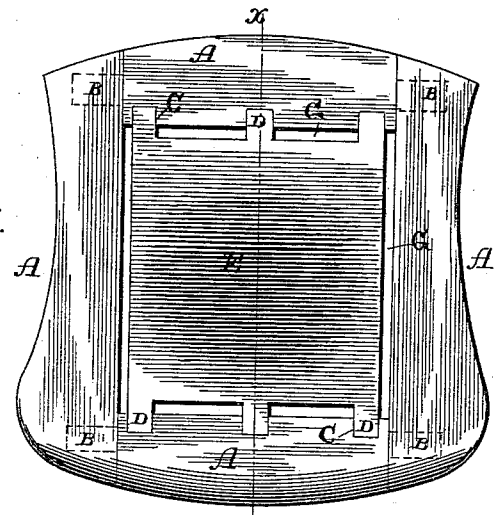
(No Model.)

C. H. & R. A. DE FREHN.

CHAIR BOTTOM.

No. 457,637. Patented Aug. 11, 1891.

Fig. 1.



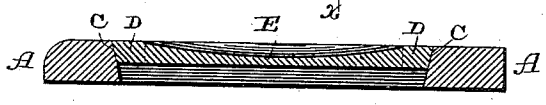


Fig. 2.

Fig. 3.

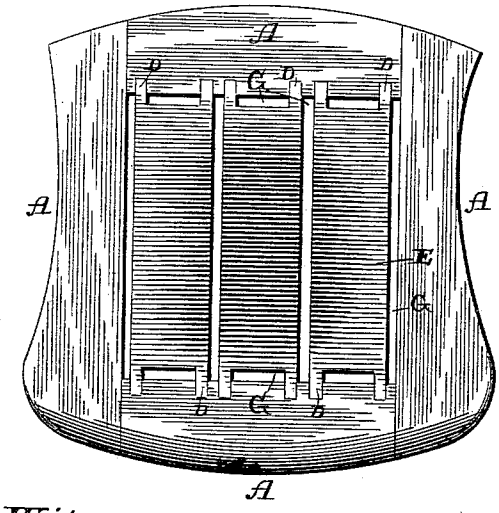
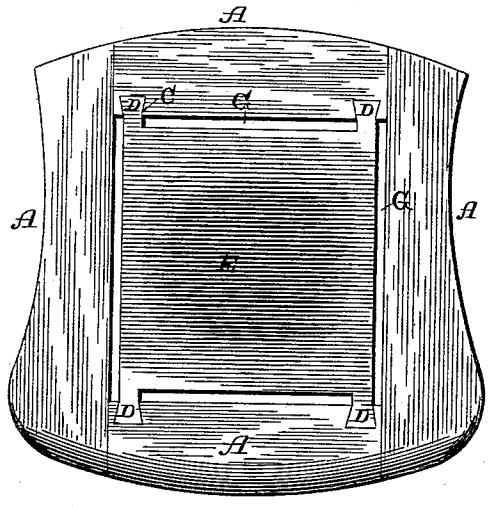


Fig. 4.



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES H. DE FREHN AND ROBERT A. DE FREHN, OF MOUNT UNION, PENNSYLVANIA.

CHAIR-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 457,637, dated August 11, 1891.

Application filed October 14, 1890. Serial No. 368,109. (No model.)

To all whom it may concern:

Be it known that we, CHARLES H. DE FREHN and ROBERT A. DE FREHN, of Mount Union, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Chair-Bottoms; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in chair-seats; and it consists in the special construction hereinafter fully described, and pointed out in the claims.

Heretofore chair-seats composed of a frame and a filling have had in some instances a groove or recess entirely around the inner edge of the frame in which the bottom is placed; but this construction is found very difficult to manufacture, for the reason that where the chairs are manufactured in quantities by machinery it is almost practically impossible to make a neat fit of the bottom in the frame. Invariably either the bottom or the frame will be out of true, and it is therefore extremely impracticable to make a close-fitting joint, and is too expensive for cheap chairs, besides not leaving any ventilation. The more common form is to cover the frame with a layer of perforated compound lumber and secure it to the frame by nails. This is expensive, because of the cost of making the layer, and is objectionable for many reasons, the chief ones being that there is an edge all around the layer, and, secondly, the nail-heads will catch in the clothes.

The object of our invention is to form a chair-seat having a bottom which is composed of one or more blocks which are smaller than the opening in the frame of the seat, and to provide this bottom with supporting projections or tenons which fit in recesses or mortises made in the inner edge of the frame, whereby a space is left around the bottom, for the purpose hereinafter pointed out.

Another object of our invention is to make the ends of the projections or tenons inclined and to give the ends of the recesses or mortises a corresponding incline, whereby the bottom is securely wedged in place, and at the same time causing a strain or tension upon the frame in which they are placed, which makes the frame rigid and thereby produces as a whole a firm and strong bottom, and to make the upper face of the bottom around its edges flush with the frame and slightly hollowed out in the center, whereby a very comfortable and sightly bottom is produced.

Figure 1 is a top view of a chair-bottom which embodies our invention. Fig. 2 is a vertical section thereof, taken on the dotted line $x\ x$ of Fig. 1. Figs. 3 and 4 are top views of the bottom, showing slight modifications.

The frame A of the seat may be of any desired shape and form, and is secured together at their ends by means of the tenons B. Formed in the inner edge of the frame A are any suitable number of recesses or mortises C, into which the supporting-tenons D upon the bottom fit. The ends of these recesses and the ends of the supporting-tenons are correspondingly inclined, as shown, the incline of the recesses continuing through to the under edge of the frame A.

As will be noticed, the bottom E is smaller than the opening in the frame A, so that a space G is left around its edge, which does away with the necessity of making a joint, adds to the appearance of the bottom, and affords ventilation, as hereinafter set forth.

We form the bottom E out of a board of suitable thickness and width, cut the tenons thereon in a line with the grain of the material, and for the purpose of adding comfort make a hollow or depression at the center thereof, as shown in Fig. 2. The supporting-tenons of the bottom are then forced in the recesses in any suitable manner until they are wedged tightly and securely in place by reason of the inclined ends of the said recesses and tenons. By means of this construction the mortises and tenons need not be very accurately formed, as the blocks are forced down until the tenons are properly wedged, and the faces of the bottom or frame planed down until they are smooth and flush, according as either the bottom or the frame

projects above one another. In order to prevent the frame A from becoming separated by the tension of the bottom when they are forced therein, the side pieces of the frame are made to overlap the end pieces and the tenons formed upon the end pieces instead of upon the side pieces, as is ordinarily the case. We do not desire to limit ourselves to a bottom composed of a single block, nor to any specified number of blocks, nor to any particular number or form of tenons, as this may be varied at will without materially departing from the broad idea of our invention. For instance, there may be three blocks, as shown in Fig. 3, or there may be any desired number of blocks, and the tenons, if desired, may be made dovetailed, as shown in Fig. 4, and inclined upon their edges as well as their ends, if desired. So, also, the tenons may be formed upon the sides instead of the ends of the blocks, in which case the end pieces should overlap the side pieces and the connecting tenons formed on the side pieces to prevent separation of the parts when put together as above described.

The above construction enables us to produce a chair-seat of the cheap grade which is comely in appearance, cheap to produce, durable, and in which the objections usually present in this character of chairs are entirely avoided.

Having thus described our invention, we claim—

1. A chair-seat consisting of a frame having inclined recesses in its inner edge and a bottom having inclined supporting-tenons which fit in the said recesses, for the purpose described.

2. A chair-seat consisting of a frame having its side pieces overlap the end pieces and provided with a tenon and a mortise, the end pieces having recesses which have inclined ends, and a bottom having supporting-tenons which have their ends inclined and fit in the said recesses, the parts combined to operate substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CHAS. H. DE FREHN.
ROBERT A. DE FREHN.

Witnesses:
C. W. ALBERT,
FRANK DE FREHN.