

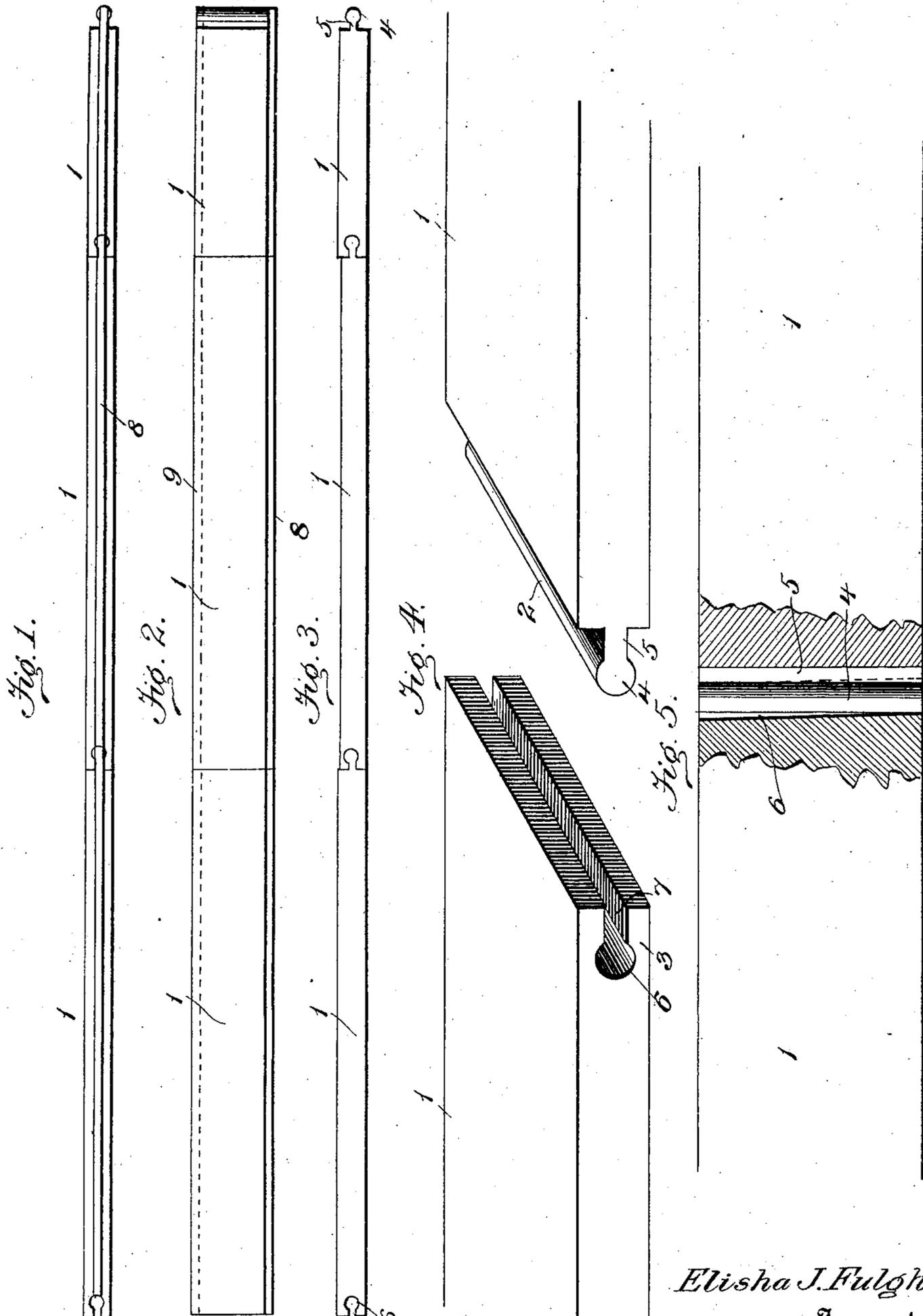
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E. J. FULGHUM.  
METHOD OF MAKING FLOOR BOARDS.

APPLICATION FILED AUG. 25, 1903.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## METHOD OF MAKING FLOOR-BOARDS.

SPECIFICATION forming part of Letters Patent No. 753,791, dated March 1, 1904.

Application filed August 25, 1903. Serial No. 170,758. (No model.)

*To all whom it may concern:*

Be it known that I, ELISHA J. FULGHUM, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a Method of Making Floor-Boards, of which the following is a specification.

This invention relates to an improved method of producing floor-boards.

It has been for some time and is now customary to unite the ends of floor-boards when laid by matching the same together at the ends with the usual plain tongue and groove, the same as used on the sides of the boards. It has been claimed that this method of end matching has to a certain extent been a saving in material, thereby enabling the manufacturer to use short pieces that would otherwise be wasted. This, however, is erroneous, for the reason that long prior to the practice of the end matching these short pieces of flooring were used with the ends square butted to the same extreme shortness as they are now used with matched ends. The lengths of commercial hard-wood flooring as listed and sold by all manufacturers to-day is from two feet to sixteen feet, and it has been the practice of builders to lay flooring from two feet to sixteen feet long directly on joists or on a sub-floor, as the specifications of the particular case might require. After taking out the commercial product of the lumber for flooring purposes, as is now customary, there is still a large percentage of waste (at least from ten to fifteen per cent.) which cannot be utilized by the old method of end matching, as pieces of floor-boards shorter than two feet have no commercial value on the market and must therefore go to waste. The commercial value of floor-boards depends upon the lengths, the short lengths being very undesirable and bringing a much lower price on the market. By my present invention I purpose to obviate this loss by short lengths, to save all the good material there is in the lumber, which would be about fifteen per cent. more than at present, and to produce the lengths of flooring desired by the consumer. I purpose to join these short pieces of floor-boards together by end matching, so as to resist longitudinal strain

in one continuous desired length while it is in process of manufacture in the factory. This process does not only apply to the joining together of promiscuous lengths or pieces from two to sixteen feet comprising the regular grades of commercial flooring, but also I purpose to join together in long strips of flooring short blocks from two inches to two feet long which may be taken from scrap or waste, and thereby arrange these short blocks in fancy patterns, which may be of different woods and colors, and thereby enable me to get as good compensation for my waste material as for the commercial product.

To secure the foregoing advantages and obviate the enumerated difficulties are therefore the main objects of my invention; and the invention consists in the method of producing floor-boards of a desired length and composed of a plurality of sections, each section being first end matched by interlocking joint members adapted to withstand when joined longitudinal strain; second, connecting or joining said sections so as to form a continuous board or strip; third, subsequently when required dressing the board to reduce the same to a uniform thickness, and, finally, tonguing and grooving the sides thereof.

Referring to the drawings, Figure 1 is an edge view of a board made in accordance with my method, and Fig. 2 is a plan view thereof. Fig. 3 is an edge view of the board after the sections have been end matched and joined and before dressing and side matching. Fig. 4 is a perspective view showing the meeting ends of two adjacent sections before the same are joined. Fig. 5 is a plan view of the board at the joint, parts being broken away to expose the same.

Similar numerals of reference indicate similar parts in all the figures of the drawings.

Sections 1, of wood of any kind and number, are first end matched, each being provided with a member of any desired form of interlocking joint, by which is primarily meant one that will when joined or connected resist longitudinal stress and not pull apart. As will be obvious, one end of a section will be formed with a male member 2 and the other with a companion or female member 3. A

plurality of the sections thus formed are jointed together, thus for all practical purposes becoming a single board. Strips thus formed are when it is necessary by reason of ununiform thickness of the sections dressed to a uniform thickness and finally side matched—that is, provided with the usual tongue and groove 8 and 9. When thus completed, the long boards may be cut into uniform lengths desired, thus escaping waste by fitting, &c. Of course the end matching of the sections obviates the necessity of arranging the joints so as to occur over the floor-joists, and by having the joints of the interlocking style there is no yield or give, as might be the case with the plain tongue and groove. When the strips are thus jointed together, the board may be handled the same as if integral, yet at the same time no gluing is necessary or desirable.

While other forms of joints adapted to withstand or resist longitudinal strain may be used, the one shown is preferred, both on account of its cheapness and simplicity and also its extreme rigidity.

Referring to Figs. 4 and 5, it will be seen that the joint member 2 (the male) consists of a transverse preferably cylindrical bead 4 and a connecting intermediate web 5, joining the same to the end of the board. The joint member 3 (the female) consists of a transverse bore 6, designed to receive the bead 4 and a narrow slot or throat 7 for the web. These members may be connected and the joint formed by sliding them laterally together. It is preferred that when thus joined the said members be forced into a mutually binding position. This may be provided for in various ways, but preferably, as shown in Fig. 5, by disposing the bore 6 and bead 4 slightly at an angle to each other, and therefore the sections on which they are formed. This difference in disposition is barely perceptible, and yet has the desired result of

drawing the sections tightly and firmly together at their joints.

By using sections of wood of different kinds a mosaic effect may be produced.

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

1. The herein-described method of producing composite floor-boards, which consists in providing the ends of a plurality of sections with companion members of an interlocking joint adapted when connected to resist longitudinal strain, connecting the said sections so as to form a continuous strip of desired length, dressing the same to uniformity, and, finally, side matching the strip.

2. The herein-described method of producing floor-boards, which consists in connecting a plurality of floor-board sections by means of a binding interlocking joint adapted to resist longitudinal strain, and subsequently side matching the board thus produced.

3. The herein-described method of producing floor-boards which consists in connecting a plurality of floor-board sections by means of an interlocking joint adapted to resist longitudinal strain, and submitting the strip thus formed to a finishing process.

4. The herein-described method of producing floor-boards, which consists in end matching and connecting a plurality of short sections by means of an interlocking joint adapted to resist longitudinal strain, subsequently finishing the same, and finally cutting into predetermined lengths.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELISHA J. FULGHUM.

Witnesses:

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J. A. McINTOSH.