

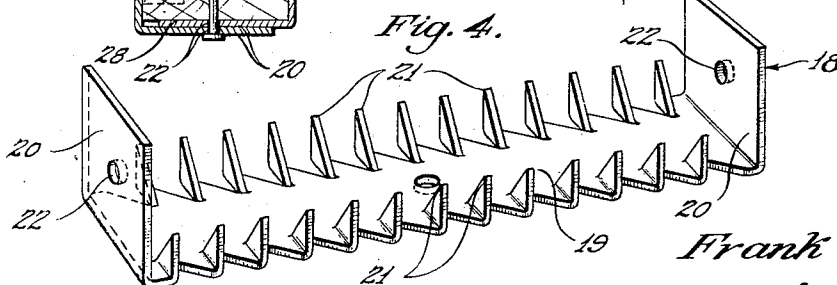
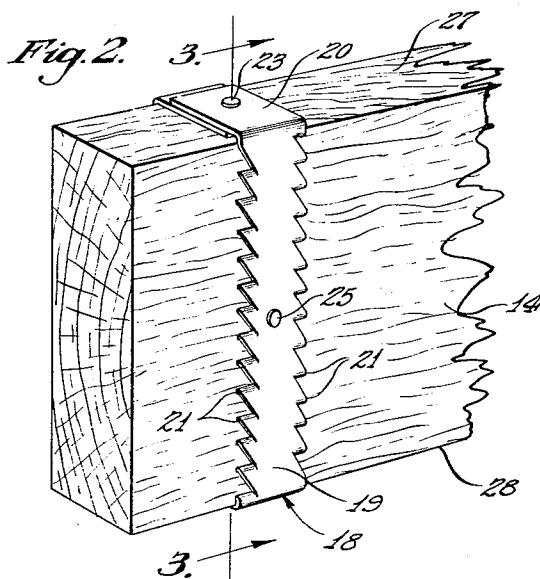
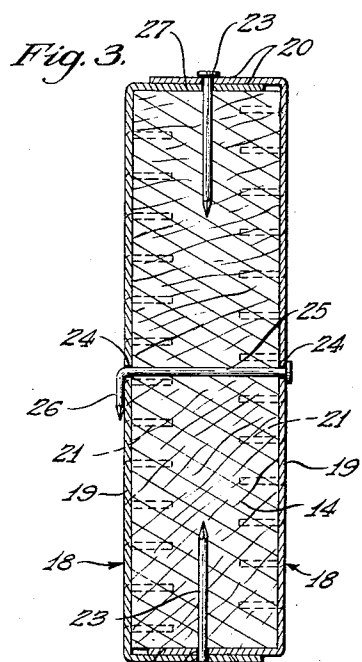
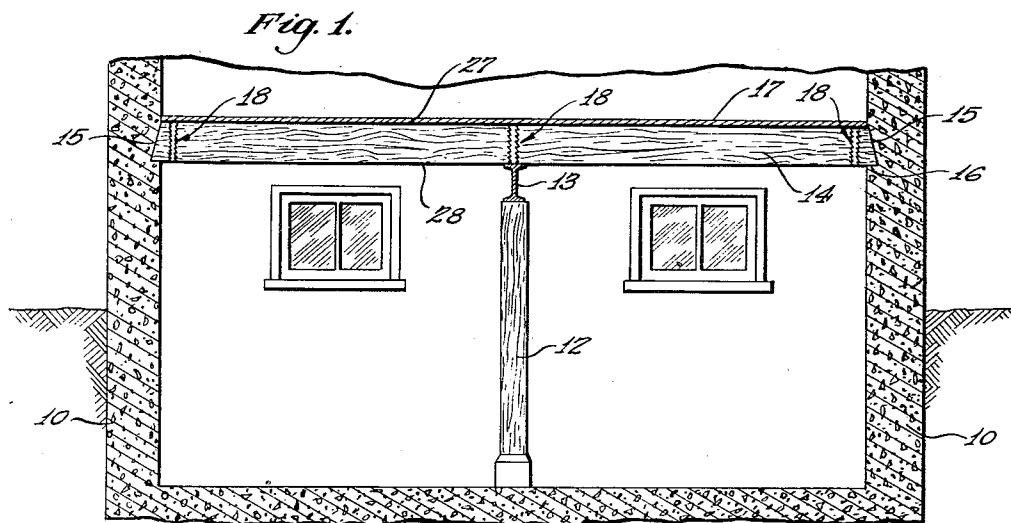
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1,947,388

ANTISHRINKING DEVICE

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UNITED STATES PATENT OFFICE

1,947,388

ANTISHRINKING DEVICE

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3 Claims. (Cl. 20—0.5)

This invention relates to certain novel improvements in anti-shrinking devices, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

The settling of the floors of buildings is frequently caused by shrinkage in the wooden joists after the latter have been installed, this shrinkage often amounting to one-half inch for each floor of the building, with considerable resulting settling of and damage to the plaster, door jams, etc.

It is an object of this invention to provide means for preventing the shrinkage of wooden joists and consequent settling of the floors resting thereon.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing showing the preferred form of construction, and in which:

Fig. 1 is a sectional view of a typical building illustrating one manner of using my invention;

Fig. 2 is a fragmentary perspective view of a joist showing my invention associated therewith;

Fig. 3 is a sectional view on line 3—3 in Fig. 2; and

Fig. 4 is a perspective detail view of a preferred form of construction of the invention.

In the drawing, which illustrates a practical embodiment of the invention, the walls of a conventional type of building are illustrated at 10, the base at 11, while 12 indicates a supporting column carrying an I beam 13 across which extends a typical wooden joist 14 having beveled ends 15 resting in notches or bearing points 16 in the walls 10, the floor 17 resting on the joist 14.

My invention includes a pair of substantially similar members, indicated generally at 18, and each comprising a substantially U-shaped metallic band, preferably but not necessarily made of hardened steel, and these bands each include a body or bight portion 19 that extends between limb portions 20 at the ends thereof.

At each side of the bight portion 19 is struck out therefrom a row of piercing elements 21 that are possessed of sufficient innate rigidity to be driven into the joist 14, as shown in Figs. 2 and 3.

Each of the limb portions 20 is provided with an aperture 22 and in use these portions 20 are overlapped, as shown in Figs. 2 and 3, thus align-

ing the apertures 20, through which are driven into the joist securing elements such as the nails 23. Each of the bight portions 19 is provided with an aperture 24, and these apertures are aligned as shown in Fig. 3, and a securing element, such as nail 25, is then driven through the bight portions 19 and clinched as at 26.

When thus in place the piercing elements or prongs 21 of the bands prevent shrinkage or contraction of the fibers of the joist due to water evaporation and which is particularly commonly experienced when using green material, as is well known in the art. The prongs 21 on opposed bight portions 19 are preferably, but not necessarily, arranged in staggered relationship, as shown in Fig. 3, so that the vertical distances between the prongs will be less than if the prongs were horizontally aligned, and so that there are thus fewer fibres between each vertical pair of prongs than if the prongs were arranged in horizontal alignment, and thus there is less opportunity for contraction or shrinkage between each two vertical prongs.

I prefer to overlap the ends 20 of the bands as shown in Figs. 1 and 2, because this reduces the number of nails needed and the labor cost of installing the bands but if desired the ends 20 may be arranged in abutting relationship so that each end 20 may be secured to the joist 14 by a separate nail, without departing from the scope of the invention.

Thus applied the bands will hold the joist 14 to its full width between the upper and lower edges 27 and 28 thereof, and maintain this full width of the joist where applied, thus preventing settling of the plaster wall located above the end portions of the joist, and likewise preventing settling of a partition that might be built above the beam 13.

The bands are preferably arranged, as shown in Fig. 1, above those points where walls and partitions are supported by the joist, being most commonly near each end of the joist and at the mid-point thereof. The bands may be attached to the joist before the same is laid upon the I beam 13 and the bearing points 16. If a split joist is used one pair of bands will preferably be arranged adjacent that end of each joist that rests on the beam 13.

While I have illustrated one manner of using the invention it is apparent the invention may be used on planks, lumber, timber and the like whenever it is desired to prevent shrinkage of the same and in building construction the invention may be used at other places than those I have indi-

cated, such as, for example, on those parts of the joists that underlie bath tubs, etc.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In combination with a building including wooden joists, metallic bands encircling said joists at intervals throughout their extent, and substantially flat relatively long piercing prongs on said bands possessed of sufficient rigidity to be driven into the joists between the fibers thereof so as to prevent shrinkage of the joists.

2. In combination with a building including joists, pairs of metallic members arranged at intervals throughout the extent of the joists, each

of said members including a body portion, and substantially flat relatively long piercing elements on the body portion possessed of sufficient rigidity to be driven into the fibers of the joists to prevent shrinkage of the latter and consequent settling of the parts of the building supported by the joists.

3. In combination with a building including joists, pairs of metallic members arranged at intervals throughout the extent of the joists, each of said members including a body portion, and substantially flat relatively long piercing elements on the body portion possessed of sufficient rigidity to be driven into the fibers of the joists to prevent shrinkage of the latter and consequent settling of the parts of the building supported by the joists, said piercing elements on opposed body portions of each of said pairs being arranged in staggered relationship so that the number of fibers and the possibility of shrinkage between the piercing elements will be less than if said elements on opposed body portions were aligned.

FRANK W. FREY.

25		100
30		105
35		110
40		115
45		120
50		125
55		130
60		135
65		140
70		145
75		150