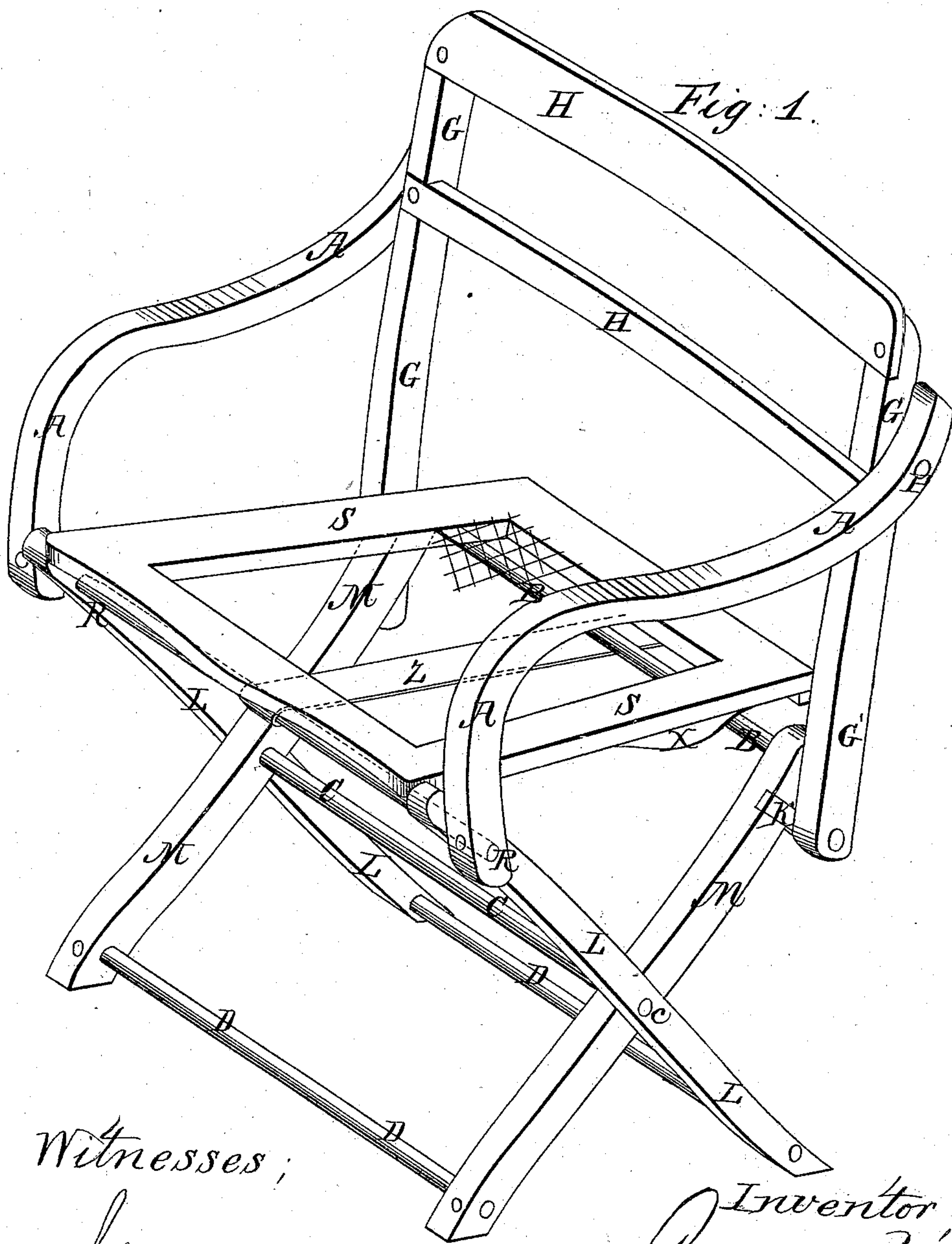


Golightly & Twitchell,

Folding Chair,

No 43,366,

Patented June 28, 1864.



Witnesses;

L. Bonner
Jas & Coombs

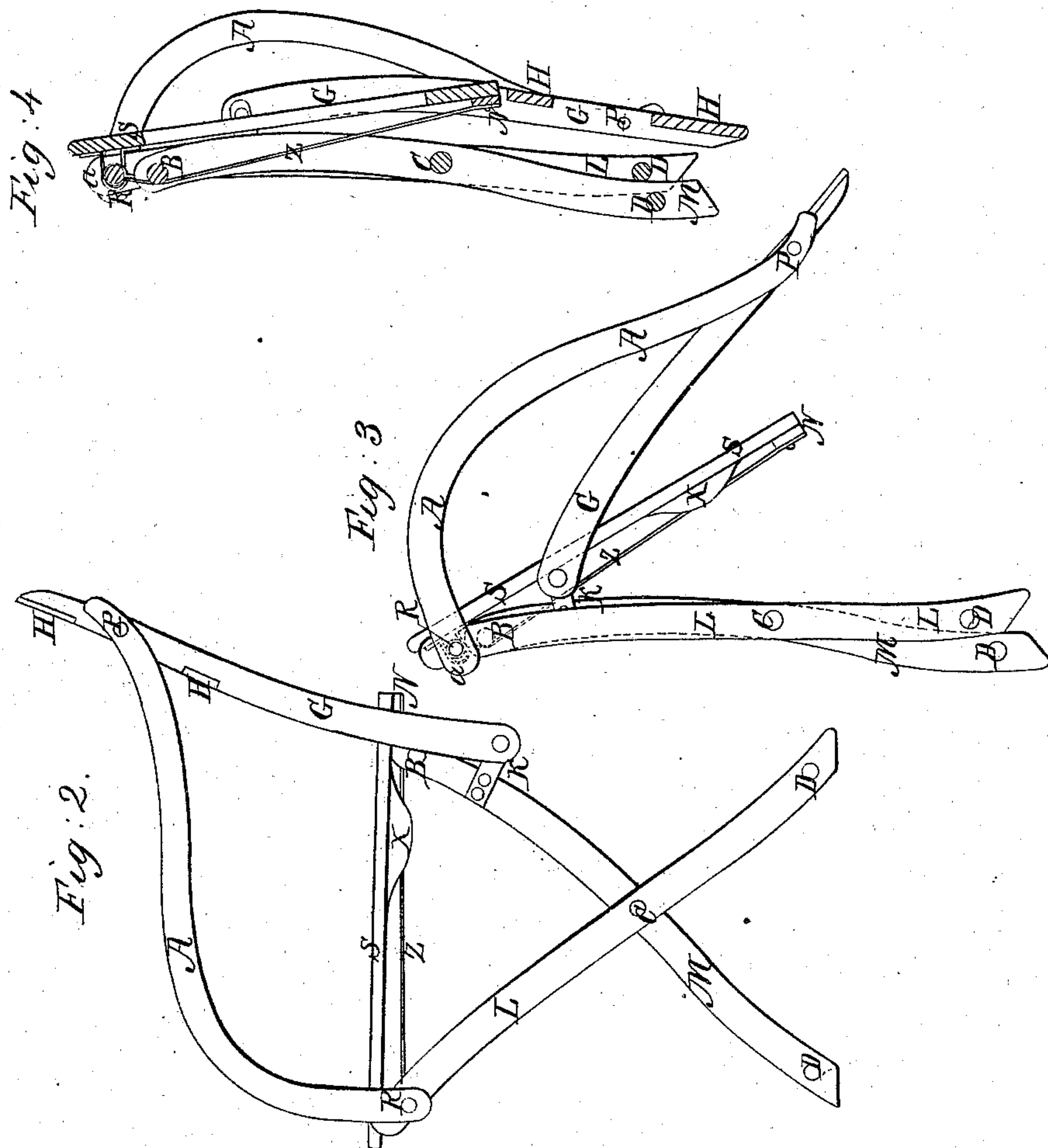
Inventor;
Golightly & Twitchell
Per A. H. Hobb
Att'y

Colightly & Twitchell,

Folding Chair,

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Witnesses,

J. D. Coombe

Inventor:

Colightly & Twitchell
Per *A. Pink*
Attys

UNITED STATES PATENT OFFICE.

HENRY S. GOLIGHTLY AND CHARLES S. TWITCHELL, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO JAMES G. ENGLISH AND E. F. MERSICK, OF SAME PLACE.

IMPROVED FOLDING ARM-CHAIR.

Specification forming part of Letters Patent No. 43,366, dated June 23, 1864.

To all whom it may concern:

Be it known that we, H. S. GOLIGHTLY and C. S. TWITCHELL, both of the city and county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Folding Arm-Chairs; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a folding arm-chair constructed in accordance with our invention, open and ready for use; Fig. 2, a side elevation of the same; Fig. 3, a side elevation of the chair in the act of being folded, and showing the parts in their intermediate positions between being open and closed or folded, and Fig. 4, a sectional elevation of the chair when folded.

This invention relates to the construction of folding arm-chairs in which the several parts are united by fixed joints and are operated by a system of leverage or levers, the fulcrums of which are fixed and determined. A chair which may be considered as the type of this class of chairs was secured to us by Letters Patent of the United States on the 6th day of October, 1863. That as well as other similar folding chairs were heretofore made with flexible seats in order to allow the cross-legs to fold upon their pivots.

The object of the present invention is to make a folding arm-chair in which the seat is made of rigid material or of a flexible fabric or substance when stretched upon or secured to or in a rigid frame; and our invention therefore consists, first, in the construction of a folding arm-chair by combining with the legs, arms, and back, when jointed together so as to admit of their being folded, as hereinafter described, of a seat made of rigid material or of a flexible fabric or substance when secured in or stretched upon a rigid frame, substantially as hereinafter set forth; second, in the arrangement in folding arm-chairs in which the several parts are united by and movable upon fixed joints of a non-flexible seat by hinging the same to the front rail or rundle, which is the hinge-bar common to the arms and front legs; third, in locating the joints of the standards

with the cross-legs at a point below the seat and out of line and back of the rear legs, so that when folded the upper part of the legs will laterally overlap each other and allow of the seat lying within the bulk of the folded standards and legs; fourth, in making, in folding arm-chairs, the several parts of which are united by and movable upon fixed joints, the rigid seat when hinged to the front and supported by the rear rail, as hereinafter described, narrower in the rear than in front, so as to clear the tops of the rear legs, as hereinafter set forth; fifth, in combining with the arrangement last referred to studs or projections in the rear of the seat for the purpose of suitably bracing the chair when open for use, as hereinafter set forth; sixth, in combining with a non-flexible seat attached to and supported by front and rear rails of a folding arm-chair operating, as described, a cam or its equivalent for the purpose of raising the seat out of side contact with the rear legs while the chair is being folded; seventh, in combining with a non-flexible seat hinged to the front rail and supported by the rear rail of a folding arm-chair operating, as described, of a strap fastened to the front and rear of the seat, and passing over the rear rail, for the purpose of holding the seat within the bulk of the folded frame.

To enable others to make and use our improvements, we shall now proceed to describe the manner in which the same is or may be carried into effect.

The seat S, which constitutes one of the distinguishing features of this invention, is composed of a rigid quadrangular frame to the sides of which are secured strands of rattan, or some other soft or flexible material or fabric, according to the taste or judgment of the manufacturer. The seat is somewhat broader in front than in the rear, the difference of width being the thicknesses of the inner or rear legs. The seat is secured to the front legs by means of metallic staples *a*, fast to the under side of the seat, and passing over the rundle or front rail, R, which forms the hinge-bar to both the arms A and front legs, L. In the rear the seat is supported by the rear rail or rundle, B, which unites the tops of the rear legs, M.

For the purpose of securely and steadily bracing the several jointed parts of the chair the seat is provided in the rear with laterally-projecting studs N, which butt against the rear legs, and thus prevent also any accidental slide of the seat off its supports. The cross-legs L and M are arranged in a manner usual in most camp-chairs—that is to say, the front and rear legs (I call front legs those that are attached to the seat in front, and rear legs those which are located in rear in contiguity with the seat)—cross each other at either side of the seat on a rundle or pivot, C, extending under the seat from side to side through about the middle of the four legs. Lateral motion is prevented by rundles or brace-rails D at or near the lower ends of the legs. The back of the chair is composed of two standards, G G', and a requisite number of traverses, H, the former being jointed to the rear legs M by means of an intermediate bracket, K, which brings the joint below the seat, back and out of line of the leg. The object of this arrangement is to allow the rear legs when folded to be in close contiguity with and be lapped over by the front legs along that portion which is above the common joint C. The arms A are secured by hinge joints at one end to the standards at P—that is, at a convenient height above the seat, and at the other to the outside of the front legs on the rundle R as pivot.

To the under side of the seat or its frame is applied a cam-shaped piece, x, projecting below the under surface of the seat to a depth equal to or exceeding the distance of the rail or rundle B to the tops of the rear legs. By this arrangement the seat will be lifted up and out of side contact of the rear legs with the frame when the chair is being folded. The cam extends in length to a point where the width of the seat exceeds the distance of the two rear legs, so that when the rear legs shall have passed the cam the seat will override them and drop as their tops approach the front rail, R. A strap, Z, the ends of which are fastened to the under side and rear of the seat and to the front rail, R, respectively, passes over the rail B of the rear legs. The latter being jointed to the front legs, so that the parts above the joint are somewhat shorter than those of the front legs, and being arranged on the interior of the front legs, it follows that the rail B of the rear legs will be located in line, or nearly so, with the rail R and C, and thus keep the strap in tension, whereby the seat is held in position within the bulk of the other parts of the chair when folded. Without this strap or some other equivalent contrivance the seat would be liable to play on its axis of suspension and interfere with the compactness of the arrangement.

Having thus described the several parts of our improved chair and the particular functions which each is designed to perform, we shall briefly refer to the general operation of

the whole. The chair being composed of a system of levers whose fulcra are in fixed relation to each other will, when open, be braced by the seat and present a more or less rigid assemblage according to the weight applied. In the positions shown in Figs. 1 and 2 the cross-legs are braced by the seat, the front legs being attached by means of staples thereto and the rear legs butting against the side studs back of the seat. The position of the standards and back of the chair is determined by the length of the arms, and we prefer to give them a slight inclination for the greater comfort of the occupant. On folding the chair the rear cross-legs are drawn in, as shown in Fig. 3. In so doing the seat is lifted up to allow the rear legs to pass under, and the standards folding backward, the whole structure collapses its parts, assuming the position shown in Fig. 4.

We would observe that this invention is susceptible of some modifications without departure from the principle thereof. We therefore do not wish to be understood as claiming the particular construction or arrangement of parts herein described, but

What we do claim is—

1. The construction of a folding arm chair by combining with the legs, arms, and back, when jointed together so as to admit of their being folded as herein described, of a seat made of rigid material or of a flexible fabric or substance when secured in or stretched upon a rigid frame, substantially as set forth.

2. In folding arm-chairs in which the several parts are united by and movable upon fixed joints, a non-flexible seat hinged to the front rail which is the hinge-bar common to the arms and front legs, substantially as set forth.

3. Locating the joints of the standards and the cross-legs at the point below the seat and out of line and back of the rear legs, so that when folded the upper part of the legs will laterally overlap each other and allow of the seat lying within the bulk of the folded standards and legs, substantially as set forth.

4. In folding arm-chairs, the several parts of which are united by and movable upon fixed joints, making the rigid seat, when hinged to the front and supported by the rear rail, as herein described, narrower in the rear than in front so as to clear the tops of the rear legs, as set forth.

5. In combination with the arrangement last referred to, studs or projections in the rear of the seat for the purpose of suitably bracing the chair when open for use, as herein set forth.

6. Combining with a non-flexible seat attached to the front and supported by the rear rails of a folding arm-chair, operating as described, a cam or its equivalent, for the purpose of raising the seat out of side contact with the rear legs while the chair is being folded.

7. In folding arm-chairs operating as described, the combination of a non-flexible seat hinged to the front rail and supported by the rear rail with a strap fastened to the front and rear of the seat and passing over the rear rail for the purpose of holding the seat within the bulk of the folded frame, substantially as set forth.

In testimony whereof we have signed our names to this specification before two subscribing witnesses.

H. S. GOLIGHTLY.

CHARLES S. TWITCHELL.

Witnesses:

EDWIN F. MERSICK,

JOHN M. WHITNEY.