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McDonnell

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[54] **WALL PARTITION ARRANGEMENT**

[76] Inventor: **Thomas M. McDonnell,** 11 N. Fourth Ave., Maywood, Ill. 60153

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[52] **U.S. Cl.** **52/632;** 52/241; 248/354

[51] **Int. Cl.**[2] **E04G 25/00;** E04H 12/18

[58] **Field of Search** 248/351, 354, 356; 403/104, 106, 110; 52/349, 632, 645, 241

[56] **References Cited**

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Primary Examiner—James L. Ridgill, Jr.

[57] **ABSTRACT**

A spring-loaded, adjustable stud, for a wall partition arrangement, adapted to fit between a pair of channel members secured to a floor and ceiling, comprising: a pair of channel elements arranged in telescoping relation, and having spring means interconnecting said channel elements and urging them away from each other and against said channel members.

4 Claims, 4 Drawing Figures

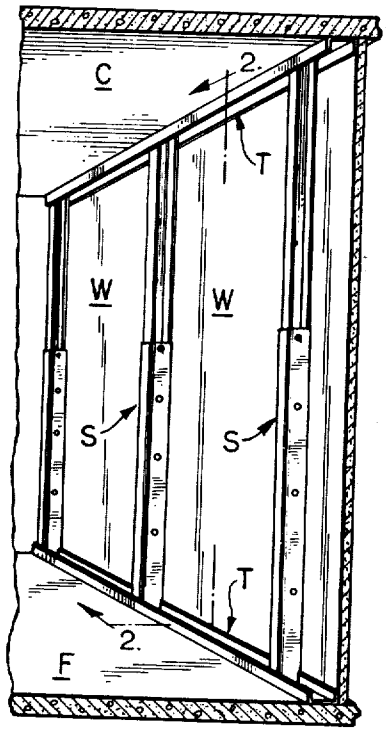


FIG. 1

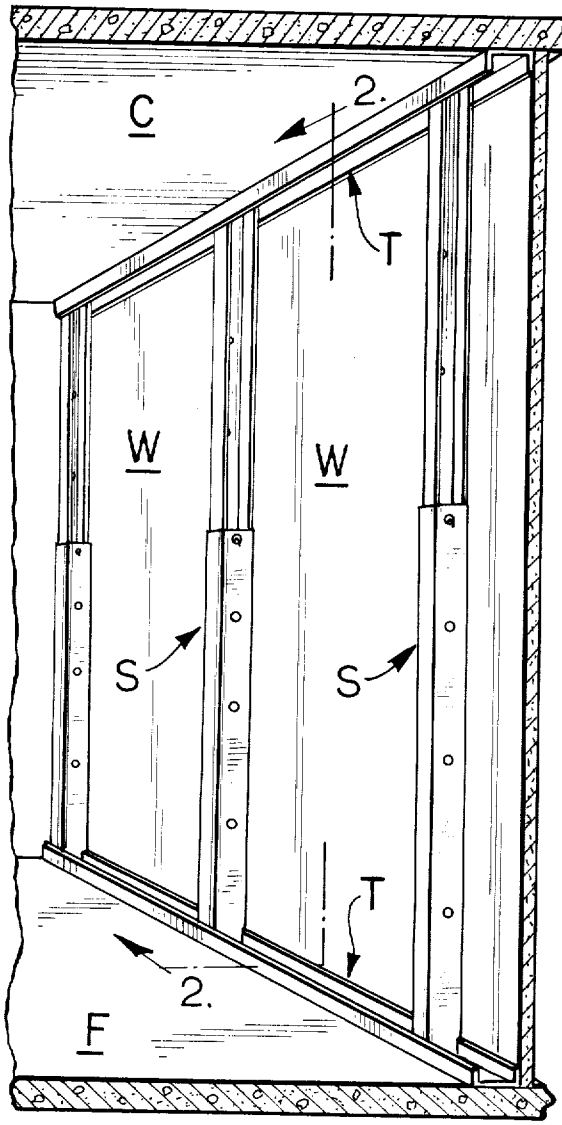


FIG. 2

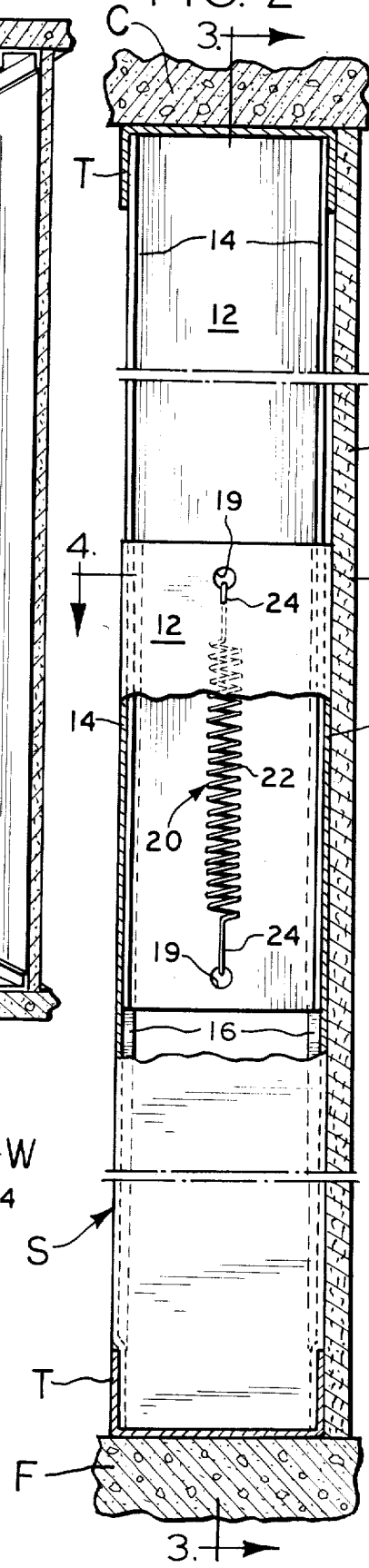


FIG. 3

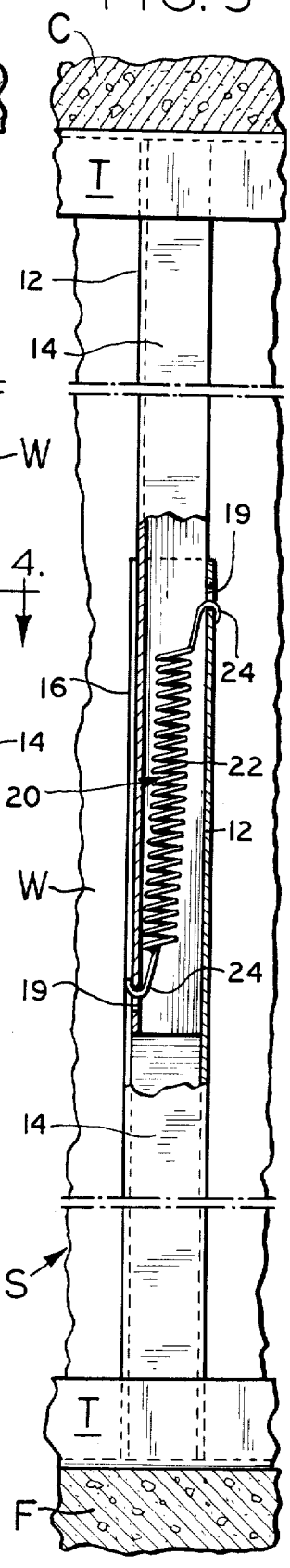
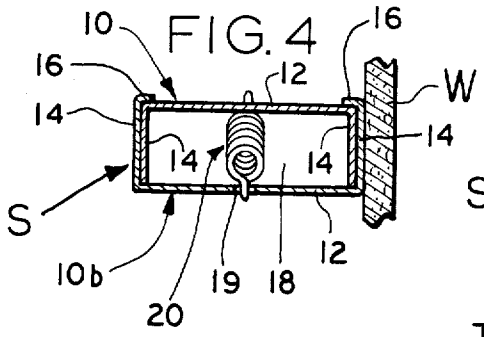


FIG. 4



WALL PARTITION ARRANGEMENT

BACKGROUND OF THE INVENTION

This invention relates to structural elements commonly known as studs which are used for vertical support in the construction of interior walls made of prefabricated materials such as wallboard, dry wall panels, plywood panels and the like.

In the construction of temporary, semi-permanent, or permanent interior walls, it is now a common practice to secure channel shaped tracks to the floor and ceiling and then attach the wallboard or wall panels to a plurality of vertical studs which extend between the floor and ceiling tracks. The studs used are formed of relatively light weight metal and each comprise a pair of telescoping channel-type elements, the ends of which are pushed apart to snugly engage the floor and ceiling tracks and then the elements are secured together by a band of adhesive tape. This taping operation requires additional time to complete, and once the stud components are taped or bolted to each other the overall length or height of the stud is fixed. Thus, if the distance between the floor and ceiling changes slightly, as the building shifts, the studs are either buckled or become too short for the vertical distance. It is therefore desirable to have a stud which is self-adjusting to the desired height.

SUMMARY OF THE INVENTION

The present invention satisfies the aforementioned need, because it is entirely self-adjusting as to height.

It is an object of the invention to provide, in a stud of the type described, a pair of telescoping components with spring means operable to urge the components against the floor and ceiling.

A more specific object of the invention is the provision, in a stud of the type described, of a pair of channel-shaped components arranged in lapping, telescoping, sliding engagement with each other and internal spring means connected between adjacent ends of the components and operable to urge the remote ends of the components away from each other and snugly against the tracks in the floor and ceiling.

These and other objects will be apparent from an examination of the following description and drawings.

DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view illustrating a wall partition arrangement embodying features of the invention;

FIG. 2 is an enlarged front elevation of one of the studs shown in FIG. 1, but with a portion of the structure broken away;

FIG. 3 is a side elevation of the structure illustrated in FIG. 2; and

FIG. 4 is a transverse section taken on line 4—4 of FIG. 2.

It will be understood that, for purposes of clarity, certain elements have been intentionally omitted from certain views where they are believed to be illustrated to better advantage in other views.

Turning now to the drawings for a better understanding of the invention, as best seen in FIG. 1, the partition illustrated extends between a floor F and a ceiling C to which have been secured a pair of lower and upper channel-shaped tracks or stud retaining members T.

Extending between the tracks T are a plurality of vertically disposed, self-adjusting studs, indicated generally at S, which embody features of the present invention.

Each of the studs S, as best seen in FIGS. 2–4, includes a pair of channel elements, indicated generally at **10** and **10*b*** which are generally similar in shape. The channel elements are each generally U-shaped in cross section and include a main or center panel **12** having a pair of integral side panels **14** extending from opposite side edges of the center panel in parallel relation with each other and normal to the center panel.

The channel elements of each stud are arranged in face-to-face, interlocking relation with each other with adjacent end portions in telescoping, sliding engagement. If desired, the side panels **14** of one of the channel elements **10*b***, (as shown in FIG. 4) may be provided with inturned flanges **16** which engage portions of the other channel element **10** to retain the channel elements in telescoping relation.

As best seen in FIGS. **2** and **3**, the adjacent end portions of the channel elements of each stud S are interconnected by a tension spring, indicated generally at **20**, which includes a coiled body **22** and a pair of hooks **24** at opposite ends thereof, which are connected to respective channel elements of a stud S at aperatures **19** which are provided at spaced intervals. Aperatures **19** also serve to accommodate the passage of electrical or other conduit through the studs.

Thus, in opertion, when the components of a stud are assembled in telescoping relation with the tension spring in place, the components are urged together or compressed enought to permit their remote ends to be inserted into the floor and ceiling tracks.

At this point the tension spring becomes operable and urges the adjacent ends of the stud components toward each other and thereby causes the remote ends of the stud to move away from each other and snugly into and against the floor and ceiling tracks T.

If the dimensions between the floor and ceiling change, or if the dimensions are not uniform throughout the length of the tracks, the stud automatically adjusts to the proper height. Further, the need to tape or bolt the stud components to each other is eliminated.

I claim:

1. In a wall partition arrangement, the combination of:

A. a pair of channel-like, stud retaining, track members affixed to vertically spaced, horizontal surfaces such as a floor and ceiling of a room;

B. a plurality of horizontally spaced, adjustable stud members extending vertically between said track members;

C. a plurality of wall panels secured to said stud members;

D. said stud members each comprising;

a. an opposed pair of elongated channel elements each being generally U-shaped in cross section and including:

i. a center panel;

ii. a pair of integral side panels extending from opposed side edges of said center panel in parallel relation with each other and normal to said center panel;

b. said channel elements having adjacent end portions disposed in lapping, telescoping relation with one portion received within the other with their side panels in sliding engagement with each

other to provide a partially enclosed cavity therebetween;

c. tension spring means disposed within said cavity and connected between said channel elements operable to bias said adjacent end portions toward each other and thereby urge the remote end portions of said channel elements away from each other and against said horizontal track members.

2. An adjustable stud according to claim **1**, wherein the side panels of one of the channel elements have inturned flanges for engagement with portions of the other channel element to maintain the elements in telescoping relation with each other.

3. An adjustable stud according to claim **1**, wherein the center panels of said channel elements are provided with a plurality of longitudinally spaced aperatures for receiving conduit means therethrough.

4. An adjustable stud according to claim **3**, wherein said tension spring means is detachably connected to said channel elements at said aperatures.

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