

Aug. 2, 1932.

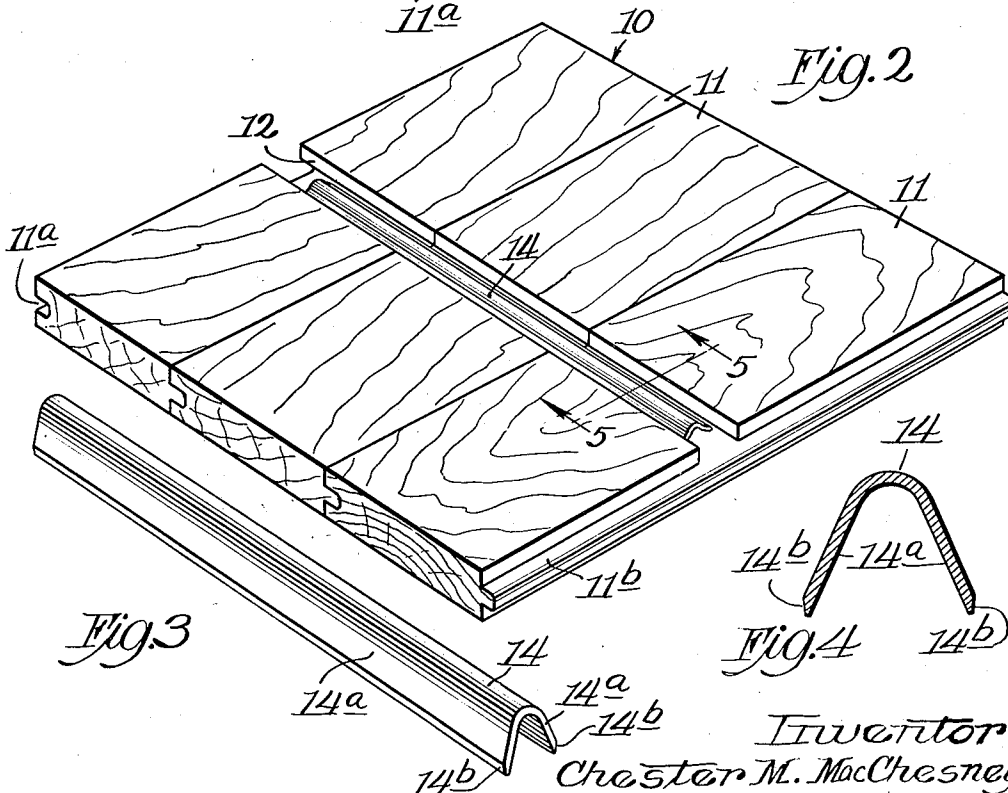
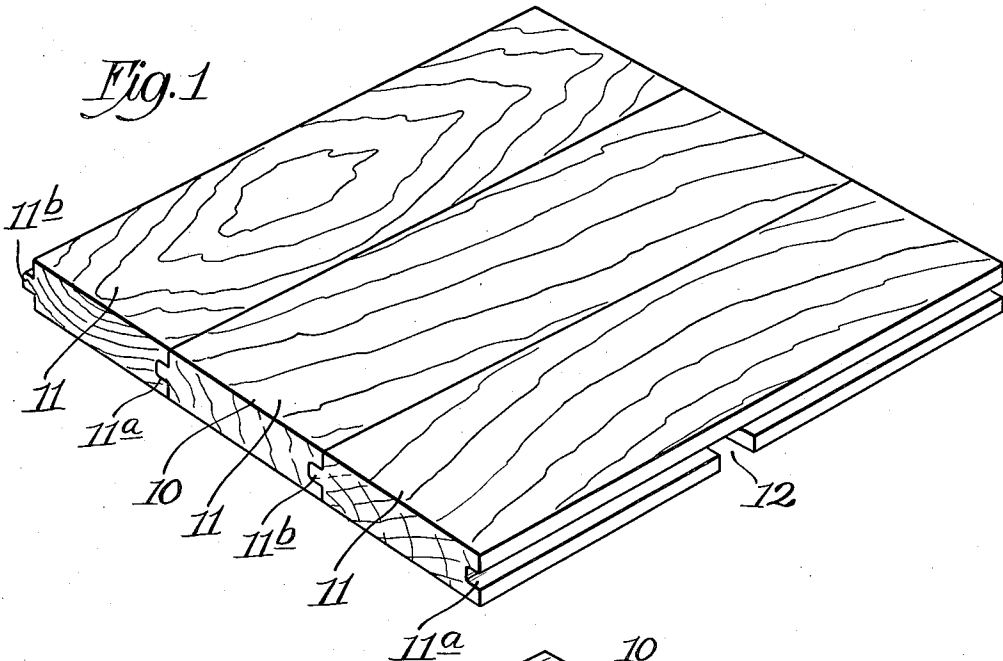
C. M. MacCHESNEY

1,869,702

FLOOR BLOCK AND FASTENER THEREFOR

Filed July 11, 1929

2 Sheets-Sheet 1



Inventor
Chester M. MacChesney
By Rector, Hibben, Davis & Macauley, Attys.

Aug. 2, 1932.

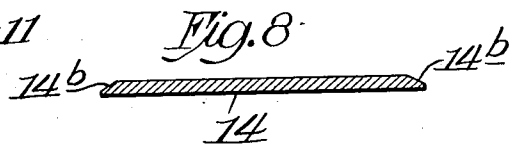
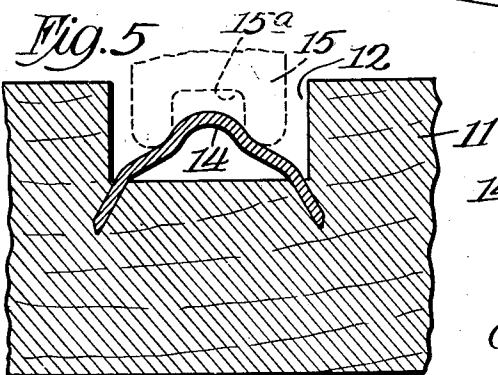
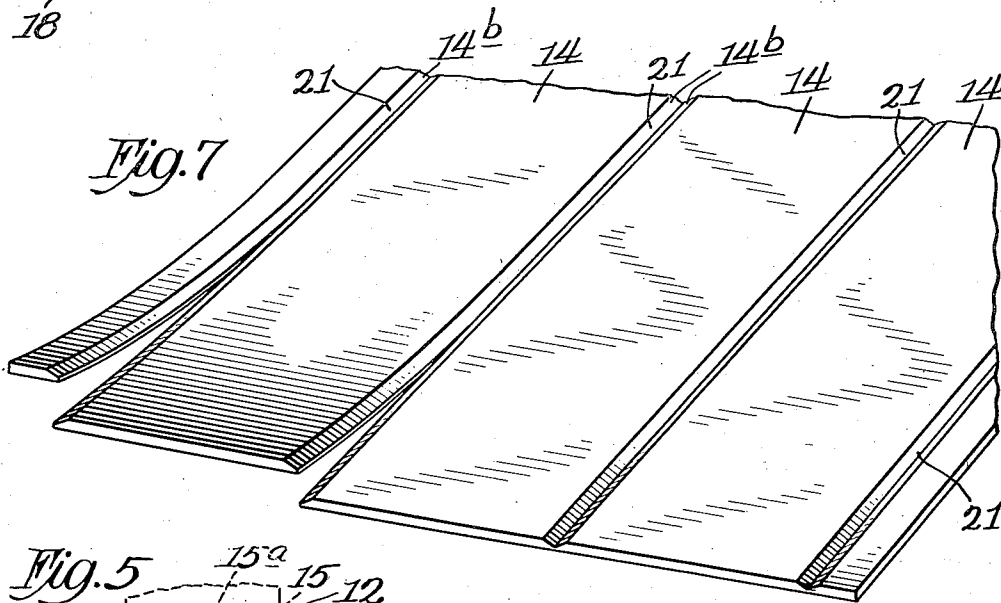
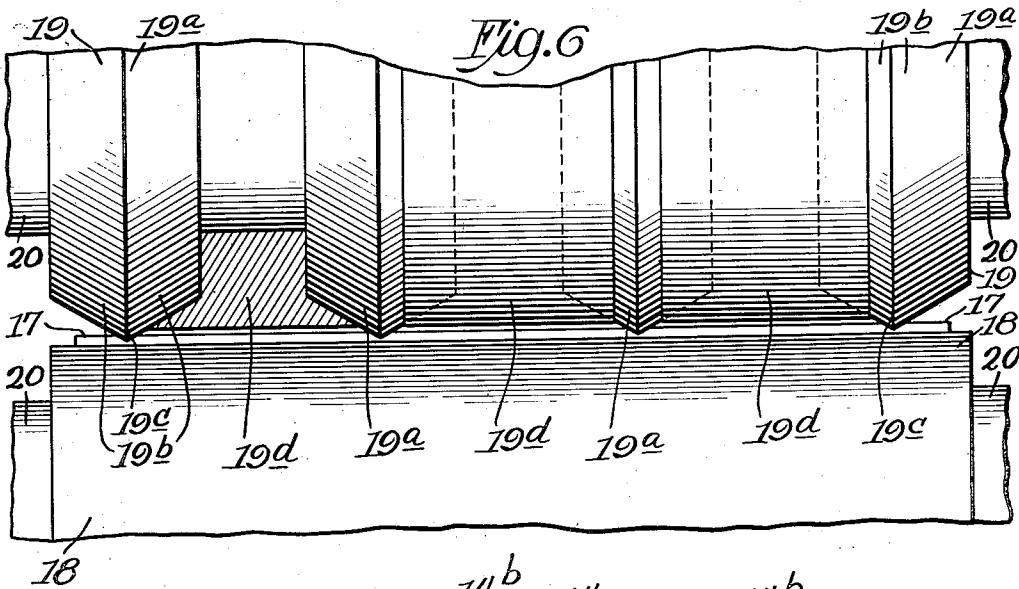
C. M. MacCHESNEY

1,869,702

FLOOR BLOCK AND FASTENER THEREFOR

Filed July 11, 1929

2 Sheets-Sheet 2



Inventor
Chester M. MacChesney
By Rector, Hibben, David & Macaulay, Attys

UNITED STATES PATENT OFFICE

CHESTER M. MACCHESNEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO ACME STEEL COMPANY,
OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

FLOOR BLOCK AND FASTENER THEREFOR

Application filed July 11, 1929. Serial No. 377,461.

This invention relates to improvements in floor blocks and fasteners therefor and its purpose is to provide an improved built-up block for use in the laying of parquet flooring and embodying an improved fastener for holding the separate elements of the block together. The principal object of the invention is to provide an improved fastener which will enable the blocks of parquet flooring to be made up of separate wooden strips, such as the waste ends of hard wood lumber and the like, which waste pieces would otherwise have no use. A further object of the invention is to provide a metal fastener for parquet flooring blocks which may be arranged to overlap the separate strips making up the block and then driven into these strips to hold them firmly in assembled relation. A further object of the invention is to provide a floor block fastener made up of a channel-shaped metal strip having the edges thereof sharpened for driving into the strips making up the block. Still another object is to provide a metal fastener for floor blocks comprising a member of angle cross-section with the longitudinal edges thereof sharpened on their outer sides so that the fastener may be driven into the block without causing the sides or arms of the fastener to spread, thereby avoiding the splitting of the block and holding the parts thereof more firmly in assembled relation. Other objects relate to various features of construction and arrangement which will appear more fully hereinafter.

The nature of the invention will be understood from the following specification taken with the accompanying drawings, in which one embodiment is illustrated. In the drawings,

Fig. 1 shows a perspective view of the improved block adapted for use in the laying of parquet flooring;

Fig. 2 shows a perspective view of the block in inverted position;

Fig. 3 shows a perspective view of the improved fastener used in uniting the separate parts of the block;

Fig. 4 shows a transverse vertical section through the fastener;

Fig. 5 shows a detail section taken on the

line 5—5 of Fig. 2, showing the cross-section of the fastener after it has been driven into the block;

Fig. 6 shows a somewhat diagrammatic end view of a pair of rollers employed in forming the metal strips which are bent to form the channel-shaped fastener;

Fig. 7 is a perspective view of a sheet of metal after it has been passed through the rolls of Fig. 6 for the purpose of sharpening the edges of the resulting strips and permitting the separation thereof, and

Fig. 8 shows a cross-section through one of the elongated strips which is subsequently bent into the channel form shown in Figs. 3 and 4.

In Fig. 1, the improved floor block 10 is shown as made up of a plurality of separate strips 11 in the form of portions of hard wood flooring each having a groove 11^a along one side and a tongue 11^b along the other side so that the three strips 11 have an interfitting dove-tailed relation to each other and form, when assembled, a square block. For the purpose of uniting the strips 11 with each other, they are provided on their under sides with transverse grooves 12 which align with each other as shown in Fig. 2. This groove is adapted to be engaged by a fastener 14 having the form shown in Fig. 3, where it is illustrated as a member of angle-shaped cross-section having downwardly diverging side walls 14^a which are sharpened on their outer sides to form inwardly directed beveled surfaces 14^b along their lower edges. The spaced relation of the sharpened edges of the side walls 14^a is such as to permit the fastener 14 to be inserted in the channel made up by the groove 12 and the fastener 14 is then driven into the strips 11 to cause them to be firmly united with each other, as illustrated in Fig. 5. The driving of the fastener into the wood may be effected by a hammer or plunger 15 having the form shown in Fig. 5, where it is illustrated as being provided with a central longitudinal groove 15^a to receive the rounded apex portion of the fastener. As the fastener 15 is driven, the upper portion thereof tends to flatten out in a lateral direction due to the

action of the member 15 but the arms 14^a of the fastener pass downwardly into the strips 11 forming the wooden block and the beveled surfaces 14^b prevent these arms from spreading out in a lateral direction so that they pass into the block transversely to the grain of the wood and do not exhibit any tendency to spread apart longitudinally of the strips 11, so that the splitting of the wood is prevented. The strips 11 are ordinarily formed of hard wood such as oak, maple or the like, and the fastener 11 is preferably formed of hard cold rolled steel which, after being bent into the form illustrated in Fig. 3, is capable of being driven without substantial deformation, in addition to having the quality of maintaining its sharpened edges 14^b.

One method of forming the improved fastener of the present invention is illustrated in Figs. 6, 7 and 8, where a sheet or strip 17 of cold rolled steel is illustrated passing between a lower cylindrical roll 18 and an upper roll 19 made up of a plurality of sharpened roll sections 19^a. The rolls 18 and 19 are mounted on heavy shafts 20 which are journaled in heavy bearings so that the two rolls maintain themselves in exact spaced relation without any bending or relative separation thereof during the passage of the metal sheet 17 therethrough. The sections 19^a of the upper roll are provided with converging faces 19^b each of which makes an angle of thirty degrees with the face of the sheet 17 and the upper peripheral portion of the roll 18. The roll sections 19^a are spaced apart by intervening disks 19^d which partially fill the spaces between the inclined surfaces 19^b on adjacent disks and have their cylindrical outer surfaces spaced slightly from the sheet 17. The spaced relation of the rolls 18 and 19 is such that as they are driven to carry the sheet 17 therethrough, the annular sharpened edges 19^c of the upper roll form annular grooves or indentations 21 in the sheet thereby dividing the sheet into longitudinal strips 14 each having an inclined beveled surface 14^b at its edge, making an angle of thirty degrees with the top surface of the strip. During this operation the disks 19^d prevent the sheets from buckling upwardly between the grooves. The grooves 21 do not pass entirely through the sheet but are deep enough to permit the separate strips 14 to be readily separated from each other by transverse bending, as illustrated in Fig. 7, and the resulting edges of the strip are then sharp enough to serve the purposes of the present invention. The flat strips having the form in Fig. 8 are then bent transversely by suitable rolls or the like to form the longitudinal fastener 14 of angle cross-section shown in Fig. 3. The arms 14^a of the fastener preferably make an angle of about fifty degrees with each other and, as

indicated above, the beveled surfaces 14^b which form the sharp edges, have an angle of preferably thirty degrees with the adjacent surfaces of the fastener. When these angles are employed, the beveled surfaces 14^b on the completed fastener, shown in Fig. 3, converge downwardly to a slight extent, thus effectually preventing any tendency of the arms of the fastener to spread longitudinally of the strips 11 when the fastener is being driven into the block. The method of forming the fastener herein described is claimed in my co-pending application Serial No. 377,462, filed July 11, 1929.

Although one form of the improved parquet flooring block and one form of my improved fastener have been shown and described herein by way of illustration, it will be understood that the invention may be embodied in various other forms within the scope of the appended claims.

I claim:

1. A floor block comprising complementary wooden members arranged side by side, and a metal fastener of permanent angle cross-section having downwardly diverging walls sharpened at their lower edges and penetrating said members to hold them in assembled relation.

2. A floor block comprising complementary wooden members arranged side by side, and a metal fastener of angle cross-section extending transversely to said members and having its walls penetrating said members to hold them in assembled relation, the walls of said fastener diverging downwardly at an angle of approximately fifty degrees before being driven and being provided at their lower edges on their outer sides with beveled surfaces making an angle of substantially thirty degrees with the faces of said walls.

3. A metal fastener for floor blocks comprising an elongated member having downwardly diverging walls making an angle of approximately fifty degrees with each other and provided along their lower edges and on their outer sides with beveled surfaces making angles of substantially thirty degrees with the adjacent faces of the member.

4. A floor block comprising a plurality of strips of wood having aligned grooves therein extending transversely to their longitudinal edges, and a metallic fastener located in the bottom of said grooves and having elongated edges sharpened longitudinally and penetrating the wood beneath the bottoms of said grooves to hold said strips in assembled relation.

5. A structural unit comprising a plurality of strips of wood united along their longitudinal edges by tongue and groove joints, said unit having a groove therein transversely to said joints and transversely to the grain of the wood of the strips, and a stiff metallic

tie of permanent inverted V-shape cross-section located in said groove and having elongated edges sharpened longitudinally to penetrate the body of the wood beneath the bottom of said transverse groove whereby said strips are united with each other permanently without splitting.

6. A floor block comprising a plurality of complementary wooden members having aligned grooves therein extending transversely to their abutting edges, and a metallic fastener located in the bottoms of said grooves and having lower elongated edges sharpened longitudinally at acute angles transversely to the fastener with bevels on their outer sides, said sharpened edges being embedded in said wooden members beneath the bottoms of said grooves.

In testimony whereof, I have subscribed my name.

CHESTER M. MACCHESNEY.

25

30

35

40

45

50

55

60

65