

[54] FLOORING SLEEPER ASSEMBLY

3,562,990 2/1971 Boettcher ..... 52/480 X

[76] Inventor: William A. Boettcher, 4507 N. Clark St., Chicago, Ill. 60640

Primary Examiner—Price C. Faw, Jr.  
Attorney, Agent, or Firm—S. J. Lehrer

[22] Filed: June 12, 1972

[21] Appl. No.: 262,057

[57] ABSTRACT

[52] U.S. Cl. .... 52/480, 52/489  
[51] Int. Cl. .... E04b 5/00  
[58] Field of Search ..... 52/480, 364, 366, 370, 489,  
52/738, 732, 715, 241

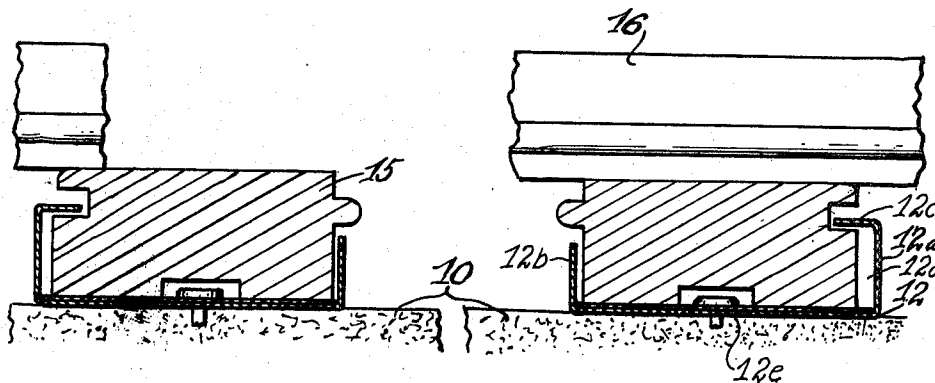
A flooring sleeper assembly comprising a retainer and flooring sleepers made up of a linear series of sections. These are of floor board material and have a slot in one side edge. The present retainer is a long, metallic receptacle for the series of sleeper sections, such receptacle rising with a channel on one side which terminates with an inward hook directed into the sleepers' slot. On the opposite side the receptacle rises with a vertical flange. The latter and the channel form guards to check lateral shifting tendencies of the sleeper sections; and the hook checks them from rising out of the retainer.

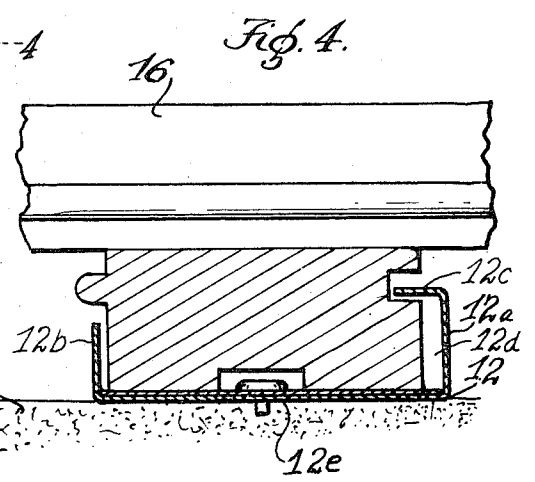
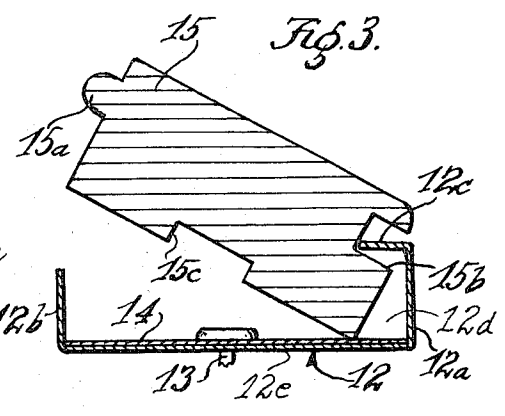
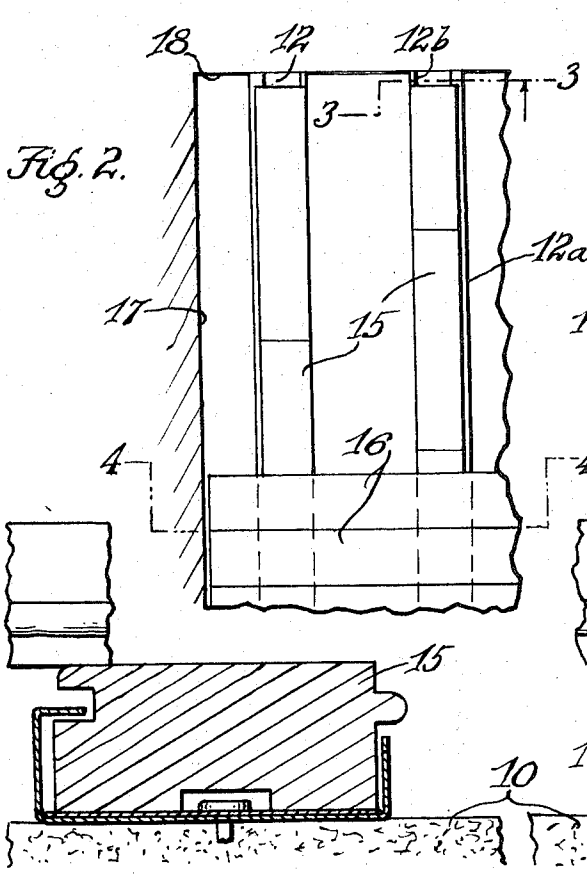
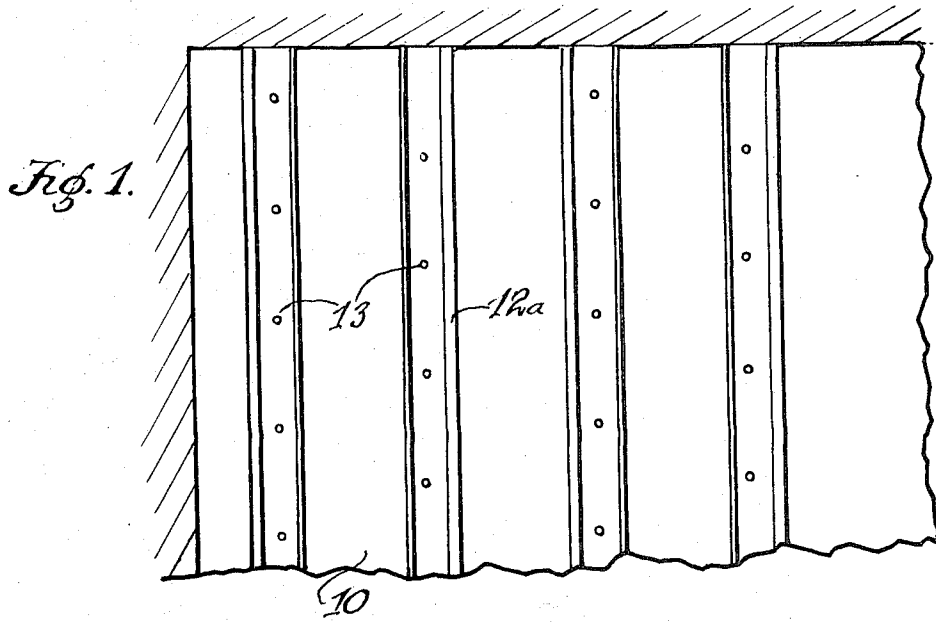
[56] References Cited

UNITED STATES PATENTS

3,160,280	12/1964	Burch .....	52/241 X
385,765	7/1888	Mesker et al. ....	52/732
1,145,933	7/1915	Spear et al. ....	52/366
1,612,075	12/1926	Tapman .....	52/489 X
1,975,228	10/1934	Grumman .....	52/732
3,501,883	3/1970	Birum .....	52/241

4 Claims, 4 Drawing Figures





## FLOORING SLEEPER ASSEMBLY

This invention relates to sleepers on which flooring is laid, and more particularly to metallic retainers to keep the sleepers from getting out of line or separating from shifting pressures imposed on the flooring. Retainers designed to accomplish this purpose are covered in my U.S. Pat. No. 3,562,990 issued Feb. 16, 1971.

While flooring sleepers usually come in lengths extending from wall to wall, the metallic retainers employed in my patented structure make it possible to use sleepers in short sections, which usually accumulate as surplus or waste material and are available at nominal cost. Also, similar waste occurs in flooring, and I have found that sectional sleepers made from flooring procure an even greater saving; and being of hardwood they are more durable than sleepers of ordinary lumber.

The present invention is an improvement over the retainer covered in my patent by offering safeguards for the sleeper sections against lateral shifting or creeping out of the retainers; and one object of the improvement is to construct the retainers with positive checks against such shifting or creeping.

A further object is to provide retainers, usable singly or in pairs, which have walls along both sides of the sleepers, making it impossible for these — or any of the sections composing them — to deviate from the retentive confines of the retainers.

Another object is to develop the improved retainers from the ones in the patent by merely altering their form, and without the need of any additional parts or securing means to lock the sleepers against lateral shifting or creeping.

A better understanding of the invention may be gained by reference to the accompanying drawing, in which:

FIG. 1 is a plan view of a base for the flooring, showing a number of the retainers secured thereto;

FIG. 2 is a similar view showing a pair of sleeper sections, laid on the retainers, and a number of floor boards laid on the lower portions of the sleeper sections;

FIG. 3 is an enlarged section taken on the line 3—3 of FIG. 2 and showing the manner of inserting a sleeper section into the retainer; and

FIG. 4 is an enlarged section on the line 4—4 of FIG. 2 showing the base and a floor board broken away.

Referring specifically to the drawing, 10 denotes a concrete base on which the sleeper installation is erected. As in the previous case, a set of the retainers 12 mentioned above is laid in parallelism as shown in FIG. 1, and secured to the base by nails 13 driven into holes previously made in the concrete. The retainers are in lengths similar to wooden sleepers, and are made of heavy sheet metal, flat on the bottom plate 12e, and raised on the outer side with an inward channel 12a and on the other side with a vertical flange 12b. Thus, each pair of retainers has its channels 12a facing each other, as seen in FIG. 4. After the retainers have been nailed down, they receive a layer 14 of mastic on the flat bottom portion, the mastic being permanently adhesive.

Each retainer 12 is designed to receive a sleeper made up of a series of sections 15 laid in endwise succession; and the sections in one retainer are staggered in relation to those in the other retainer, as shown in

FIG. 2. As previously mentioned, the sleeper sections 15 are pieces or remnants of conventional floor boards formed with a rib 15a on one side, a slot 15b on the other side, and a recess 15c in the bottom. FIG. 3 shows how a sleeper section is tilted for insertion into a retainer; and the right-hand side of FIG. 4 shows how the sleeper section eventually seats on the mastic layer 14 in the bottom of the retainer, the recess 15c clearing the row of nails 13. The floor boards 16 may now be nailed to the sleepers in the usual manner.

It is now apparent that the channel 12a and the flange 12b form walls confining the sleeper section against lateral deviation, and that the top hook 12c of the channel extends into the slot 15b of the sleeper section to check it from rising out of the retainer. While the space 12d in the channel would seem to allow the sleeper section lateral play in the channel, FIG. 3 shows that the sleeper section requires the added space when first inserted as shown. In fact, FIG. 4 shows that the sleeper section actually has very little lateral clearance — between the flange 12b and the top hook 12c of the channel — such clearance being necessary because the sleeper sections may vary slightly in width. On the subject of clearance, it is noted in the lower left-hand part of FIG. 2 that the floor boards 16 end spacedly from the wall 17 of the premises to allow for the slight linear expansion of the floor boards. More importantly, the same figure shows at the top that the series of the sleeper sections 15 ends in spaced relation to the opposite wall 18 in order that such series may find end-room in case the sections separate from the lateral, cumulative expansion of the floor boards during damp or rainy weather. However, these forces impose no strain on the retainers because the sleepers are only encased in the retainers but not attached to them.

It is now evident that the improvement in the present case over the retainer in my aforesaid patent consists of the flange 12b which forms part of the retainer on the side opposite from the channel 12. Such flange is low enough to permit the insertion of the sleeper section in the simple manner illustrated in FIG. 3, yet high enough to form a wall which resists stresses imposed upon the sleeper sections to creep out of the channels. The flanges of each set of retainers therefore join with the channels to maintain their rows of sleeper sections in their original alinement and to check stresses tending to throw the sleepers out of line and weaken the support of the flooring.

I claim:

1. A flooring sleeper assembly for use in securing finished wooden flooring to a sub-floor comprising sleeper sections to which the said flooring may be secured and a rigid, elongated, unitary retainer to receive and hold said sections, each of said sections having a longitudinal slot in one vertical face, said retainer comprising a bottom plate having means to secure said plate to said sub-floor, a first rigid upright means extending along one edge of said plate to restrain said sleeper against movement upwardly from said plate and laterally outward of said one edge of said plate and a second rigid upright means extending along the opposing edge of said plate to restrain said sleeper against movement laterally outward of said opposing edge of said plate, said first means comprising a channel formed by a vertical extension rising upwardly from said one edge and being of a height slightly greater than the distance of the bottom surgence of said slot from the bottom surface of said

3

4

sleeper when inserted into said retainer, and a horizontal flange forming a hook extending inwardly from the top edge of said vertical extension in the direction of said second means to form an opening for the insertion of said sleeper having a width less than the width of said sleeper, said second means comprising a vertical flange rising upwardly from said opposing edge to a height greater than the depth of said slot and less than the height of the said channel to allow angular insertion of said sleeper into said retainer with the slot receiving said hook and the said sleeper then being pivoted about said hook into seating engagement within the retainer.

2. The assembly according to claim 1 wherein said sections are pieces or remnants of conventional floor boards having a rib on one vertical surface, a slot on the opposite vertical surface and recess in the bottom surface.

3. The assembly according to claim 2 wherein the upper edge of said vertical flange is below said rib.

4. The assembly according to claim 1 including a layer of a sound-deadening mastic between the bottom plate and the bottom surface of said sleeper.

\* \* \* \* \*

15

20

25

30

35

40

45

50

55

60

65