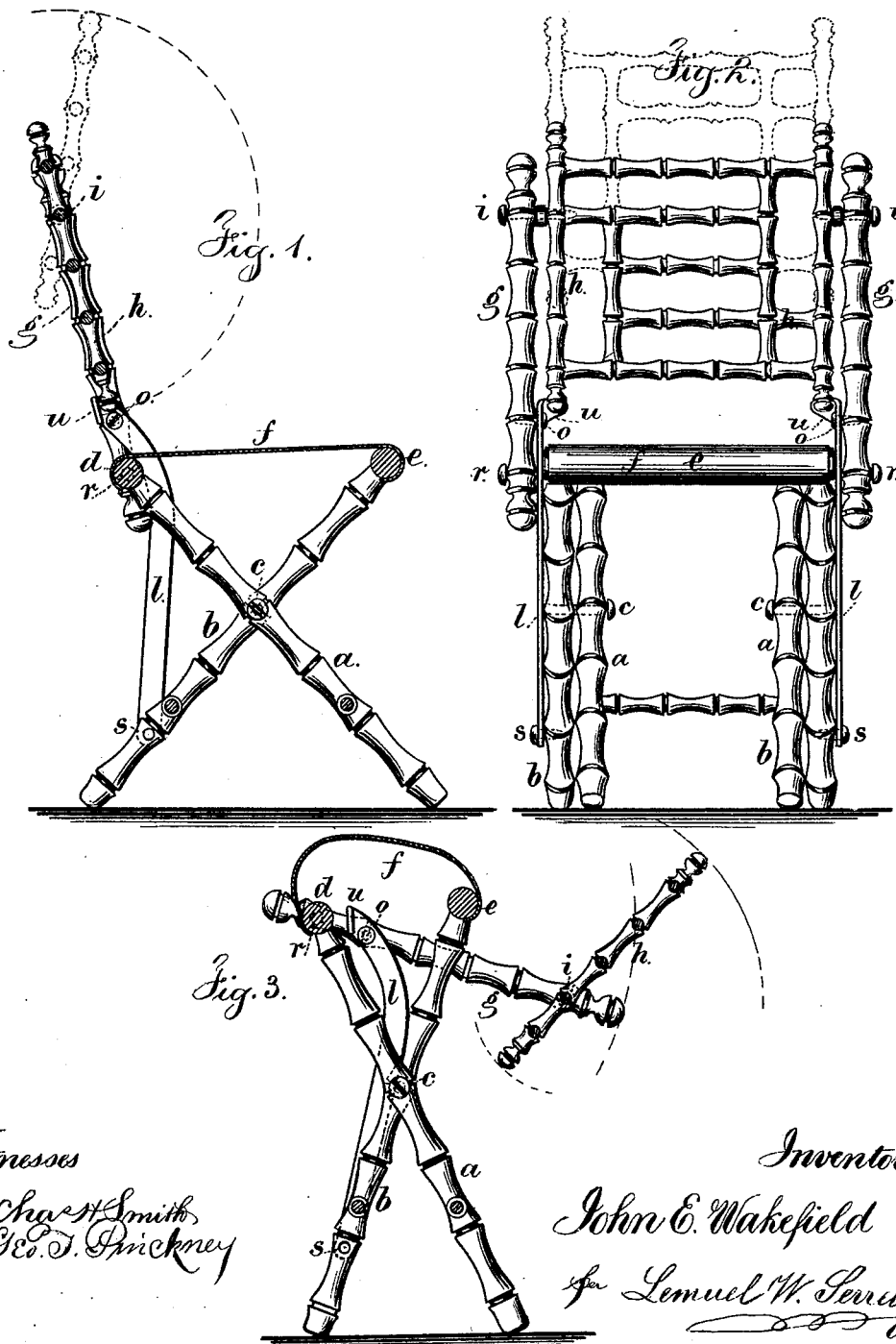


J. E. WAKEFIELD.
Folding-Chair.

No. 220,949.

Patented Oct. 28, 1879.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN E. WAKEFIELD, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN FOLDING CHAIRS.

Specification forming part of Letters Patent No. **220,949**, dated October 28, 1879; application filed May 16, 1879.

To all whom it may concern:

Be it known that I, JOHN E. WAKEFIELD, of Worcester, in the State of Massachusetts, have invented an Improvement in Folding Chairs, of which the following is a specification.

Chairs have been made with folding X-legs and a flexible-seat, and with a back that is hinged to the upper end of the front legs.

My present invention is for straining the flexible seat and locking the parts of the chair, so that they will not be liable to fold under the ordinary circumstances of use. I also make the back to swing, and also to reverse, for varying the height of said back.

In the drawings, Figure 1 is a vertical section of the chair in position for use. Fig. 2 is a front elevation of the same, and Fig. 3 is a section of the parts partially folded.

The front legs, *a*, and back legs, *b*, are united by the pivot at *c*, and provided with the seat-rails *d e* and flexible seat *f*, all as usual.

The side pieces, *g*, of the back are pivoted at *r* at or near the ends of the seat-rail *d*, and swing thereon. These side pieces, *g*, may be connected, in any desired manner, to form the back or back frame; but I prefer and use the back *h* that is connected by the pivots *i* to the side pieces, *g*, and can swing on said pivots, so as to be inclined more or less, and suit the convenience of the person sitting in the chair.

The back *h* is made longer at one side of the pivots *i* than at the other side of said pivots, so that when the back is swung into the position shown by dotted lines the top edge will be much higher than it will be when in the position shown by full lines.

I remark that both surfaces of the back have to be adapted to use, and they may be upholstered, caned, or otherwise prepared for use; or the back may be made of open rails, as shown.

The toggle-braces *l* are pivoted at their lower ends, *s*, to the back leg, *b*, and at their upper ends to the side pieces of the back at *o*, and these toggle-braces are curved in such a manner that when the chair is unfolded for

use the pivot or joint *o* will pass to the rear of a straight line passing from the pivot *s* through the joint *r*; and there is a stop to prevent the further movements of the parts. That stop is shown as formed by the back seat-rail, *d*, against which the side of the toggle-brace is arrested; or the upper end of the toggle-brace may extend above the pivot and be turned around behind the side pieces, *g*, of the back; or any other suitable stop may be used.

In opening the chair, the back, as it swings on *r*, draws upon the toggle-brace, shortening the distance between *o* and *s*, straining the seat.

When the upper pivot, *o*, of the toggle-brace is in the same line as that through the pivots *s* and *r*, the seat is under the greatest strain; but the chair-back, being moved beyond that point, the tension of the flexible seat tends to hold the back of the chair in position, and when the chair is to be folded the back is swung forward and the front seat-rail passes through between the side portions, *g*, of the back, and the parts fold down into the form illustrated in Fig. 3, the X-legs being folded together by the action of the toggle-brace.

There should be stops upon the side pieces, *g*, to limit the swinging movement of the back *h*. Such stops are shown at *u* upon the upper ends of the toggle-braces *l*. The stop, however, may be upon the back *h*, to come into contact with the side pieces, *g*; or any other desired stop may be employed.

I claim as my invention—

1. The combination, with the folding X-legs, back, and flexible seat, of the toggle-braces *l*, pivoted to the back legs and to the back, and a stop to limit the backward movement of the back, substantially as set forth.

2. The combination, with the folding X-legs, flexible seat, back, and toggle-brace, of the swinging back *h*, substantially as set forth.

3. In combination, with the side pieces, *g*, of the back of a folding chair, the back *h*, pivoted to said side pieces, *g*, and made wider at

one side of the pivots than at other, so as to vary the height of the chair-back, substantially as set forth.

4. The folding X-legs, the flexible seat, and the side pieces, *g*, of the back, in combination with the toggle-braces, connected at their lower ends to the back legs, and at their upper ends to the side pieces, *g*, and the swing-

ing back *h* and stops *u*, for the same, substantially as set forth.

Signed by me this 9th day of May, A. D. 1879.

JOHN E. WAKEFIELD.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.