped in form, and are adapted to straddle the floor runner 1, the transverse web of the clip being offset upwardly at the middle, as indicated at 14, so as to provide at each side of the runner 1 a depending portion 15 which extends downwardly into proximity to the underlying floor surface. The upper extremities of the clip are bowed inwardly, as indicated at 16, for a purpose hereinafter described.

In the clip shown in Fig. 4, two ears 17 are pressed out of the metal of the transverse web and extend downwardly at opposite sides of the floor runner 1 so as to positively establish the position of the clip in the assembly centrally of the floor runner. Intermediate the ears 17, the transverse web of the clip is provided with an opening 18 for reception of the nails 13 which, as previously set forth, perform the double function of securing the clip to the floor runner and to the floor itself.

In the form of clip shown in Fig. 5, the ears 17, 17 have been omitted, and the central web in this instance is provided with a rectangular opening 19 which corresponds to the stud openings 2 in the floor runner 1. With this form of clip, the stud may extend directly through the clip and into the sockets 2 in the floor runner. In this

case nail holes 21, 21 are provided at opposite sides of the stud opening 19, so that if desired the clip may be secured in place on the floor runner by means of nails passing through these openings 21 and through the nail holes in the floor runner. In all other respects, the clip 5 is identical with the bracket shown in Fig. 4.

Referring now to Fig. 2, it will be noted that the base plates 9 and 11 are provided at their upper and lower edges respectively with back-turned flanges 22 and 23. In assembly, the flange 23 hooks under the depending portions 15 of the clips 12, the lower edge portions of the plates thereby being held rigidly in place against the floor surface. The upper flange 22 hooks over the upper edges of the clip and is similarly held in place with respect to the basic framework of the partition structure.

Normally, the bowed portions 16 at the upper ends of the clip are as shown in dotted lines in Fig. 2, and the interlocking engagement between the upper edges of the clip and the inturned flanges 22 of the base plates is effected by bending these bowed portions outwardly to the extent that the upper edges of the clip are forced upwardly behind the flange 22, as shown in full lines. In assembling the clips and base plates with the floor runner 1, the plates 9 and 11 are laid against the opposite sides of the clip with their respective flanges 23 interlocked with the depending portions 15 of the clip. The clip is then nailed down solidly against the top of the floor runner 1, and subsequently the bowed portions 16 of the arms of the clip are flexed outwardly by means of pliers or other suitable tool to thereby force the upper edges of the clip arms, as previously described, into interlocked engagement with the inturned flanges 22 of the base plates. In completing the partition, plaster is poured into the space between the base plates 9 and 11, over the floor runner 1, and around the bottoms of the studs, and the plaster is then progressively built up on the metal lath 7 and at both sides thereof to an extent such that the outer surface of the solid plaster partition thus produced lies flush with the outer surfaces of the base plates 9 and 11.

In the embodiment of my invention shown in Fig. 6, a modified form of clip is employed. In this instance, the clip, designated generally by the reference numeral 24, comprises a single upstanding arm 25, the upper end of which is bowed in the typical fashion previously described and as indicated at 26. The transverse web 27 of the clip is provided with a down-turned flange 28 which engages behind the inner side of the floor runner 1, a pressed-out ear 29 at the other side of the transverse web providing the means for positively positioning the clip on the floor runner. The transverse web 27, where it joins the arm 25, is deflected downwardly so as to provide the depending part 31 which, as previously set forth, functions to interlock with the base plate. A single base plate 32, in this instance, is secured to the clip in the manner previously described.

In the arrangement shown in Fig. 7, the clip 33 is of a form adapted to be secured directly to the wall surface, connection being established in the present instance by means of a nail 34. This clip 33 has the typical depending portion 35, and the bowed upper end 36 through the medium of which, as previously set forth, the base plate 37 is interlocked with the clip.

I claim:

1. In a metal base for partition structures, a floor runner in the form of an inverted channel having in its transverse web apertures for reception of upstanding studs, base plates extending at opposite sides of said runner, and clips for supporting said base plates in upright position, each said clip comprising a transverse member extending over the top and being deflected downwardly at each side of said runner and terminating in an upright arm, a reversely turned marginal flange at the lower edges of said plates forming a socket for reception of the lower ends of said clip arms, a reversely turned terminal flange at the upper edges of said plates forming a socket for reception of the upper ends of said clip arms, said arms being normally of lesser effective length than the space between said upper and lower flanges and having means providing for extension of the arms to bring the upper ends thereof into interlocked engagement with said upper flanges.

2. In a metal base for partition structures, a floor runner in the form of an inverted channel having in its transverse web apertures for reception of upstanding studs, base plates extending at opposite sides of said runner, and clips for supporting said base plates in upright position, each said clip comprising a transverse member extending over the top and being deflected downwardly at each side of said runner and terminating in an upright arm, a reversely turned marginal flange at the lower edges of said plates forming a socket for reception of the lower ends of said clip arms, a reversely turned terminal flange at the upper edges of said plates forming a socket for reception of the upper ends of said clip arms, said arms being normally of lesser effective length than the space between said upper and lower flanges, and each of said arms having a bowed section permitting extension of the effective length thereof by flexure into interlocking engagement with said upper and lower flanges.

3. In a metal base for partition structures, a stud-receiving floor-runner, base plates, a clip for supporting said plates upright at opposite sides of and in parallel relation to said runner, said clip having at each end an upright arm and an intermediate transverse member joined by depending portions to the lower ends of said arms, means for rigidly securing said transverse member on the runner, a reversely turned marginal flange at the lower edges of said plates forming a socket for reception of the lower ends of said clip arms and the adjoining depending portions of the transverse member, and means at the upper edges of said plates for interlocking engagement with the upper ends of said arms.

4. In a metal base for wall structures, a stud-receiving floor-runner, a base plate, a clip for supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension secured to said runner and joined by a depending portion to the lower end of said arm, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and means at the upper edge of said plate for interlocking engagement with the upper end of said arm.

5. In a metal base for wall structures, a stud-receiving floor-runner, a base plate, a clip for

supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension secured to said runner and joined by a depending portion to the lower end of said arm, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and a corresponding flange at the upper edge of said plate for reception of the upper end of said arm.

6. In a metal base for wall structures, a stud-receiving floor-runner, a base plate, a clip for supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension secured to said runner and joined by a depending portion to the lower end of said arm, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and a corresponding flange at the upper edge of said plate for reception of the upper end of said arm, said arm having means providing for extension thereof to bring the upper end of the arm into interlocking engagement with said flange.

7. In a metal base for wall structures, a stud-receiving floor-runner, a base plate, a clip for supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension secured to said runner and joined by a depending portion to the lower end of said arm, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and a corresponding flange at the upper edge of said plate for reception of the upper end of said arm, said arm being normally of lesser effective length than the space between said flanges and being bowed to permit extension of said effective length by flexure to an extent interlocking the upper end of said arm with the flange.

8. In a metal base for wall structures, a stud-receiving floor-runner, a base-plate, a clip for supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension joined by a depending portion thereof to the lower end of said arm, means for rigidly securing said extension to said runner, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and means at the upper edge of said plate for interlocking engagement with the upper end of said arm.

9. In a metal base for wall structures, a stud-receiving floor-runner, a base plate, a clip for supporting said plate upright in parallel spaced relation to said runner, said clip having an upright arm and a transverse extension joined by a depending portion thereof to the lower end of said arm, means including depending ears for engaging the opposite sides of said runner for rigidly securing said extension to the runner, a reversely turned marginal flange at the lower edge of said plate forming a socket for reception of the lower end of said clip arm and the adjoining depending portion of said extension, and means at the upper edge of said plate for interlocking engagement with the upper end of said arm.

ARTHUR V. SPINOSA.