No. 732,771. PATENTED JULY 7, 1903.

A. R. MILNER.

FOLDING CHAIR.

APPLICATION FILED JUNE 17, 1902.

NO MODEL.

Fig. 1.

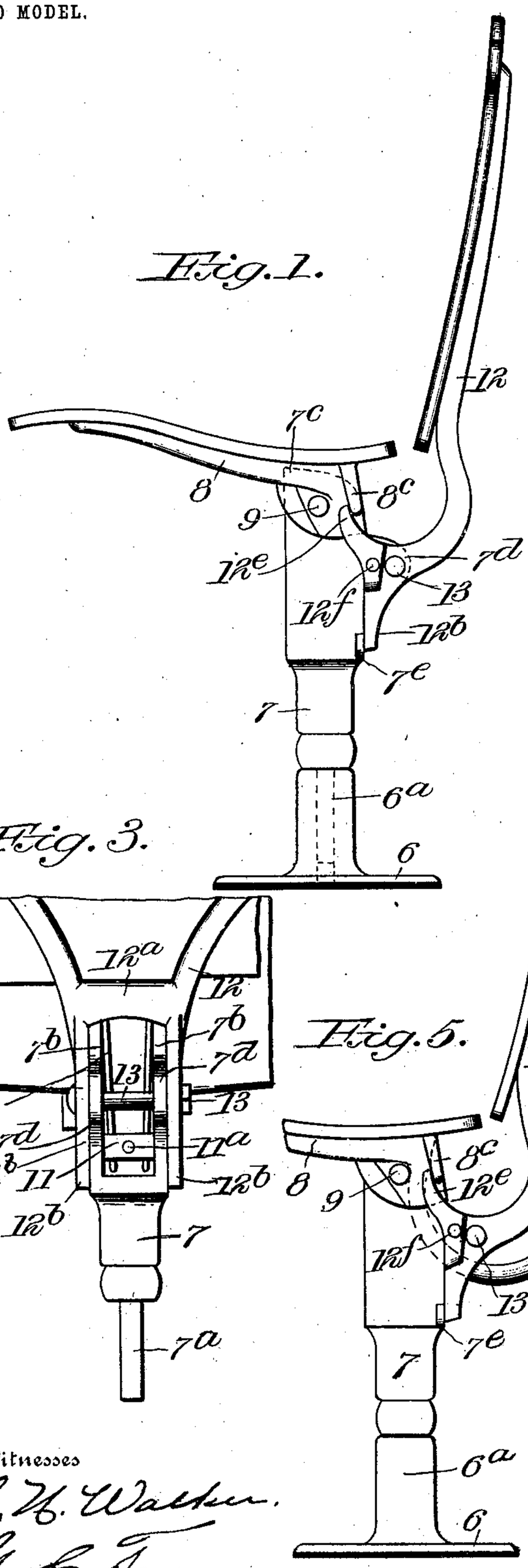

Fig. 2.

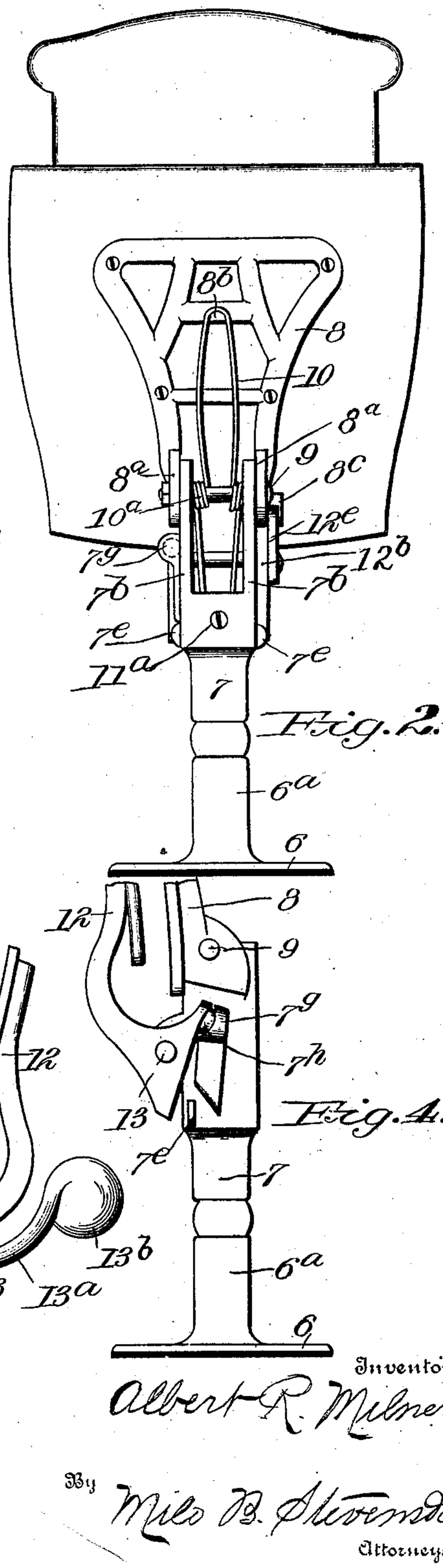

Fig. 3.

Fig. 5.

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT R. MILNER, OF CANAL DOVER, OHIO.

FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 732,771, dated July 7, 1903.

Application filed June 17, 1902. Serial No. 112,105. (No model.)

To all whom it may concern:

Be it known that I, ALBERT R. MILNER, a citizen of the United States, residing at Canal Dover, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Folding Chairs; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to folding opera-chairs, and particularly to a swiveling chair in which the seat and back will fold automatically when the chair is not in use.

The object of the invention is to form an improved chair of the class indicated characterized by strength and simplicity of construction and by ease of operation. A single spring or equivalent weight operates to tilt both the seat and the back to a substantially vertical position as soon as a person rises from the chair. Further novel features of arrangement and construction will appear from the following description and the accompanying drawings, in which—

Figure 1 is a side elevation of the chair. Fig. 2 is a front elevation of the chair folded. Fig. 3 is a rear elevation, parts being broken away. Fig. 4 is a side elevation, partly broken away, of the side of the chair opposite to that shown in Fig. 1. Fig. 5 is a side view of a modification in which a weight is substituted for the spring.

Referring specifically to the drawings, 6 indicates the base of the chair, which may be screwed or otherwise attached to the floor. This base has a vertical circular bearing-socket 6^a for the spindle 7^a of the standard 7, on which the chair is supported. A swivel-joint is thus formed whereby the chair may be turned as desired. The top of the standard is forked, as at 7^b, and the seat-bracket 8 is pivoted at the top of the forks by a bolt 9, which extends through the forks and through ears 8^a, formed on the seat-bracket.

A spring is indicated at 10, which acts to normally raise the seat, and with it the back, to a vertical position. This spring is looped around a lug 8^b, projecting from the seat-bracket, and then both branches of the spring are coiled, as at 10^a, around the pivot-bolt 9 and extend thence down between the forks of the standard, where the ends are seated in grooves formed in a block 11. The block is adjustable by means of a screw 11^a to vary the tension of the spring.

A stop for the seat to limit its downward motion is formed by shoulders 7^c at the top of the forks.

The back-bracket comprises arms 12, joined at their lower end by a body or cross-bar 12^a and lower extensions 12^b. The back is pivoted to the standard by a bolt 13, which passes through the extensions 12^b and through ears 7^d, projecting rearwardly from each fork of the standard. The extensions on the back-bracket are outside the ears and are shaped to abut against stops 7^e, which project laterally from the standard when the back is tilted backward to its limit. The back is pivoted forward of its center of gravity, so that it has a tendency to tilt backward.

To cause the back to tilt forward when the seat is lifted by the spring, a laterally-projecting lug 8^c is formed on one side of the seat-bracket. This lug bears against a toe 12^e, which projects forwardly from one of the extensions 12^b of the back-bracket. This toe-piece may be separate and secured firmly to the back-bracket, as by a screw-bolt 12^f, or it may be cast integrally with the back-bracket. When the seat is lowered, the lug at the heel thereof rises and allows the back to tilt backward until it strikes its stops. When the seat is raised, the lug strikes the toe-piece and tilts the back forwardly on its pivot. The back and seat are thus folded quite close together. The chair occupies very little space.

On the side of the standard opposite to the lug and toe-piece just described is a stop 7^g to limit the forward tilt of the back. This stop is cushioned by a rubber block 7^h, so that the chair will fold noiselessly. The extension of the back-bracket is shaped to strike this cushion, as shown in Fig. 4.

The swiveling feature will be found very useful in opera-houses and halls in cleaning the floor, as the chairs can be turned so that all parts of the floor can be readily reached.

In the modification shown in Fig. 5 the weight 13^b is substituted for the spring. This weight is joined to the seat-bracket by a curved arm 13^a, which works between the forks of the standard. The weight hangs out behind and serves to turn the seat on its pivot, and with it the back, in a manner similar to the spring described above.

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

1. A folding chair comprising a single standard directly under the seat, seat and back brackets pivoted thereto under the seat and having engaging projections under the seat to tilt the back forwardly by raising the seat, and a spring bearing against the seat-bracket and acting to normally raise the same.

2. A folding chair comprising a base, a forked freely-swiveling standard thereon, a seat and a back pivoted to the forks and having engaging projections causing an automatic opposite-folding movement, and a spring between the forks bearing against the seat to normally raise the same; the standard, seat and back pivots, and spring, being beneath the seat and within the floor-space thereof, substantially as described.

3. In a chair, in combination, a base, a single forked standard swiveling freely thereon, seat and back brackets, pivot-bolts extending through the forks and brackets, projections on the brackets engaging to tilt the back forward when the seat is raised, stops on the standard for the brackets, a spring coiled around the pivot-bolt of the seat-bracket between the forks of the standard and bearing under the seat-bracket to normally raise the same; all of said parts being under the seat and back and within the floor-space thereof, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT R. MILNER.

Witnesses:

GEO. HOOPINGARM,

FLORENCE HAMMOND.