F. P. D'ARCY.

FRAME AND CORNER IRONS THEREFOR.

APPLICATION FILED FEB. 26, 1914.

1,184,079. Patented May 23, 1916.

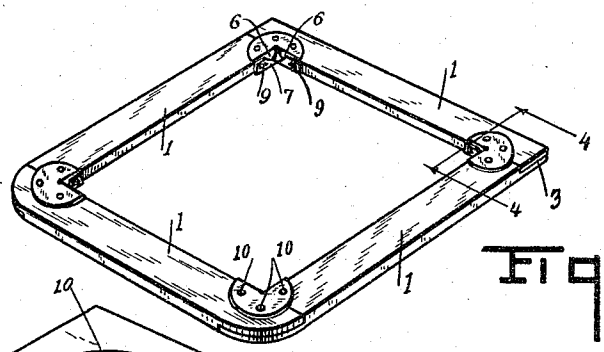


Fig. I.

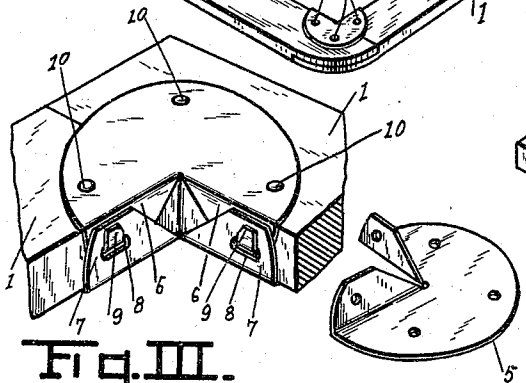


Fig. III.

Fig. V.

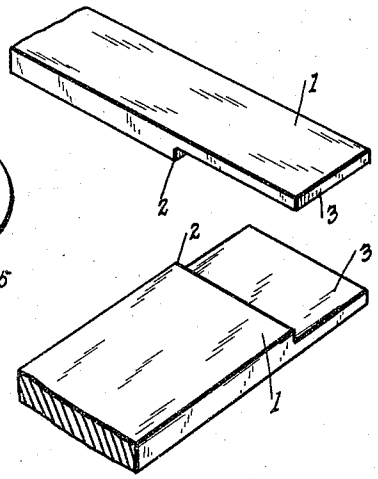


Fig. II.

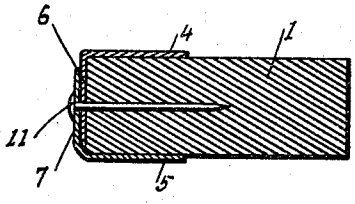


Fig. VI.

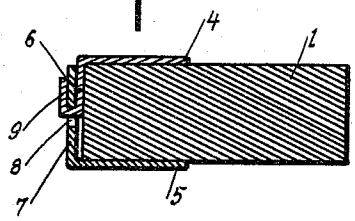


Fig. IV.

Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

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FRAME AND CORNER-IRONS THEREFOR.

1,184,079. Specification of Letters Patent. Patented May 23, 1916.

Application filed February 26, 1914. Serial No. 821,151.

To all whom it may concern:

Be it known that I, FRANK P. D'ARCY, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Frames and Corner-Irons Therefor, of which the following is a specification.

This invention relates to improvements in frames and corner irons therefor.

My improved frame is especially designed by me for use in cushion seats for automobiles, carriages, and the like, where it is desirable to have a light, rigid frame. In cushions of this character, using helically coiled springs, the springs are frequently mounted on supports such as is shown in my Patent No. 726,817, issued on the 28th day of April, 1903, adapted to be nailed to the frame. Cushions of this character are sometimes roughly handled and are subjected to severe strains. If the frame is not entirely rigid, that is, if there is looseness or racking in its joints, the spring supports soon become loosened and the cushion is destroyed or must be repaired.

It is the main object of this invention to provide an improved frame which is simple and economical in structure and at the same time, strong and rigid, and one which, while having these advantages, may be constructed of comparatively light material.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this specification, in which:

Figure I is a perspective view of a frame embodying the features of my invention. Fig. II is a detail perspective view of a pair of meeting frame pieces, showing the manner of forming the joint therebetween. Fig. III is an enlarged detail perspective view of one of the corners of the frame, showing the corner irons in position. Fig. IV is a sectional view on a line corresponding to line 4—4 of Fig. I. Fig. V is a perspective view of a modified form of corner iron, it being perforated to receive a nail instead of being provided with tongues or slots as in the construction shown in Figs. I and III. Fig. VI is a sectional view corresponding to that of Fig. IV, showing the application of the modified form of corner iron.

In the drawing similar reference numerals refer to similar parts throughout the several views.

Referring to the drawing, the frame shown is rectangular, it being formed of four pieces. These frame pieces are jointed by rabbeted lap joints, the pieces having rabbets 2 at both ends forming tongues 3 which are lapped as shown. The corner irons 4 and 5 are plate-like in form, being preferably circular so as to obviate corners and are provided with angularly disposed flanges 6 and 7 respectively, adapted to engage the inner edges of meeting frame pieces,—in other words, these flanges are disposed at angles to each other corresponding to the angles of the frame pieces, the angles of the structure illustrated being right angles. The corner irons are arranged in opposed pairs on the sides of and overlapping and secured to the ends of meeting frame pieces with their flanges overlapped in the angles and engaging the inner edges thereof.

In the embodiment shown in Figs. I and III, one corner member of each pair is provided with slots 8 in its flanges, while the other is provided with tongues 9 on its flanges, arranged through the slots and clamped upon the flanges of the opposed members. The corner irons are secured to the meeting frame pieces for economy preferably, by nails 10, there being a securing nail for each corner iron engaging the meeting frame pieces and also one for each corner iron engaging the lapped tongued portions thereof, as is clearly shown in the drawing. The frame pieces are thus securely and rigidly secured together and braced at the joints. The corner irons being interlocked prevent the nails drawing out as there is but little longitudinal pull on the nails. Further, the frame pieces are braced against rocking movement by the engagement of the corner iron flanges with the edge thereof. In practice, these corner irons are formed of sheet metal stampings. I have found that scrap metal, ordinarily considered as useless, can be satisfactorily used for the purpose, thus further reducing the cost of the material. The die for forming the corner irons is simple and they can be turned out very rapidly. Further, the

frames may be quickly assembled and the corner irons applied. In the modification shown in Figs. V and VI, the tongues and slots are omitted from the flanges and the flanges secured together by nails 11 therethrough driven into the edges of the frame pieces. This I find to be a very satisfactory embodiment of my invention. The frames thus made and assembled are simple and economical and can be produced at a low figure, and at the same time, are very strong and rigid and capable of withstanding very severe uses.

I have not attempted to illustrate the applications of my invention which I contemplate, as I believe the disclosure made will enable those skilled in the art to which my invention relates to adapt and embody the same as may be desired.

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

1. In a structure of the class described, the combination of the frame pieces having rabbeted lapped joints and plate-like corner irons having angularly disposed flanges, said corner irons being arranged in opposed pairs on the sides of and overlapping and secured to the ends of meeting frame pieces with their flanges overlapping in the angles and engaging the inner edges thereof, one of each pair having slots in its flanges and the other having tongues disposed through said slots, there being a securing nail for each corner iron engaging each of the meeting frame pieces and one engaging the lapped tongue portions thereof.

2. In a structure of the class described, the combination of the frame pieces and plate-like corner irons having angularly disposed flanges, said corner irons being arranged in opposed pairs on the sides of and overlapping and secured to the ends of meeting frame pieces with their flanges overlapped in the angles and engaging the inner edges thereof, one of each pair having slots in its flanges and the other having tongues disposed through said slots.

3. A structure of the class described comprising pairs of plate-like corner irons having angularly disposed flanges, one having slots in its flanges and the other having tongues adapted to engage said slots.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

FRANK P. D'ARCY. [L. S.]

Witnesses:
C. B. DES JARDINS,
P. W. POMEROY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."