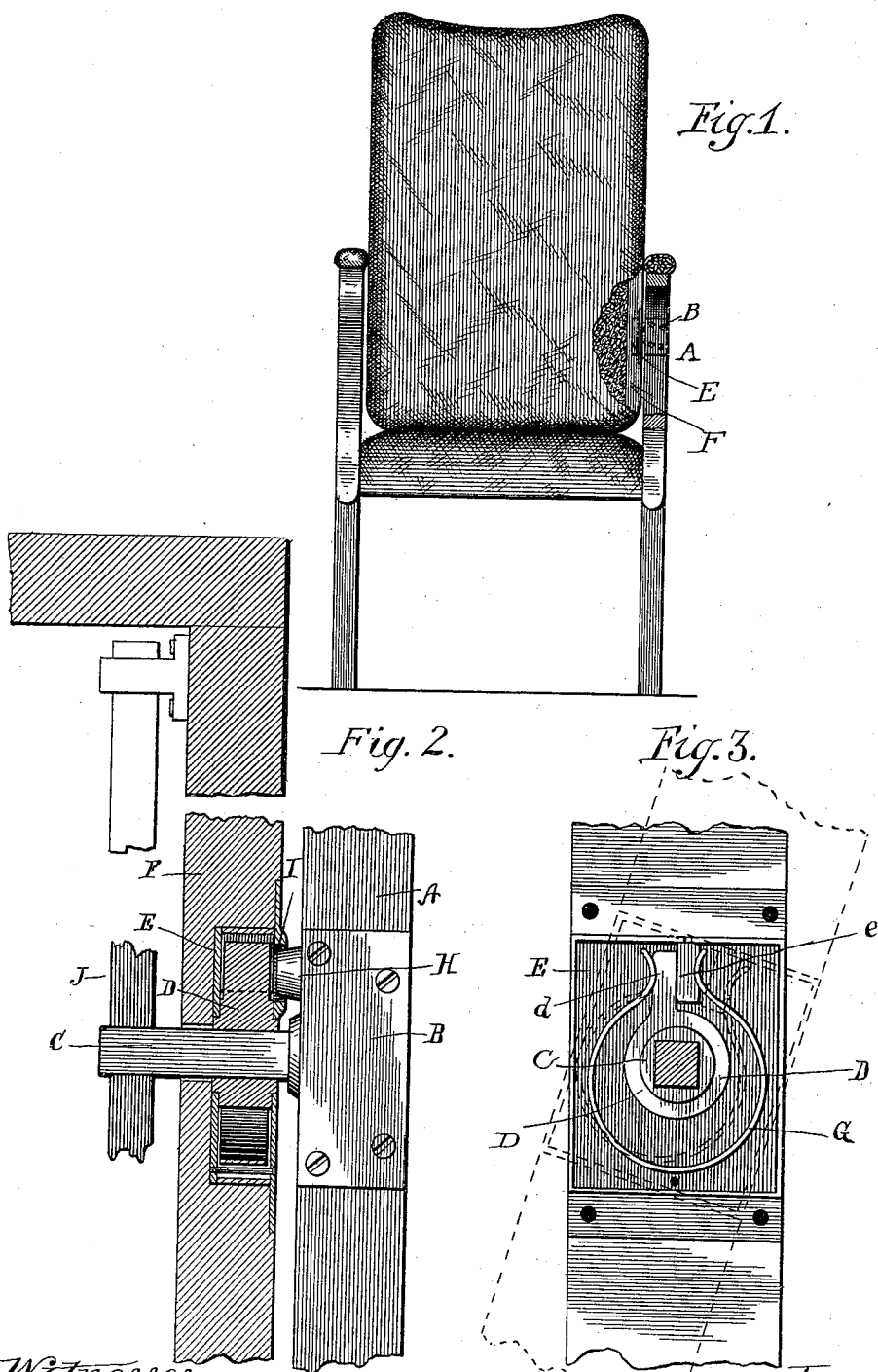


(No Model.)

A. M. RICHARDS & I. VEEDER.
CHAIR.

No. 478,131.

Patented July 5, 1892.



Witnesses.
Wm. M. Rheem
Todd Mason.

Inventors
A. M. Richards, and
I. Veeder
By Raymond & Veeder
Attys.

UNITED STATES PATENT OFFICE.

ARTHUR M. RICHARDS, OF BLOOMINGTON, AND IRWIN VEEDER, OF CHICAGO, ILLINOIS; SAID VEEDER ASSIGNOR TO SAID RICHARDS.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 478,131, dated July 5, 1892.

Application filed June 20, 1891. Serial No. 396,913. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR M. RICHARDS, of Bloomington, McLean county, and IRWIN VEEDER, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

Our invention relates to chairs having their backs pivoted so as to yield to the occupant, and is intended to provide a device which will permit the chair-back to yield in one direction only, and which will on the back being relieved of pressure restore it to its original position.

In the accompanying drawings, Figure 1 is an elevation of a chair to which our improved device is attached, a portion of the chair arm and back being broken away to show the attachment. Fig. 2 is a detail view, on a larger scale, partly in section, of the attachment and a portion of the chair back and arm connected therewith. Fig. 3 is a sectional view of a portion of the attachment secured to the chair-back, as seen from the right of Fig. 2.

A is the arm of the chair, to which is affixed a plate B. From the inner side of the plate B a stud C projects. Said stud is of polygonal section and fits a sleeve D, on which is journaled a casing E, affixed to the frame F of the chair-back, the sleeve D being shouldered to receive the casing and to allow the back to tilt. Instead of making the stud C of polygonal section, any other well-known means for preventing the sleeve from revolving on the stud may be employed. The sleeve D has a projecting lug *d*, in apposition to which is a lug *e*, secured in or forming a part of the case E. Surrounding the encircling sleeve D is a C-spring G, the ends of the spring bearing against the lug *d* and the lug *e*, respectively, as shown in Fig. 3. The ends of the spring G are preferably curved outwardly, and the faces of the lugs *d* and *e*, against which they bear, are correspondingly hollowed, as shown, the spring G being thus kept in place, no other provision being necessary for that purpose. To limit the distance which the back can yield, a short stud H upon the plate B projects into a slot I in the casing E. The dotted lines in Fig. 3 show the position of the parts when the back yields.

The spring E may be made strong enough to furnish a sufficient resistance to the weight of the occupant of the chair, or it may be supplemented by a spring J, Fig. 2, secured to the inner end of the stud C and fastened at one or both of its ends to the chair-back in the manner shown in the patent granted to Arthur M. Richards October 7, 1890, numbered 437,938.

The present device, in a combination employing the spring J, serves as a positive stop when the chair-back is released from the pressure of the occupant, so that uniformity in the position of the chair-back is secured, such uniformity being especially desirable when a considerable number of fixed chairs arranged in rows is used, as in public halls and theaters.

While we have hereinabove described the plate B, supporting the stud C, as secured to the chair-arm and the casing E as being secured to the part of the chair-back marked F, it is evident that the relative positions of the stud-supporting plate B and casing E to the parts A and F may be reversed without altering the mode of operation of the device; or, what amounts to the same thing, the part A may be considered as belonging to the chair-back and the part F as belonging to the chair-arm, instead of vice versa, as hereinabove described. The first construction herein described, however, will be generally preferable where the spring J is used, as said spring is then covered by the upholstery of the chair-back.

We claim—

1. The combination, with a chair and its back pivoted thereto, of a casing attached rigidly to one part and a stud attached to the other, a sleeve fitted upon said stud and forming a journal for said casing, a lug upon said sleeve, and a lug in apposition thereto attached to the case, and a C-spring surrounding said sleeve and bearing at one end against the lug on the sleeve and at the other against the lug attached to the case, substantially as described.

2. The combination, with a chair-back and a support therefor, of a yielding pivotal attachment consisting of a casing attached to one of said parts and a stud C, attached to the other, a sleeve rigidly seated on the stud, a cas-

ing journaled on the sleeve, a lug *d* on the sleeve,
a lug *e* on the casing in apposition to said lug
on the sleeve, and a spring tending to main-
tain contact between said lugs, substantially
5 as described.

3. In means for pivotally attaching a chair-
back to a support, the combination of the cas-
ing E, attached to one of said parts and pro-
vided with a lug *e*, a stud C, secured to the
10 other of said parts, a sleeve D, seated on the
stud and provided with a lug *d*, said casing

journaled on said sleeve, a spring G within
the casing C, tending to maintain contact be-
tween the lugs *d* and *e*, and a spring J, secured,
respectively, at its opposite ends to the piv- 15
oted part and the support therefor.

ARTHUR M. RICHARDS.
IRWIN VEEDER.

Witnesses:

TODD MASON,
ELSIE NEMETT.