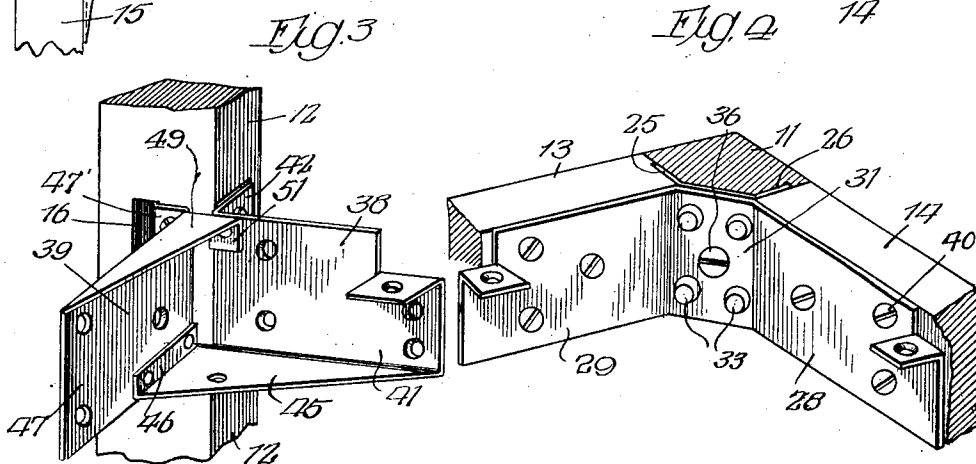
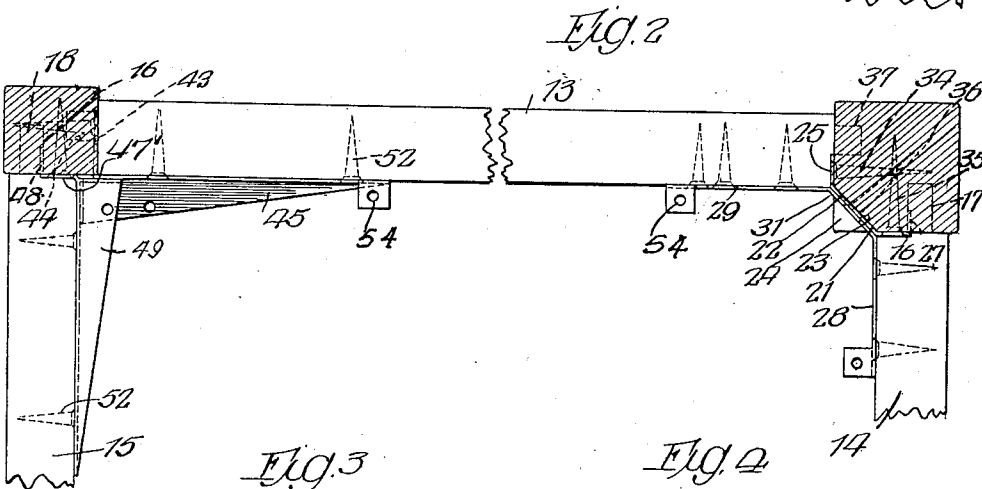
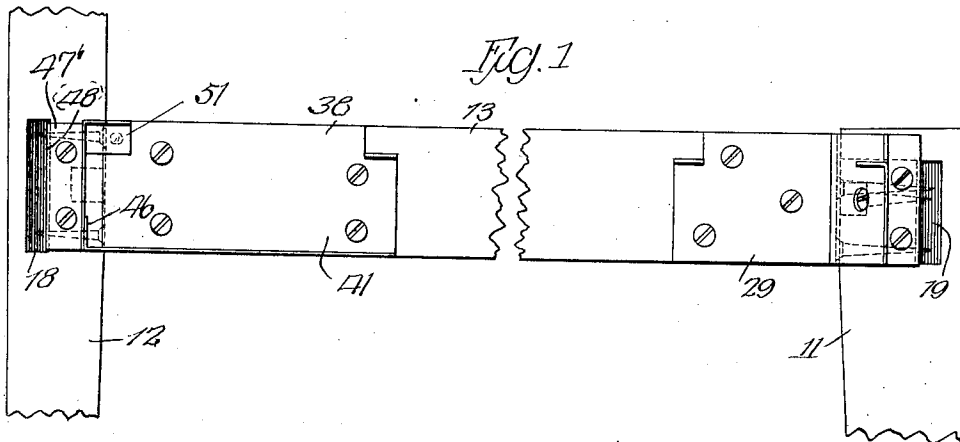


A. J. GUSTAFSON.
FURNITURE.
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1,346,955.

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UNITED STATES PATENT OFFICE.

AUGUST J. GUSTAFSON, OF MAYWOOD, ILLINOIS.

FURNITURE.

1,346,955.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST J. GUSTAFSON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Furniture, of which the following is a specification.

This invention relates in general to chairs and similar articles of furniture and also to braces or reinforces for strengthening chairs and other articles of furniture, the invention being capable of effective embodiment in numerous other connections, however, as will be apparent as it is better understood.

While the invention is capable of embodiment in numerous forms, the form hereinafter selected for the purpose of illustration is particularly adapted for use in the manufacture of chairs and more particularly chairs of the character of dining-room chairs, these being selected for the reason that chairs of this character by reason of their use require exceptionally sturdy construction and reinforcing if they are long to receive the ordinary use to which such chairs are subjected.

A principal object of the invention is the provision of a brace for furniture and the like of simple and cheap construction and of durable and permanent efficiency. It is highly desirable that the parts of the piece of furniture be directly connected together both for appearance and to relieve the usual fastening devices and at the same time be strongly and additionally braced. To this end my invention contemplates the provision of braces in chairs and other articles of furniture, the parts of which braces will enter into and reinforce the parts of the wood actually forming the connections and will also form separate auxiliary connections between such parts, and all of this without altering in any way the conventional and desirable appearance of the furniture and without the attending evils either in the manufacture of the braces or in the manufacture and assembling of the chair parts.

A still further and highly important object of this invention is the provision of a chair and particularly the braces therefor so constructed and arranged that the structure may be sold in knocked down condition and put together with certain accuracy by the ordinary purchaser and without expert mechanical training or skill and also without the employment of mechanics

trained in the art and without the use of tools of any character other than a screw-driver.

Another object and advantage of the invention is the provision of a chair or other article of furniture and braces therefor which may be positioned without danger of splitting the material of the wooden parts, the fastening devices serving themselves to prevent such action.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description when considered in connection with the accompanying drawing illustrating a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a fragmentary view of two legs of a chair and a connecting side rail; 60

Fig. 2 is a partial horizontal view taken just above the horizontal rails; 65

Fig. 3 is a perspective view of one of the rear or back braces; and

Fig. 4 is a similar view of a front brace. 80

For the purpose of illustrating my invention I have shown in diagrammatic fashion a chair having front legs 11, back legs 12, side horizontal rails 13, a front horizontal rail 14 and a rear horizontal rail 15. The rails are connected with the legs with the usual mortise and tenon connections consisting of tenons or tongues 16 and 17 on the ends of the rails entering into mortises 18 and 19. At each corner I provide a brace which forms a part of the connection between the rails and the leg which connects them and enters also into the connection to reinforce the connecting wooden parts. Since the strains on a dining-room chair are slightly different at the front than at the back the braces provided at the front and at the back in the present instance differ in certain particulars, although it will be manifest that they can be used in other positions and in changed form. 100

Considering first the brace at the front, it will be noted that there is a sheet metal plate generally indicated at 21, which embraces a part of the leg. It has a body part 22 resting against a face 23 provided by rabbeting the corner 24. At the side a wing or flange 25 extends upon the adjacent face of the leg and at the front is located a similar flange 26, this last mentioned flange, however, terminating in an inturned lip 27, which enters into the mortise 17. A second plate bent to 110

form wings 28 and 29, arranged at right angles with respect to each other and connected by a central portion 31 lying upon the outer face of the central part 22 of the brace part 21, is provided, rivets 32 taking through the two contacting parts of the plates. The two wings 28 and 29 lie close against the inner faces of the adjacent ends of the rails 14 and 13 when the parts are completely assembled. Screws indicated at 34 and 35 are inserted through the flanges 25 and 26 into the leg at right angles, these screws being located in different planes, as indicated in Fig. 1, and an additional screw 36 is positioned through two contacting plates and into the material of the leg at an angle with the two screws 34 and 35. These screws tend to draw the material tighter in the three directions they extend, so that each reinforces the material of the leg against splitting under the action of the other screws. During the assembling of the chairs the front braces are thus positioned on the leg and the tenons 17 at the ends of the front rail and the tenons 37 at front ends of the side rails are positioned in their respective mortises, the adjacent faces of the rail being recessed to receive the flanges 25 and 26 of the brace. Suitable screws 40 are then positioned through the wings 29 and 28 and into the side rails at the corners for completely and permanently assembling. The brace at the rear is also composed in the present instance of two sheet metal members indicated generally at 38 and 39. The member 38 provides a wing 41 adapted to lie along the inner face of the rear end of the adjacent side rail and is provided with an outstanding flange 42 having an opening 43 over the mortise 44 for receiving the tenon of the adjacent end of the side rail. It also has a horizontally disposed triangular flange 45 connecting at 46 with the sheet metal member 39, which flange forms a web for reinforcing the chair against the load imposed upon it by persons tilting back when sitting in the chair or dragging it over the carpet or floor. The member 39 provides a wing part 47 extending alongside the inner face of the adjacent end of the back rail and this member also has a flange 47' extending rearwardly, turned over at its end at 48 and inserted within the mortise 16 in the same manner in which the flange 27 is inserted in the mortise 17. At the top member 39 has a triangular flange or web 49 which is turned over at its end at 51 and riveted to the member 38, so that this flange also forms a reinforcing web when the parts are assembled. The back brace is first fastened to the leg and the adjacent ends of the rail secured in place, screws 52 being positioned to lock the structure in permanent connection. The metal portions 48 and 27 entering with the wood into the mortises reinforce the tenons

and form under certain aspects of the invention parts thereof and the plate 42 extending across the mortises and the flanges 25, 26 and 47' also serve to reinforce the mortises. It will be noted that these parts enter actually into the connections between the adjacent faces of the rails and legs, and this without interrupting the directness of the connection between these several parts. If desired lips 54 may be provided to form seats for the chair bottom.

It is thought that the invention and many of its attendant advantages will be better understood from the foregoing description and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. An article of furniture comprising legs, rails connecting same and a corner fastener engaging the two rails connected to a leg and entering into a mortise and tenon engagement and having a part insertible laterally into the mortise.

2. An article of furniture comprising legs and rails connected thereto, said rails entering into closed mortises in said legs and fastening members engaging the two rails connected to a leg and engaging said rails and entering into said mortise and tenon connection.

3. An article of furniture comprising legs and rails connecting the same, fastening members engaging the two rails connected to a leg and connected to one face of said rails and fastened to said legs by fastening devices extending into the legs angularly with respect to which and exerting a pulling strain, each fastening device preventing splitting by the other.

4. An article of furniture comprising legs and rails connected thereto and fastening devices connecting said rails and said legs, a fastening device being secured to exposed faces of the rails and having three fastening members extending into a leg, and all angularly disposed with respect to the others.

5. An article of furniture comprising legs and rails connected thereto and fastening devices, said fastening devices being secured to the faces of the rails and having intumed ends or flanges disposed between the contacting faces of the rails and legs, and fastening members extending through said flanges and into said legs.

6. An article of furniture comprising legs, rails mortised thereto and fastening devices secured to the faces of the rails and having flanges or parts disposed between the adjacent faces of the rails and legs and fasten-

ing members disposed through said parts or flanges and into said legs.

5 7. An article of furniture comprising legs, rails connected thereto by mortise and tenon joints and fastening devices secured to the faces of said rails and having a part extending through adjacent a mortise at one side around and into a mortise at the other.

10 8. An article of furniture comprising legs and rails connected thereto and sheet metal fastening devices having parts lying along and engaging with the rails and other parts disposed between the ends of the rails and the legs and fastening members disposed
15 through said last mentioned parts.

9. An article of furniture adapted for engagement with three angularly disposed furniture leg surfaces and having apertures for the reception of fastening devices as

screws whereby to permit the insertion of said fastening devices drawing the material against splitting. 20

10. A brace for furniture comprising parts for fastening to furniture rails and parts adapted to enter between the connection of said rails with the leg, one of said parts being adapted to enter into a mortise and tenon connection and another extending between joined furniture part and about the tenon of another mortise and tenon connection. 25 30

Signed in the presence of two subscribing witnesses.

AUGUST J. GUSTAFSON.

Witnesses:

JOHN C. CARPENTER,
ETHEL WOOD.