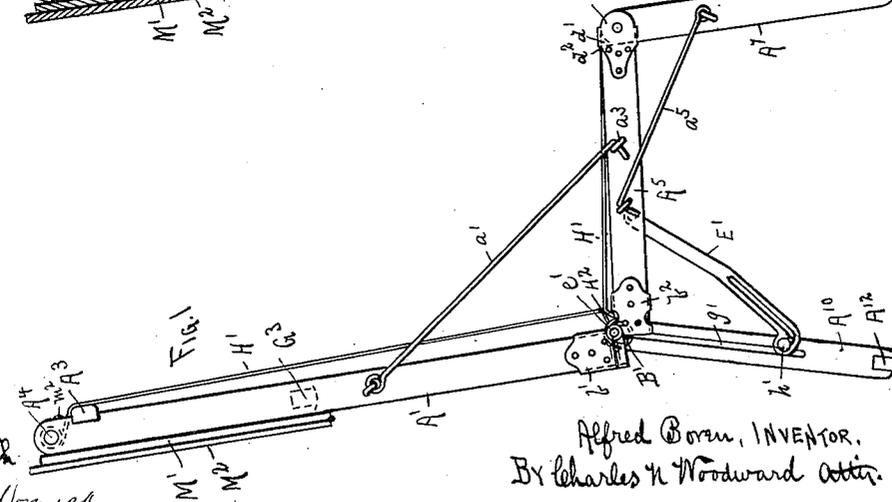
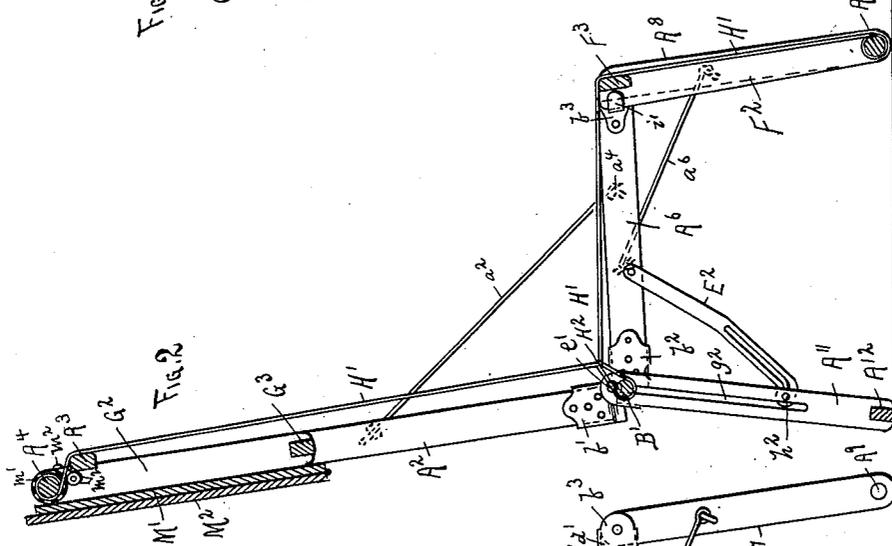
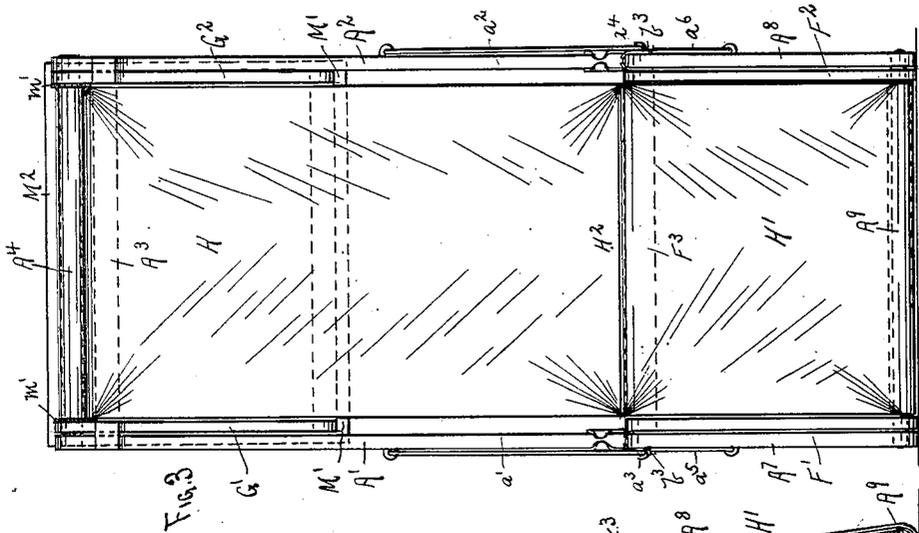


A. BOREN.
COMBINED FOLDING CHAIR AND COUCH.

(Application filed Aug. 7, 1899.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES
 R.B. Coranog
 Frank Womser

Alfred Boren, INVENTOR.
 By Charles N. Woodward Attor.

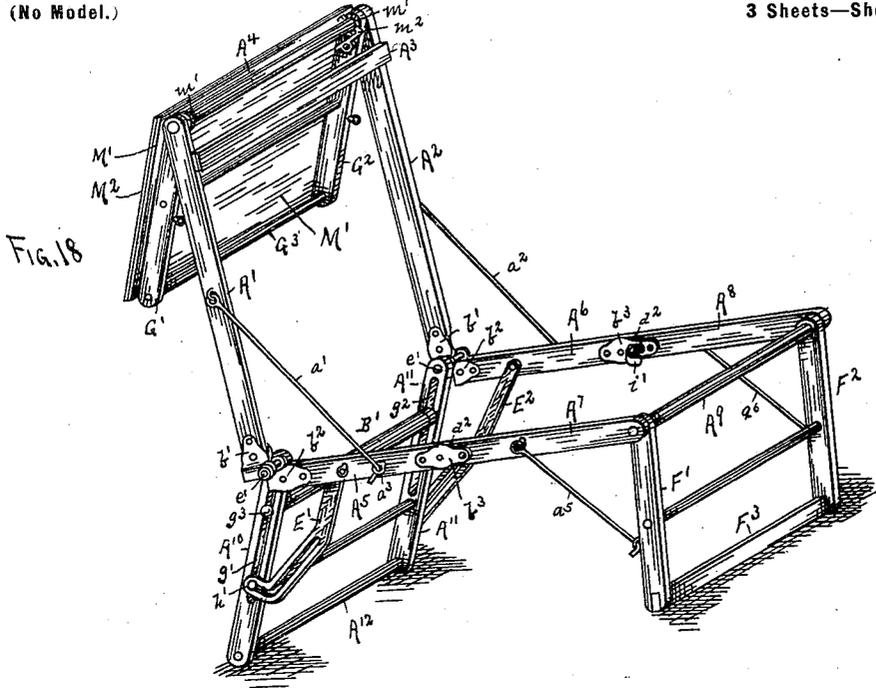
A. BOREN.

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(No Model.)

3 Sheets—Sheet 3.



WITNESSES.
 Fred S. McBracken.
 R. Lindahl.

Alfred Boren
 INVENTOR,
 By Charles W. Woodward, Atty.

UNITED STATES PATENT OFFICE.

ALFRED BOREN, OF ST. PAUL, MINNESOTA.

COMBINED FOLDING CHAIR AND COUCH.

SPECIFICATION forming part of Letters Patent No. 663,486, dated December 11, 1900.

Application filed August 7, 1899. Serial No. 726,484. (No model.)

To all whom it may concern:

Be it known that I, ALFRED BOREN, a citizen of the United States, residing in St. Paul, county of Ramsey, and State of Minnesota, have made certain new and useful Improvements in a Combined Folding Chair and Couch, of which the following is a specification.

This invention relates to combined folding chairs and couches; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the device arranged as a chair. Fig. 2 is a longitudinal sectional elevation, and Fig. 3 is a front elevation of the same. Fig. 4 is a side elevation of the device arranged as a reclining-chair and as a couch. Fig. 5 is a side view of the combined chair and couch folded up. Fig. 6 is a side view of the device arranged as a table. Figs. 7, 8, 9, 10, 11, and 12 are enlarged details of sections of the frame, illustrating modifications in the construction. Figs. 13, 14, and 15 are enlarged detached details of one of the hinge-plates, illustrating its construction. Figs. 16 and 17 are enlarged details of portions of the back-section, illustrating the construction of the tension-adjusting mechanism. Fig. 18 is a perspective view of the framework of the combined chair and couch with the canvas covering removed.

The combined chair and couch is formed of seven sections—the back-section, the seat-section, the forward leg-section, the foot-section, the rear section, the head-section, which supports the head end when the device is employed as a couch, and the table-section.

The back-section consists of two side pieces $A^1 A^2$, connected at their lower ends by hinge-plates b^1 to corresponding hinge-plates b^2 on the sides $A^5 A^6$ of the seat-section. The seat-section is in turn connected by hinge-plates b^3 to the sides $A^7 A^8$ of the forward leg-section, the lower ends of the sides $A^7 A^8$ being connected by a roller A^9 , as shown. The upper ends of the sides $A^7 A^8$ are rounded off, as shown at d' , so that while the forward leg-section will fold down freely in one direction, as shown in Figs. 1 and 2, the shoulder d^2 will act as a stop to prevent it moving above a line parallel to the sides $A^5 A^6$ of the seat-

section, as shown in Figs. 4 and 5. The sides $A^1 A^2$ are provided with hooked rods $a^1 a^2$, adapted to engage screw-eyes $a^3 a^4$ on the sides $A^5 A^6$ of the seat-section to support the back-section in its proper position, while similar rods $a^5 a^6$ are arranged to keep the forward leg-section in proper position with relation to the seat-section.

The rear leg-section consists of two side pieces $A^{10} A^{11}$, pivoted by the upper ends to the pivots e^1 of the hinge-plates $b^1 b^2$ and connected near their lower ends by cross-bars or "rounds" A^{12} . Each of the side pieces $A^{10} A^{11}$ is formed with a slot $g^1 g^2$, in which a roller B^1 is journaled by pins g^3 in its ends, so that it will play up and down in the slots.

The back-section is adapted to be supported from the seat-section when the device is arranged as a chair or couch, as in Figs. 1, 2, 3, 4, and 6, by the brace-rods $a^1 a^2$, while the forward leg-section is likewise braced from the seat-section by the brace-rods $a^5 a^6$, as shown.

The rear leg-section is braced from the seat-section by slotted braces $E^1 E^2$, as shown, the slots of the braces running over the pins $h^1 h^2$ when the section is to be folded, as hereinafter shown.

The foot-section consists of side pieces $F^1 F^2$, pivoted by one end upon the roller or round A^9 and connected by rounds F^3 and adapted to be folded in between the slide-pieces $A^7 A^8$, as shown in Fig. 2, with the ends of the sides resting against stops i^1 on the plates b^3 , as shown in Fig. 2.

The head-section consists of two side pieces $G^1 G^2$, connected by a cross-bar G^3 and pivotally connected by their upper ends to the roller A^4 , as shown.

H^1 represents the canvas-support, commencing at the roller A^4 , to which one end is attached with a loop H^2 and sewed or otherwise secured around the roller B and the other end secured to the roller A^9 , as shown.

When the device is arranged as a chair, as in Figs. 1, 2, and 3, the cross-bar F^3 forms a support to the canvas at the forward end of the seat-section, as shown in Fig. 2, while the roller B^1 by fitting slidably in the slots $g^1 g^2$ permits the canvas to yield to the pressure of the occupant of the chair.

If it is desired to transform the device into

a semireclining-chair, as in Fig. 4, it is only necessary to turn the front leg-section $A^5 A^6$ upward and the foot-section $F^1 F^2$ downward and transfer the braces $a^5 a^6$ to the position shown in Fig. 4.

If it is desired to transform the device into a couch, it is only necessary to release the braces $a^1 a^2$, turn the head-section $G^1 G^2$ downward, as shown in Fig. 4, and transfer the braces $a^1 a^2$ to the head-section, as shown.

If it is desired to fold all the parts together, it is only necessary to release the braces, when the parts will all fold together, as in Fig. 5.

The side pieces $G^1 G^2$ are rigidly connected to the roller A^4 , so that when the head-section is turned outward and downward, as in Fig. 4, to form the device into a couch the canvas H^1 will be stretched by the turning of the roller A^4 to take up the slack by drawing the canvas over the cross-bar A^{12} .

The hinge-plates b^3 are formed with inwardly-projecting stops v^1 , against which the upper ends of the sides $F^1 F^2$ of the foot-section rest when the device is employed as a chair, as shown in Fig. 2, to limit the inward movement of the foot-section and retain it in place. The manner of forming this stop v^1 is shown in Figs. 13, 14, and 15, the stop being formed by cutting a U-shaped slit in the body of the metal and bending the tongue thus formed outward in the form of the stop, as shown.

Surrounding the roller A^4 and fast thereon at one or both ends is a toothed disk m^1 , with whose teeth pawls m^2 , pivoted upon the sides $A^1 A^2$, engage to hold the roller at whatever point it may be set. By this simple arrangement the tension of the canvas H^1 may be perfectly controlled and the slack taken up at any time desired.

In Figs. 7, 8, 9, 10, 11, and 12 are shown enlarged details of portions of the framework, showing how they may be constructed wholly of metal, the side frames being of U-shaped metal, and with the hinge-plates $b^1 b^2 b^3$ formed in one with the side frames. This greatly simplifies the construction and may be employed to advantage under some circumstances.

$M^1 M^2$ represent two leaves of a table, one leaf M^1 secured across the sides $G^1 G^2$ of the head-section and the leaf M^2 hinged to the leaf M^1 , as shown, the leaves forming a table when the device is arranged as in Fig. 6. This is a very convenient and useful adjunct to the device and greatly increases its usefulness.

Having thus described my invention, what I claim as new is—

1. In a combined "chair, and couch," the central section consisting of side members A^5

A^6 , a back-section consisting of side members $A^1 A^2$ pivotally united by their lower ends to the rear ends of said central side members, and having a roller A^4 rigidly secured in the upper ends of the said back-section side members, a head-supporting section consisting of side members $G^1 G^2$ journaled loosely upon said roller, and toothed disks attached to said roller, pawls m^2 upon the said head-section side members and engaging said toothed disk, a stretcher-bar A^3 uniting the back-section side members below the line of said roller, rear seat-supporting section consisting of slotted side members $A^{10} A^{11}$ pivotally united by their upper ends to said back-section and said seat-section at their points of juncture, and adapted to be supported from said seat-section by removable braces, a cross-bar B^1 slidable by its ends in the slots in said rear seat-supporting members, front seat-supporting section consisting of side members $A^7 A^8$ pivoted by their upper ends in the forward ends of said seat-section side members and united by a cross-roller A^9 at their lower ends, and a canvas cover H^1 united by its ends to the said rollers $A^4 A^9$, and connected intermediate of its ends to said cross-bar B^1 , whereby when said apparatus is extended into a couch the canvas covering will be stretched over said stretcher-bar, by the revolving motion imparted to said roller A^4 when said head-supporting section is extended, substantially as set forth.

2. In a combined "chair, and couch," the central portion consisting of side members $A^5 A^6$, and forming the seat-section, rear seat-supporting sections consisting of side members $A^{10} A^{11}$ and pivotally united by their upper ends to the rear ends of said seat-section members, clamp-plates b^3 attached to and extending beyond the forward ends of said seat-section members, forward seat-supporting section consisting of side members $A^7 A^8$ pivoted by their upper inner ends between the said extended ends of said clamp-plates, and connected at their lower outer ends by cross roller or bar A^9 , and foot-supporting section consisting of side members $F^1 F^2$ pivotally connected by their upper ends to said roller-bar A^9 and united at their other ends by cross-bar F^4 , said clamp-plates having inwardly-extending clips b^3 adapted to support the lower or free ends of said foot-section when folded back as a chair-support, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALFRED BOREN.

In presence of—

V. C. SUNDBERG,

A. SWANSON.