W. H. MAXWELL. ANGLE METAL FOLDING BENCH. APPLICATION FILED MAR. 21, 1907.

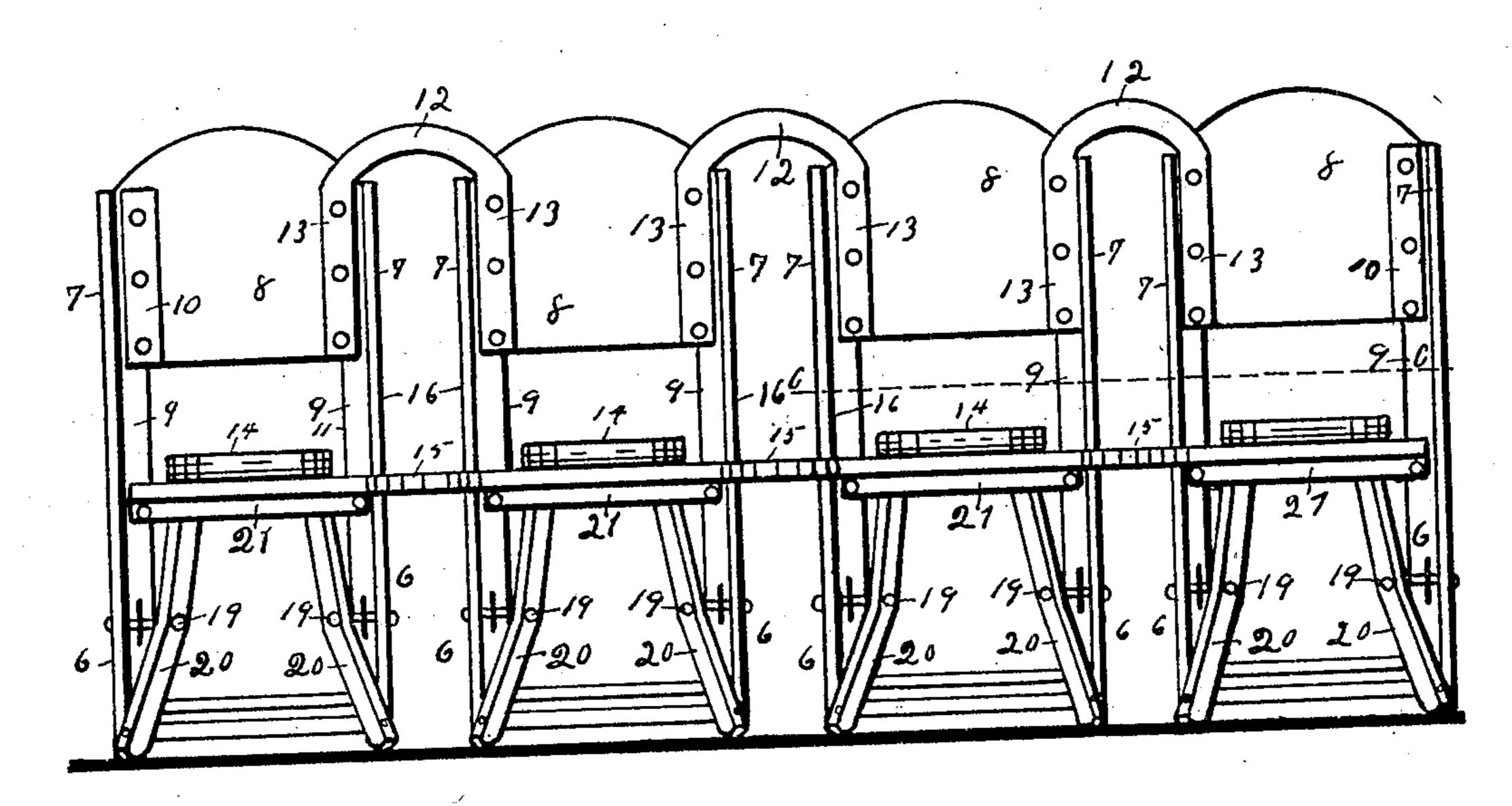
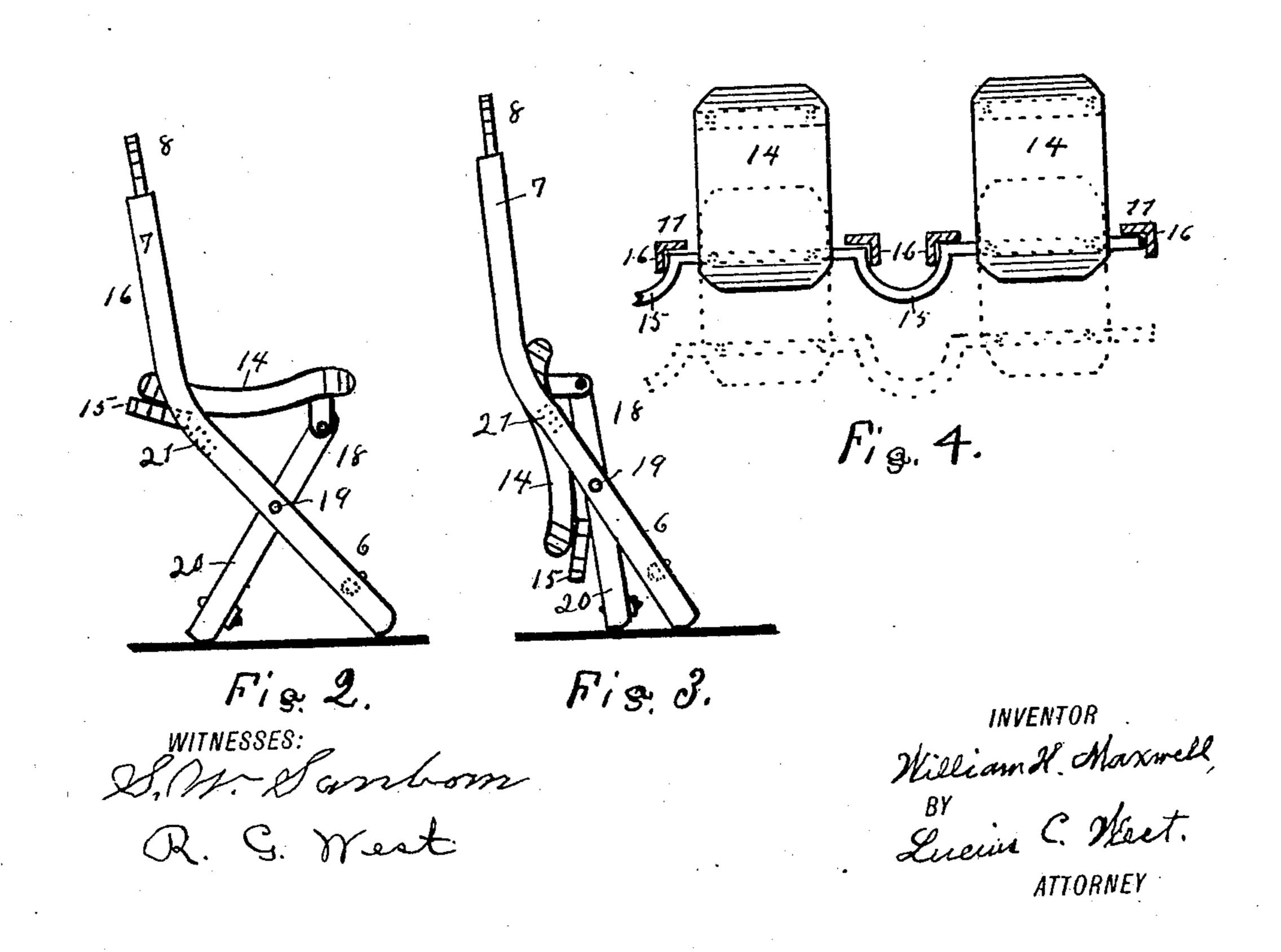


Fig. 1.



UNITED STATES PATENT OFFICE.

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ANGLE-METAL FOLDING BENCH.

No. 882,010.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed March 21, 1907. Serial No. 363,667.

To all whom it may concern:

Be it known that I, WILLIAM H. MAX-WELL, a citizen of the United States, residing at the city of Kalamazoo, in the county of 5 Kalamazoo, State of Michigan, have invented a new and useful Angle-Metal Folding Bench, of which the following is a specification.

This invention relates to seating benches 10 which are produced by attaching together a series of chairs side by side in a row, and which are for halls, lecture rooms, school rooms, and wherever needed for seating a gathering together of people.

The object of this invention is to produce benches from individual folding chairs, whereby the benches will be folding benches, without expense other than to purchase the manufactured folding chairs, adapt them for 20 attachment, and supply the simple means for the purpose.

The main advantage of having the benches storing in storage places when not in use; 25 folding the standing benches while in use, for convenience, for instance in sweeping out the room, especially a school room.

In carrying my objects into effect I have procured in the open market folding chairs 30 of which I am not the inventor, and in the make of which angle metal is employed.

In the drawing forming a part of this specification, Figure 1 is a series of folding chairs attached together in rear elevation; Fig. 2 an end elevation looking from a point at the right of Fig. 1; Fig. 3 same as Fig. 2 showing bench folded; Fig. 4 is a section on line c—c in Fig. 1 looking from a point above.

In the chairs which I have procured to carry out my invention, the forward legs 6, and the side frames 7 of the chair backs $\bar{8}$ are made of angle metal, the inner angle 9 being presented as in Fig. 1. The backs 8 fit into these angles 9, and binding bars 10 are placed 5 against the back edge of the back 8, and they and the back are riveted to the forward flange 11, of the angle metal. My means for attaching these folding chairs together are loops 12 made from strips of flat metal bent upon itself in something the shape of a hair pin, and their side parallel bars 13 are attached to the contiguous side frames of the chair backs 8. These loops 12 are very

is needed, at a cheap rate, and lend great 55 attractiveness to the appearance. The chairs, or now bench, in Fig. 1, are as when ready for use, or unfolded as in Figs. 2 and 4. I employ a bar having a series of loops 15, passing around the rear flanges 16 of the 60 angle metal as in Fig. 4, said bar which has the loops 15 being attached to the chair bottoms 14 as shown in Fig. 4. The loops 15 are in position to contact with the rear flanges 16, Fig. 4, of the angle metal in case 65 of the strain of the bench endwise, and hold it firm. The chair bottoms being thus secured together by the bar having the loops 15, they act in unison or as one when folding.

The upper end 18 of the rear legs 20 sup- 70 port the forward ends of the bottoms 14. The legs 6 and 20 are pivoted where they cross at 19.

The rear end of bottoms 14 are supported by bars 21 dotted in Figs. 2 and 3.

To fold the bench the bottoms are pushed fold, are for packing in close quarters to ship, | rearwardly as in dotted position in Fig. 4, and then folded down to position in Fig. 3. Observe that the bottoms 14 move in unison or all at once by a single act, the main object 80 of the bar with loops 15.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is-

1. A folding bench comprising a series of 85 folding chairs side by side and a little separated, loop hair pin shaped bars attached to the contiguous sides of the chair backs, substantially as set forth.

2. A folding bench comprising a series of 90 folding chairs side by side and a little separated, loop hair pin shaped bars attached to the contiguous edges or sides of the chair backs, and a bar attached to the seat bottoms and provided with loops in position to 95 prevent movement by endwise strain on bench, and causing the series of bottoms to act as one in the movement of folding, substantially as set forth.

3. A folding bench comprising a series of 100 folding chairs side by side and a little separated, the side bars to the backs of said chairs being of angle metal, and loop hair pin shaped bars the parallel portions of which are attached to the sides, substantially as set 105 forth.

4. A folding bench comprising a series of strong in their use here where great strength I folding chairs side by side and a little separated, the side bars of the backs of said chairs being metal, loop hair pin shaped bars the parallel portions of which are attached to the sides, and a bar attached to the rear of the chair bottoms, and provided with loops surrounding the rear flanges of the angle metal bars, whereby the bottoms act as one in

folding the bench, and the chairs are prevented from endwise misplacement, substantially as set forth.

WILLIAM H. MAXWELL.

Witnesses:

L. C. West, F. Ress.