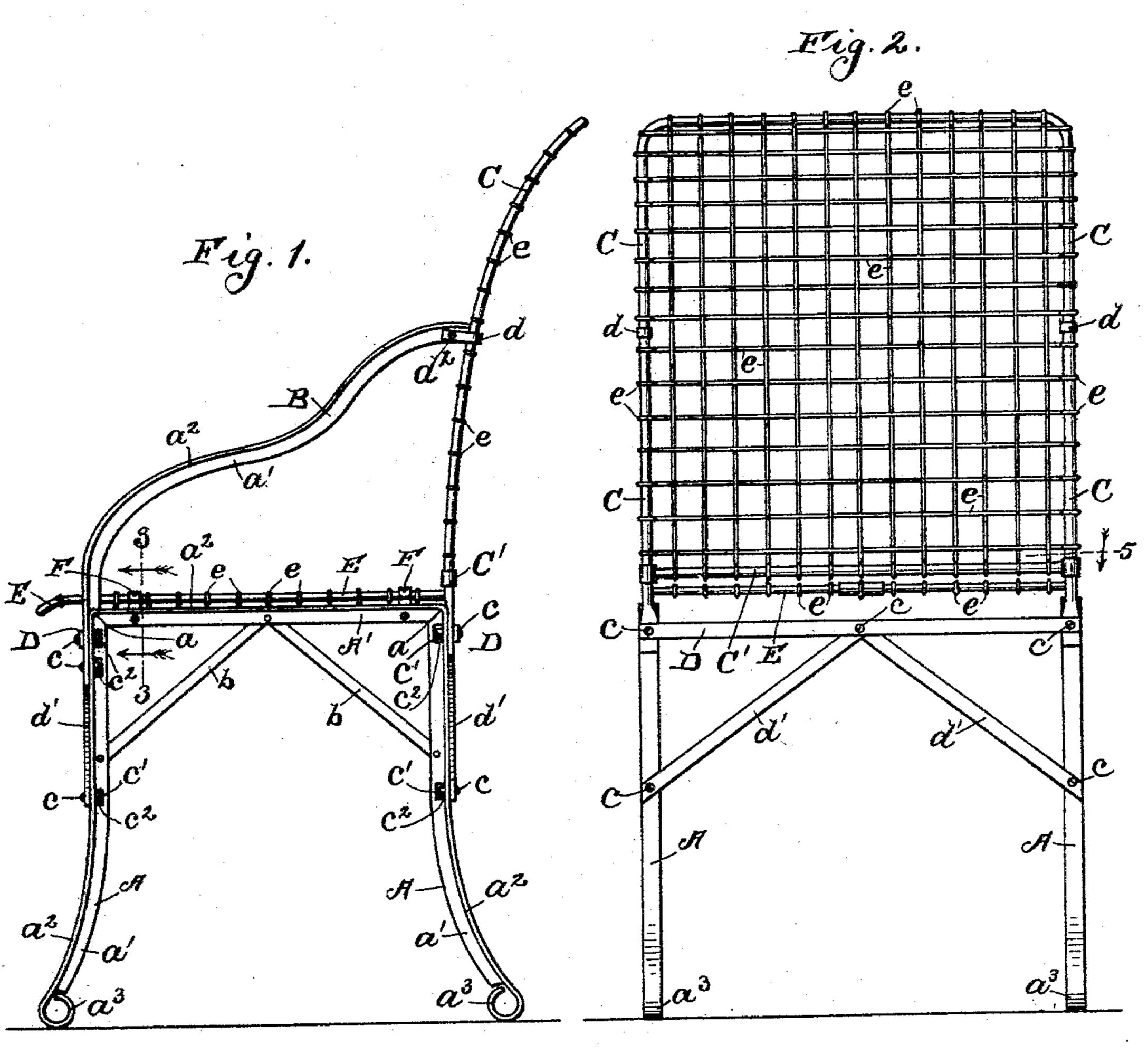
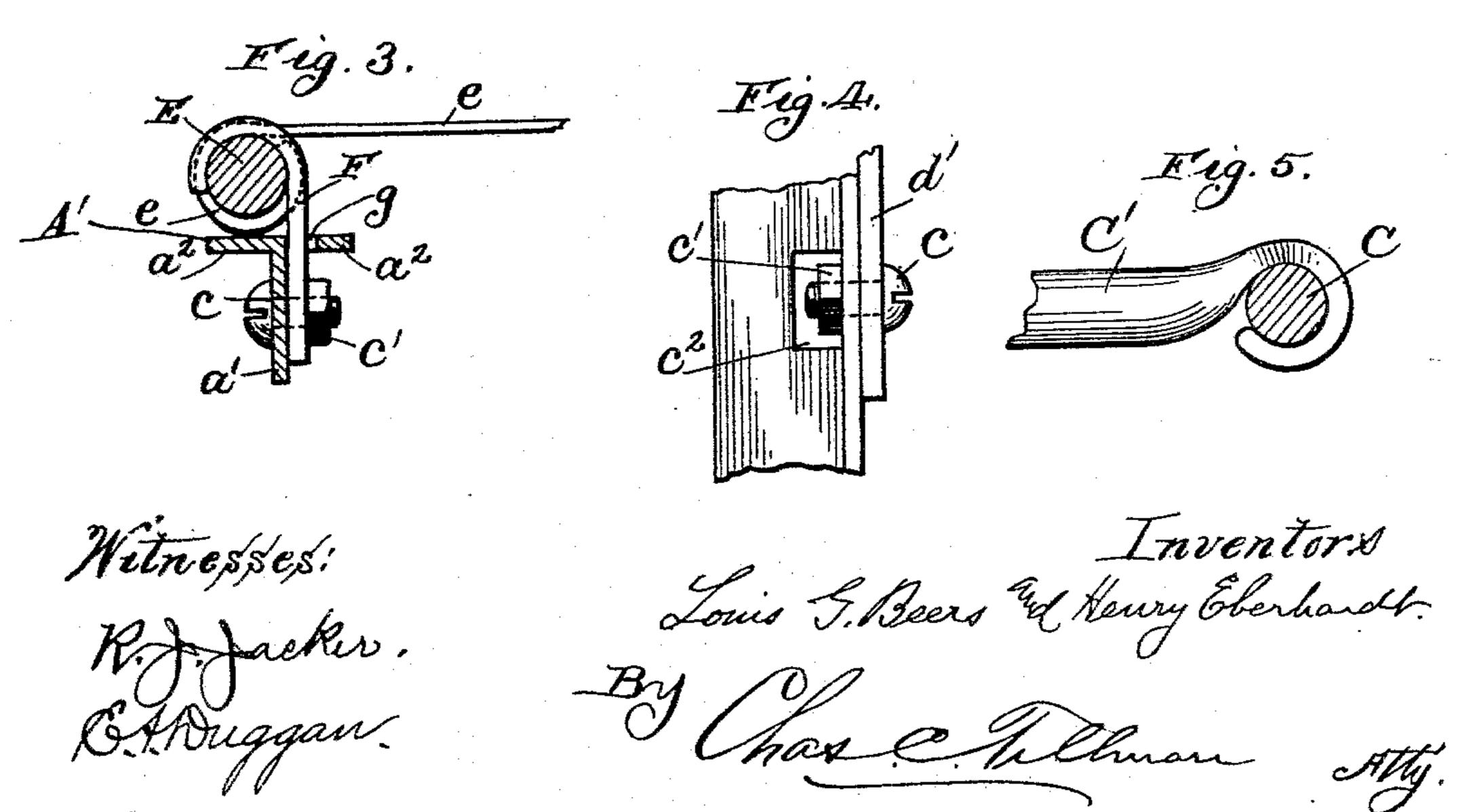
(No Model.)

## L. G. BEERS & H. EBERHARDT. COLLAPSIBLE CHAIR.

No. 584,070.

Patented June 8, 1897.





## United States Patent Office.

LOUIS G. BEERS AND HENRY EBERHARDT, OF CHICAGO, ILLINOIS, ASSIGNORS TO THE GILBERT & BENNETT MANUFACTURING COMPANY, OF GEORGETOWN, CONNECTICUT.

## COLLAPSIBLE CHAIR.

SPECIFICATION forming part of Letters Patent No. 584,070, dated June 8, 1897.

Application filed June 12, 1895. Serial No. 552,514. (No model.)

To all whom it may concern:

Be it known that we, Louis G. Beers and Henry Eberhardt, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Collapsible Chairs, of which the following is a specification.

This invention relates to improvements in collapsible or knockdown chairs and settees and that class of such structures which are made of metal and are generally used for lawns or outdoors; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set

forth and specifically claimed.

The objects of our invention are, first, to provide a collapsible chair which shall be simple and inexpensive in construction and strong and durable; second, such a chair which by reason of its peculiar formation and the novel arrangements of its parts may be readily knocked down or taken apart, so that the same may be placed into a compact package or form for shipment, and, third, a chair or settee the supporting-legs of which shall be of such a shape and so constructed as to afford the greatest degree of strength from a minimum amount of material.

In order to enable others skilled in the art to which our invention pertains to make and use the same, we will now proceed to describe it, referring to the accompanying drawings,

35 in which—

Figure 1 is a view in side elevation of a chair or settee embodying our invention. Fig. 2 is a similar view of the rear part thereof. Fig. 3 is a cross-sectional view taken on line 3 3 of Fig. 1, showing a portion of the supporting-frame and one of the rods of the seat-frame secured thereto. Fig. 4 is a detail view in elevation of a portion of one of the supporting-legs, showing the manner of securing the brace-bar, arm, or back of the chair thereto; and Fig. 5 is a sectional view taken on line 5 of Fig. 2, showing the method of uniting the vertical and horizontal portions of the back of the chair.

Similar letters refer to like parts throughout 50

the different views of the drawings.

A represents the supporting-legs of the chair or settee, which legs are made of material substantially T-shaped in cross-section, as shown in Fig. 3 of the drawings, which 55 figure illustrates the horizontal portion A', which unites the front and rear legs at their tops, the said legs and horizontal portion being preferably made of one piece of material and mitered, as at a, in order that the legs 60 may be turned down at right angles, as shown. The lower portion of the ribs a' of the legs is cut away in order that the web or broad portions  $a^2$  of the T-shaped material of which the legs are constructed may be bent, as shown 65 in Fig. 1, to form broad or flat feet  $a^3$ , which will prevent the chair or settee from sinking into the ground, and the upper portion or top of the curl of this bend rests beneath the cutaway portion of the rib, as shown, whereby 70 the bent portion  $a^3$  is prevented from coiling upon itself under a heavy weight.

The upper portion of the supporting-frame is provided with brace-bars b, which are secured at one of their ends to the ribs a' of 75 the legs and at their other ends to the ribs of the horizontal portions A', thus firmly securing the front and rear legs together in pairs. To the upper part of the supporting-frame and at each side thereof is secured an arm-80 piece B, which is also preferably formed of T-shaped material and has the rib a' thereof at its lower portion cut away in order to allow the flange, web, or broad part  $a^2$  to rest against the corresponding part of the front 85 leg, to which it is detachably secured by means of screws c and nuts c', which screws are passed through suitable openings in the web or broad part  $a^2$  of the arm-piece B and front leg, the rib a' of said leg being provided with recesses 90  $c^2$  for the reception of the nuts c', and which recess is of too little depth beyond the tip of the screw to permit the nut from falling off of the same if it should become loose, as seen in Fig. 4. The upper portion of each of the 95 arm-pieces B is bent rearwardly and is secured at its end to the upright standard C of the back of the chair by means of a strap d,

fastened with a screw or bolt  $d^2$  to the rib of the arm-piece. The back is made of a rod C, bent in the shape of an inverted U, having its lower ends somewhat flattened in order 5 that the same may be fastened to the rear legs by means of screws c and nuts c' in a manner similar to the method of securing the arm-pieces to the front legs. The lower portion of the back is braced by means of a hori-10 zontal rod C', which extends from one upright C to the other and is bent therearound, as is clearly shown in Figs. 2 and 5 of the draw-

 ${
m mgs.}$ Extending from the upper part of one of 15 the legs to the like part of the other leg at the front and rear of the chair or settee, and usually by means of the screws c and nuts c', used for securing the lower portions of the back and arm-pieces, are secured horizontal 20 bars D, which brace the legs laterally at the front and rear of the chair. To the bars D and at about their middle are detachably secured brace-bars d', which are likewise secured at their lower ends to the outer portions 25 or webs  $a^2$  of the supporting-legs by means of screws c and nuts c', the latter being set in the recesses  $c^2$  of the ribs of the legs. The frame of the chair being thus united it remains to furnish the same with a seat, which 30 is composed of a rod E bent into a rectangular shape or suitable form to cover the top of the supporting-frame and is provided with strips of flattened metal e, which are interlaced in the same manner as shown in Fig. 2 35 of the drawings and are similarly secured to the frame or rod E by being bent around the same at their ends. The seat-frame, or rod E, composing the same, is secured to the horizontal portions A' of the supporting-frame by 40 means of hooks F, which have their shanks passed through suitable openings g in the web or broad portion of said pieces and secured to the ribs thereof by means of screws c and nuts c'. These hooks F extend over the rod 45 or seat-frame E, as shown in Figs. 1 and 3, and firmly hold the same in place, causing it to rest on the strips e, which, as before stated, are bent around under the same.

The legs A are preferably slightly curved |

outwardly, as shown in Fig. 1 of the drawings. 50 in order to form a broader base and also with a view of obtaining greater strength through the medium of the ribs a', which are thus presented substantially vertically and edgewise to the weight on the chair. Another advan- 35 tage obtained by the use of our T-shaped legs is that the ribs a', provided with the recesses c<sup>2</sup> for the nuts, permit of the openings in the webs or broad parts a<sup>2</sup> for the screws being formed without any material loss in the oo strength of the legs, as would occur if said

shaped legs were not used.

From the foregoing and by reference to the drawings it will be seen and readily understood that by removing the brace-bars D and 55 d'at the front and rear of the chair and detaching the arm-pieces B and back C from the chair and one another, the supportingframe and the seat-frame E only will be left in a set-up position, when by removing the to hooks F said seat-frame may be detached from the supporting-frame, thus allowing the two pair of legs to be placed together and the other parts of the chair laid thereon or into a small package ready for transportation.

Having thus fully described our invention. what we claim as new, and desire to secure by

Letters Patent, is—

A supporting piece or leg formed of material T-shaped in cross-section and presenting so the rib thereof edgewise and vertically, and the broad portion or web on the outer edge of said rib, the web and rib being provided with openings and recesses respectively for screws and nuts for securing other parts to 35 the leg or supporting-piece, and the recess beyond the screw being narrower than the thickness of the nut, the lower portion of the rib being cut away, and the lower part of the web bent to form broadened feet, the upper 10 part of the curled or bent portions of the web resting beneath and against the cut-away portions of the ribs, substantially as described.

LOUIS G. BEERS. HENRY EBERHARDT.

Witnesses:

CHAS. C. TILLMAN, E. A. Duggan.