

S. M. RANDOLPH,
NAILING STRIP.
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1,021,847.

Patented Apr. 2, 1912.

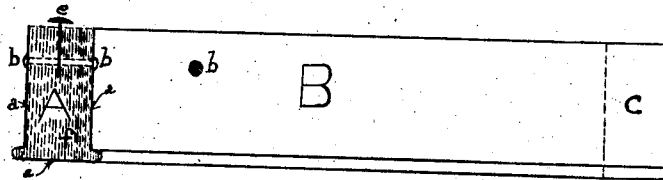


FIGURE 1.

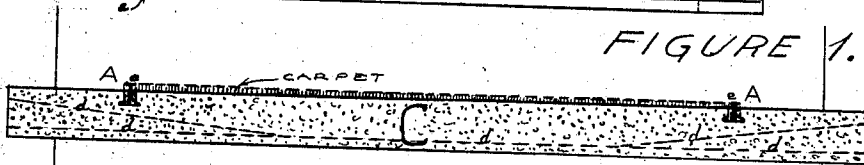


FIGURE 2.

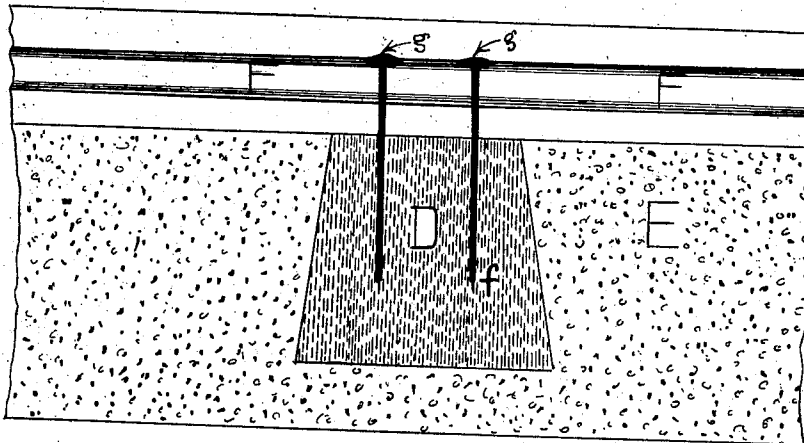


FIGURE 3.

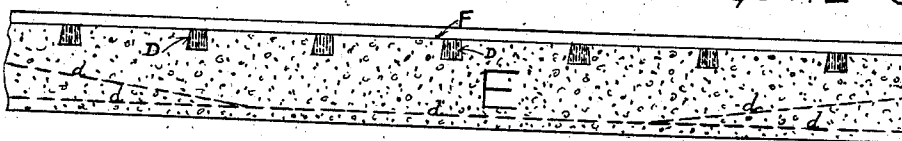
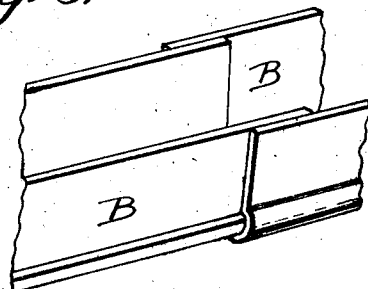


FIGURE 4.

Fig. 5.



WITNESSES:

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NAILING-STRIP.

1,021,847.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SMITH MARTIN RANDOLPH, a citizen of the United States of America, and a resident of Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Nailing-Strips, to be placed in concrete, grout, or other plastic material which later sets and hardens, for fastening wooden floors, carpets, rugs thereto, or in completing or finishing the side walls, roofs, or the like, of which the following is a specification.

In the use of wooden strips for this purpose as is now common, the wood readily absorbs the moisture from the plastic material and swells, or expands, the plastic material setting and hardening to the form and dimensions of the strips as thus enlarged. After the plastic material has set and hardened the moisture is gradually evaporated out of the wood which then shrinks thus becoming loose in its bed or cavity. Such work is unsatisfactory and various means are employed to seek to overcome the difficulty. Because of such difficulty it is customary to lay such strips in a separate or additional layer of plastic material on the top of the floor proper, thus adding to the weight of the floor, it being impossible to employ such a method in the construction of the floor proper as the strips prevent the operation of the compression necessary to form a firm and staple floor.

The object of this invention is to overcome the objections above referred to and to this end I employ suitable strips of non-absorptive or water-proof material capable of holding a nail or equivalent member and which shall be substantially fire proof. In carrying my invention into operation, I also prefer to make such strips of such a form that they will be self anchoring in the material thus preventing accidental displacement or the strips becoming loose with use as well as insuring suitable compression. It also economizes time in the construction of such work to a considerable extent as will appear in the description thereof.

In the drawings wherein like reference characters indicate like or corresponding parts; Figure 1 is a perspective view of a strip suitable for a carpet fastening, showing at one end a sectional view to more clearly illustrate my invention. Fig. 2 is a section of floor showing such strips in position and a carpet or rug secured thereto.

Fig. 3 is a partial sectional view showing a modified form of strip in position; and Fig. 4 is a section of a floor showing several strips of the form illustrated in Fig. 3 in position. Fig. 5 is a detail perspective view of a pair of strips showing the same nested together.

In the form shown in Fig. 1, A, B illustrate a nailing strip comprising a suitable metal form or shell *a* into which is placed a porous or penetrable material *f* and with rivets *b* placed at suitable intervals to bind the parts together. The end indicated in *a* is preferably constructed with the shell extended slightly so that the end of one strip may be positioned or nested in the opposite end of the other strip thus connecting the two firmly together when extended a considerable distance across the building. The porous or penetrable material may be of such construction as desired so long as it is of a nature that will readily receive a tack or nail and thus maintain a carpet or other part in position, the metal casing *a* being sufficient to prevent the material from absorbing the moisture from the surrounding plastic material to an extent that would interfere with its office. In practice I have used a composition of sawdust with a suitable adhesive cement for holding the whole together in suitable form, paper pulp, strawboard or equivalent material for the purpose may be employed.

As shown in Fig. 2, the strips A, B are embedded their depth in the concrete floor C, which is reinforced in the usual manner by rods *d d*. It will be seen that by this construction the strips become a part of the completed construction, placed in position at the time of building, and thus become a part of the compression elements in the computation of resistance. It is obvious that this decreases weight, reduces the cost of constructing the floor, and at the same time forms a better, firmer and more compact floor than would be the case if the floor is first completed and then a separate layer of cement, concrete or other material is laid upon the top thereof in which the usual nailing strip may be embedded.

In the form shown in Fig. 3, the strip is formed without the addition of a metal shell or inclosing member, and is preferably in the form of the frustum of a cone, or other equivalent form that as before mentioned will be self anchoring in the concrete

or plastic material as the latter sets and hardens. In the form here shown I have secured very satisfactory results in forming the strips by means of layers of strawboard
5 cemented together under heavy pressure and coated with a suitable water-proof cement. The cement I have employed is that well known to the trade as "R, I, W," a material manufactured by Dr. Toch and which I
10 have found sufficient to resist the absorption of moisture from the surrounding cement or plastic material. I have also secured very satisfactory results with a strip composed of paper-pulp firmly compressed and
15 coated with a suitable water-proof material as above set forth. I have also in my experiments employed a similar compound as that heretofore described where a metal shell is employed. The material I employed
20 in this case consisted of saw-dust, magnesia, and an adhesive cement all firmly compressed under a suitable pressure and coated with a water-proof material as above stated. I found all of these materials to be substantially non-absorbent to the extent necessary
25 in the construction referred to and that they will all hold a nail, tack, screw or other holding device to a sufficient extent for the purposes intended.
30 As shown in Fig. 4 a number of the strips shown in Fig. 3 are in place in a floor as is illustrated in Fig. 2, the strips forming a part of the compression member in computation of resistance. Here again the truss
35 rods *d d* are shown the floor and strips being formed as a complete whole and without the addition of an additional layer of plastic material to hold the nailing strips in place.

As shown in Fig. 1 and Fig. 2 *e e* are nails or tacks suitable to hold a carpet in place, 40 and as shown in Fig. 3 *g g* are suitable nails for holding a floor board in position upon the strips.

It is obvious that after having thus described my improvement various immaterial 45 modifications may be made either in the composition of the strips themselves or in their form, without in any way departing from the spirit of my invention which broadly consists in the use of such strips 50 which are sufficiently non-absorbent to prevent the swelling and shrinking of the strips during the setting of the inclosing plastic material, and which at the same time will be of a composition that will receive and 55 suitably hold a nail or equivalent member to secure parts to the strips. It is also preferably substantially fire-proof as before set forth, and as before stated is preferably self anchoring. 60

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

The combination with a body of plastic composition, of a moisture absorbent penetrable nailing strip embedded in said body, 65 the said strip being protected by a surrounding moisture proof casing.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses. 70

SMITH MARTIN RANDOLPH.

Witnesses:

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CHARLES I. COBB.