J. P. SANDELL.

COMBINED CHAIR AND TABLE.

APPLICATION FILED JUNE 9, 1916.

1,218,322.

Patented Mar. 6, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

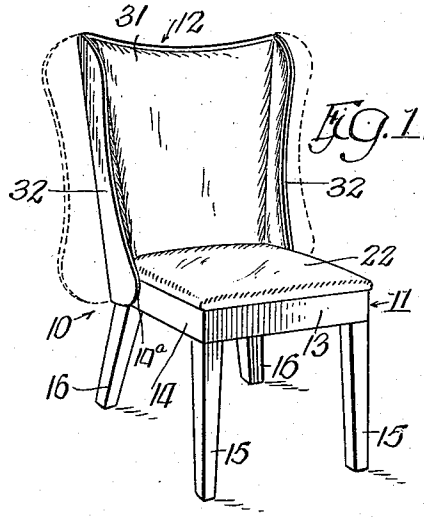


Fig. 2.

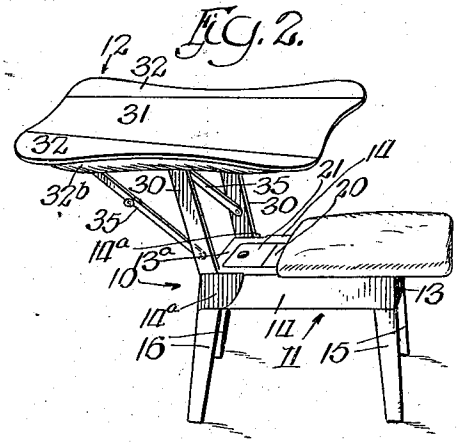


Fig. 7.

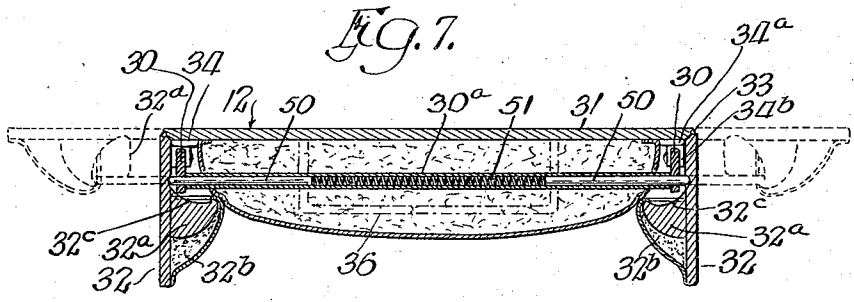
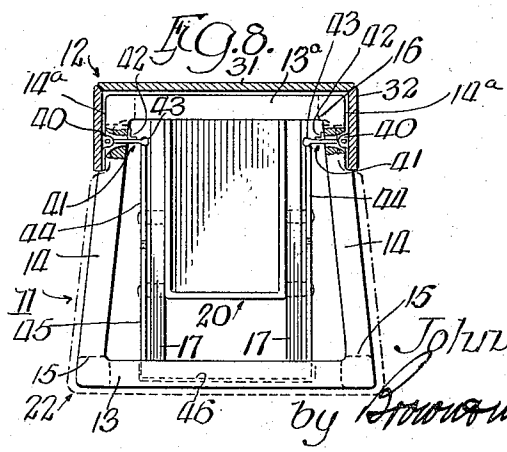


Fig. 8.



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2 SHEETS—SHEET 2.

FIG. 3.

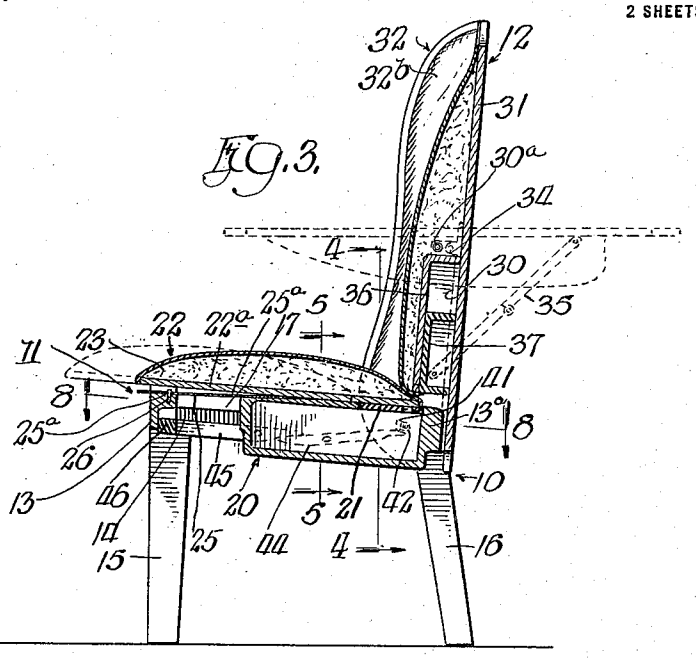


FIG. 4.

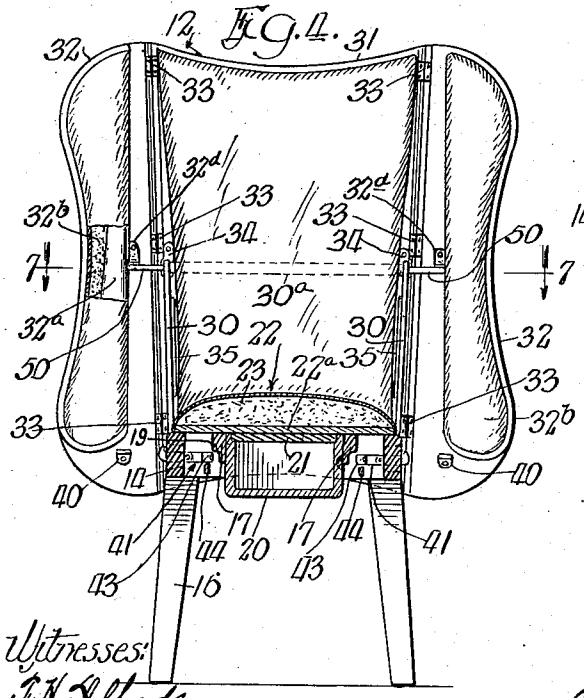


FIG. 5.

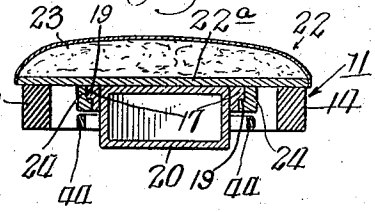
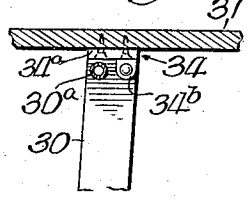


FIG. 6.



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UNITED STATES PATENT OFFICE.

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COMBINED CHAIR AND TABLE.

1,218,322. Specification of Letters Patent. Patented Mar. 6, 1917.

Application filed June 9, 1916. Serial No. 102,622.

To all whom it may concern:

Be it known that I, JOHN P. SANDELL, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Chairs and Tables; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in furniture of the type known as combined chair and table and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The object of the invention is to provide a piece of furniture which when in one assembled form will possess the appearance and utility of a fully upholstered chair and when said piece of furniture is in its other assembled form, it will possess the utility of a table having a seat associated therewith. When used as a chair it provides a comfortable upholstered seat with which is associated an upholstered back member having like upholstered shoulder engaging wings or rests. The chair back and wings are so arranged that they may be swung into a horizontal position to provide a table top and the seat of the chair may be extended outwardly to provide a comfortable support upon which a person may sit either straddle or sidewise into a position affording convenient use of the said back as a table top.

In the drawings:

Figure 1 represents a perspective view of the piece of furniture made in accordance with my invention, as it appears when used as a chair.

Fig. 2 represents a perspective view of the same as viewed from a different angle and showing the various parts in the position they assume, when it is desired to have the use of a table and an associated seat.

Fig. 3 represents a longitudinal, vertical section through the device when the same is used as a chair.

Fig. 4 represents a transverse, vertical section through my improved combined chair and table and with several of the parts shown in a position somewhat changed from that illustrated in Fig. 3. The plane of said section is indicated by the line 4—4 of Fig. 3.

Fig. 5 represents a transverse sectional view through the device, the plane of section being indicated by the line 5—5 of Fig. 3.

Fig. 6 represents a detail sectional view on an enlarged scale and will be more specifically referred to later.

Fig. 7 represents a horizontal, transverse sectional view on an enlarged scale through the back member of the piece of furniture, the plane of the section being indicated by the line 7—7 of Fig. 4.

Fig. 8 represents a horizontal plan sectional view through the device, the plane of said section being indicated by the line 8—8 of Fig. 3.

Referring now, to that embodiment of my invention illustrated in the accompanying drawings:—10 indicates as a whole my combined chair and table which primarily consists of a horizontal seat supporting frame 11 and a normally, approximately upright back member 12 pivoted to said seat frame. The said back member is capable of being swung from its upright position wherein it provides the back rest of the chair, into a horizontal position, wherein it provides a table top associated with the chair seat.

The seat frame 11 comprises transversely extending front and rear rails 13 and 13ª and longitudinally extending side rails 14 which converge slightly toward each at their rear ends. This frame as shown, is inclined downwardly from front to rear, and is mounted at its corners upon front and rear legs 15 and 16 respectively, the former being approximately perpendicular while the latter are inclined slightly rearwardly from the perpendicular in the usual manner of chair legs.

17, 17 indicate longitudinally extending parallel spaced bars which are attached at their ends to the front and rear rails 13 and 13ª respectively of the seat frame. These bars which brace the frame 11 as a whole, are rabbeted on their bottom surfaces as indicated at 19 in Figs. 4 and 5 for a purpose soon to appear, and the top surfaces of said bars are flush with the top of the frame rails. Supported between said bars at their rear ends, is a closed box-like compartment 20, in the top wall of which is provided a removable cover plate 21 by means of which

access may be had to the interior of said compartment. In this compartment may be conveniently stored such articles as are desired.

Slidably mounted on the frame 11 is an upholstered seat member 22 which is normally locked in a position providing the seat of the piece of furniture when used as a chair. Said seat is so arranged, that it may be unlocked from this position and extended or moved longitudinally outward on said frame 11 to provide a seat extension adapted to be comfortably and conveniently occupied with reference to the back member 12 when the same is swung into a position forming a table top as will presently appear. When extended, this seat member exposes the cover plate 21, permitting access to the compartment 20. The upholstered member 22 comprises a flat, rectangular base piece 22^a preferably of wood and of a plan area approximating that of the frame 11, but terminating short of the rear rail 13^a and overhanging the front and side rails of said frame. A covering of leather or like material and complemental upholstering 23 is provided for on said base 22^a. Fixed to the under side of said base is a pair of short longitudinally extending, parallel rabbeted bars 24 (see Fig. 5) which normally engage with the like bars 17 on the seat frame 11 in a manner permitting of a sliding movement of said base on the top edges of said seat frame, without vertical displacement.

To the underside of the seat base 22^a, on its longitudinal median line, is fixed a flat strip of spring metal 25 in which is provided longitudinally spaced apertures 25^a, 25^a adapted to coact with a pin 26 fixed on the top edge of the front rail 13 of the seat frame to lock the seat in either limit of its longitudinal movement on said frame. Said strip projects at its front end, beyond the outer face of the rail 13 so that it may be conveniently manipulated and released from locking engagement with the pin 26.

30, 30 indicate approximately upright standards which rise from the rear corners of the seat frame. Said standards consist of flat metallic bars arranged with their widths in the longitudinal plane of said seat frame and as shown said standards diverge laterally and are inclined slightly rearwardly at their top ends. A transverse tube 30^a connects the top ends of said standards together and rigidly holds them in their proper spaced relation. These standards provide the supports for the operative connection of the back member 12 to the seat frame and said connection is as follows:— The back member 12 is preferably made of wood and comprises three sections, namely a central or main section 31 and side or wing sections 32, 32 hinged to said main section along its lateral edges. The main section 31 when in its substantially upright position forms the back proper of the chair while the side sections 32 form the wings or shoulder rests therefor, as shown in Fig. 1 and after the back member 12 as a whole has been swung into the horizontal position as shown in Fig. 2, the main section 12 forms the major part of the table top while the wing sections form the minor or finishing parts of the table top.

As shown in the drawings, the main section 31 is widest at its top and converges along its lateral edges toward its bottom end and to said lateral edges are connected by means of hinges 33, the said sides or wing sections 32 before mentioned. The adjoining edges of said several sections are beveled to provide a better operative hinged connection, when said wing sections are in their normal positions at right angles to said main section as when forming the shoulder rests of the chair back. The said main section 31 and its lateral wing sections are so proportioned that when in a horizontal position, they will approximate an area substantially equal to the square of the vertical length of said wings, and the free edges of said sections are cut in as shown to provide for the finished appearance of all of said sections when in either their vertical or horizontal positions. When the back 12 as a whole is in its substantially upright position the bottom end of the main section terminates as shown in approximately the plane of the bottom edge of the seat frame 11.

Adjacent the lateral edges of said main section 31 intermediate its ends is fixed a pair of brackets 34, one of which appears in side elevation in Fig. 6, by means of which the back member 12 as a whole is hinged to the top ends of the standards 30. Each bracket consists of a flat plate 34^a adapted for attachment to the main section 31 by means of screws and a pair of integral spaced ears 34^b which embrace the upper rear corner of said standards 30, a rivet or bolt passing through said ears and associated standard to provide the proper hinged connection. The parts of this bracket are so arranged that when the back member 12 is in a horizontal position, the front face of the plates 34^a of said brackets will engage the top ends of associated standards and act as protection plates between the wood of said main section 31 and the said top ends of the standards.

35—35 indicate rule jointed brace bars which are connected at one end to the inner face of the standards 30 near the seat frame and at their outer ends to the main section 31, adjacent the lateral edges thereof and near its normal bottom end. These jointed bars support the rear end of the back 12 as a whole when it is in a horizontal plane and

occupy a concealed position adjacent the inner face of the standards 30 when said back is in its normal upright position.

Fixed to the inner (front) face of the main back section 31 between its connection to the standards 30 as before described, and near its bottom end, is a compartment or box-like casing 36 which is open at its bottom end. A drawer 37 is provided in said compartment for the reception of such articles as it is desired to keep therein and said drawer is so arranged that it may only be withdrawn from said compartment when the back 12 is in a position providing the table-top. Suitable and easily operated means (not shown) are provided to retain said drawer in its proper closed position in said compartment, when said back member 12 is in its normal upright position. On the front face of said main section 31 is provided suitable upholstery which incloses the said compartment 36 as well as the major middle portion of the tube 30[a] which connects the standards 30, 30, together at their top ends.

The wings 32 of the back 12 are hinged as before described to the lateral edges of the main section 31 of said back and means are provided for locking said wings in positions substantially parallel to the side members 14 of the seat frame and at right angles to said main section when the back member 12 as a whole is in an upright position. In connection with said means are provided other means for releasing said wings from their locked position and also means for moving said wings outwardly about the pintles of the hinges 33 as axes into a position wherein said wings will extend approximately in the plane of said main section 31. Such means are as follows:

To the inner face of each wing near its bottom end is fixed a catch 40 which is adapted to engage with a transversely arranged latch device or pawl 41 mounted on each of the side rails 14, 14 of the seat frame. Each of said latches is pivoted intermediate its ends upon angular bracket clips 42 (see Fig. 8), fixed to the inner face of the seat frame rails 14 near their rear ends. The outer or hooked ends of said latches project through suitable holes provided therefor in said side rails, into a position to be operatively and automatically engaged by said wing catches 40 before mentioned. The inner end of each of said latch devices extends into the vicinity of the rabbeted rails 17 of the seat frame and is over-weighted as indicated at 43. 44, 44 indicate lever arms which are pivoted between their ends to lateral studs fixed on the side walls of the compartment 20 of the seat frame 11. The rear ends of said arms engage beneath the weighted ends of said latch devices and the front ends of said lever arms are operatively engaged beneath the rear ends of a pair of similar arms 45 which are also pivoted on said compartment wall. The front ends of the last mentioned pair of arms are connected together by a cross bar or head 46 which is arranged in a concealed position in a rabbet provided therefor in the rear inner edge of the front rail 13 of the seat frame 11. As will be apparent when the said wings are in the relative position shown in full lines in Figs. 7 and 8 they will be locked in said position by reason of the engagement of the catches 40 on their bottom ends, with the outer hooked ends of the latches 41.

When it is desired to release the wings 32 from their locked position, it is only necessary for the operator to grasp the front rail 13 of the seat frame, with the fingers of the hand engaging the cross bar 46. Upon imparting a slight upward movement to said cross bar, a like movement will be imparted through the arms 45 to the rear ends of the arms 44 engaged beneath the weighted inner ends of the latches 41, raising said inner ends and depressing the outer ends thereof and disengaging them from locked engagement with the catches 40 on said wings.

After said wings have been released from the locked position just described they are swung outwardly approximately into the plane of the main section 31 of the back 12. The means for imparting such movement to said wings is as follows:—In the ends of the tube 30[a] connecting the top ends of the standards 30 together, are located plungers 50 and in said tube between and engaging the inner ends of said plungers is located an expansion coiled spring 51 (see Fig. 7) which normally tends to move said plungers outwardly beyond said standards 30. When the wings 32 are in a locked position, that is in the position wherein they are arranged at right angles to the main back section 31, the outer ends of said plungers 50 normally engage the inner face of each of said wings at a point intermediate its ends. The spring 51 under these conditions is of course, compressed. Fixed to said wings on their inner faces are form bars 32[a] (one of which appears in the left hand side of Fig. 4) which are inclosed or concealed by the upholstery 32[b] on said wings. These form bars are preferably made of wood and taper from the bottom or rear to the top or front ends of said wings and perform two functions, one of which is to provide the forms about which the upholstery 32[b] is built and the other is to provide cam surfaces 32[c], 32[c] (see Fig. 7) adapted to coact with the said plungers 50, 50, for the purpose of moving said wings into an open position upon release of said wings from their locked position. Upon such release of said wings through the manipulation of the cross-head 46, the spring 51 in the tube 30[a] will tend to expand to its normal expanded position, forcing the

plungers 50 outwardly. The outer ends of said plungers being engaged with the cam surface 32^c on said wings, said plungers will of course rotate or swing said wings outwardly about the hinges 33 as axes, into the approximate plane of the main section 31 of the back member.

The back member 12 as a whole may now be swung about its horizontal pivots provided for by the brackets 34, into a substantially horizontal plane. During this downward swinging movement of the back member, cam lugs 32^d, 32^d, fixed to said wings near their inner lateral bevel edges and adjacent the middle hinge 33, will engage the periphery of the plunger 50 near their outer ends and on account of said engagement will act to automatically swing said wings further about the pintles of the hinges 33 as axes, into a full open position wherein they will be located in the plane of the main section 31 of the back member 12. When in this position the outer surface of said main section 31 and the like surfaces of the wings 32 will be flush and the cam lugs 32^d will act as a bracing or spacing blocks (as shown in dotted lines in Fig. 7) between said wings and the plungers 50 to hold or support said wings in this position. The jointed brace bars 35 will of course automatically open and form rigid braces between the rear end of said back member and a fixed part of the seat frame 11.

The manner of making the change from a chair to a table and associated seat is as follows:—Starting with the parts in the position shown in Fig. 1, the operator will first grasp the front rail 13 of the seat frame and with the fingers, impart an upward movement to the cross head 46 in its rabbet. This movement will impart an upward movement to the rear ends of the lever arms 44 through the lever arms 45 and raise or lift the inner ends of the latches 41. When the rear inner ends of said latches are raised the outer ends are of course depressed and released from locking engagement with the catches 40, 40 on the wings 32. The wings being thus unlocked the springs 51 in the tube 30^a will expand and move or swing said wings outwardly about the pintles of the hinges 33 connecting said wings to the main section in substantially the plane of said main section. The top end of the main section is now grasped by the operator and a downward swing imparted thereto about its pivotal connection with the top ends of the standards 30 into a substantial horizontal position. During this downward swinging movement the cam lugs 32^d will engage with the plungers and operate as before described to bring the said wings into a position wherein their outer surfaces will be flush with the outer surface of the main back section 31 and the jointed brace bars 35 will open in the well known manner into the bracing position shown in dotted lines in Fig. 3. The table top is now provided for. Should it be so desired, the drawer 37 may now be withdrawn from its compartment 36 and articles removed from said drawer. The operator next grasps the front edge of the upholstered seat, and in doing so, imparts an upward movement to the front end of the seat locking strip 25, disengaging the foremost opening 25^a from locking engagement with the pin 26 in the front rail 13 of the seat frame. A forward pull on said seat member will cause it to be extended forwardly in sliding engagement with the top edge of the seat frame until the rearmost opening 25^a in said strap 25 automatically engages with the said pin 26 again locking said seat, but in its extended position. The cover 21 of the compartment 20 is now exposed and may be removed if so desired.

With the various parts in the position just mentioned the operator may now seat himself in a comfortable straddling or side position upon said seat and be located conveniently with respect to the table top, whether the same be for writing, playing at cards or for any other purpose. The cut-in lateral edges of the various sections of the back member 12 (now the table top) permit the operator, as well as the other people who are to use the same as a table, to sit close to the table top and at the same time give a more finished appearance as a whole to the piece of furniture both when it is in the form of a chair and in the form of a table with an associated seat.

To make the change back into a chair, the seat is released from its extended locked position and moved rearwardly until the foremost opening 25^a in the locking strip 25 engages the pin 26 as before described. The jointed braces 35 are next "broken" and the front (top) end of the main section 31 lifted upwardly until said main section assumes its normal position, the brace bars 35 folding up at the same time into the plane of the standards 30. The wings 32 are next swung inwardly about the hinges 33 as axes against the restraining action of the spring pressed plungers 50 until the catches 40 on said wings automatically engage and lock with the latches 41. To permit of the bottom ends of the wings 32 to assume the proper angular position relative to the main section 31 when the parts are in the position defining a chair, the outer rear ends of the longitudinal rails 14 of the seat frame are cut away as shown at 14^a in Figs. 2 and 8.

As is apparent from the foregoing description my combined chair and table possesses advantages not before attained in furniture of this kind. When in the form pro-

viding a chair, it is ornamental as well as useful and from all outside appearances resembles an upholstered chair such as is found in well furnished houses. The parts are so disposed relative to each other that the various latches and operating devices are concealed from observation. It may be instantaneously changed from one form to the other and with but little effort on the part of the operator and without the use of tools.

While in describing my invention I have referred to certain details of mechanical construction and arrangement of parts, I do not wish to be limited thereto except as may be pointed out in the appended claims.

What I claim is:—

1. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their locked position and means moving said wing sections outwardly about their hinged connection with said main sections substantially into the plane of said main back section.

2. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their locked position, means moving said wings outwardly about their hinged connection with said main section substantially into the plane of said main back section, and means operable upon the downward swinging movement of said back member, to move said wing sections fully into the plane of said main back section and to automatically lock said section in said last named position.

3. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their said locked position, means moving said wing sections outwardly about their hinged connection with said main section substantially into the plane of said main back section, means operable upon the downward swinging movement of said back member, for moving said wing sections fully into the plane of said back section, and for automatically locking said wing sections in said position and means locking said back member as a whole in said horizontal position.

4. A device of the kind described comprising a substantially horizontal seat frame having front, rear and side rails, a normally upright back member fulcrumed to said seat frame in a plane above said rear rail, and adapted to be swung from its upright position into a horizontal position, said back member consisting of a central main section and lateral wing sections hinged thereto, said wing sections normally extending in planes at right angles to said main section and embracing a part of said side rails, means automatically locking said wing sections in said last named position, means adjacent said front rail of said seat frame for releasing said wing locking means and means moving said wing sections substantially into the plane of said main back section after said wing locking means has been released.

5. A device of the kind described comprising a substantially horizontal seat frame having front, rear, and side rails, a normally upright back member fulcrumed to said seat frame in a plane above said rear rail, and adapted to be swung from its upright position into a horizontal position, said back member consisting of a central main section and lateral wing sections hinged thereto, said wing sections normally extending in planes at right angles to said main section and embracing a part of said side rails, latch devices mounted on said side rails, coacting devices carried by said wing sections and adapted for engagement with said latch devices to lock said wing sections in position, means for releasing said latch devices from locking engagement with said coacting devices on said wing sections and means for moving said wing sections substantially into the plane of said main back section after said latch devices have been released from engagement with their coacting devices on said wing sections.

6. A device of the kind described comprising a substantially horizontal seat frame having front, rear and side rails, a normally upright back member fulcrumed to said seat frame in a plane above said rear rail and adapted to be swung from its upright position into a horizontal position, said back member consisting of a central main sec-

tion and lateral wing sections hinged thereto, said wing sections normally extending in planes at right angles to said main section and embracing a part of said side rails, latch devices pivoted to said side rails, the outer ends of said latches projecting through said side rails and the inner ends of said latches being overweighted, coacting devices carried by said wing sections and adapted for engagement with the outer ends of said latch devices to lock said wing sections in said position, levers mounted on said seat frame and engaged at their rear ends under the overweighted ends of said latch devices, a cross head concealed in said front rail and adapted for operating said lever arms to raise said weighted ends of said latches and operatively release the outer ends thereof from locking engagement with said coacting devices on said wing sections, and means for moving said sections into substantially the plane of said main back section, after said wing sections have been released from locking engagement with said latches.

7. A device of the kind described comprising a substantially horizontal seat frame, standards rising from said seat frame, a normally upright back member fulcrumed to said standards and adapted to be swung from its normally upright position into a horizontal position, said back member consisting of a central main section pivoted to said standards and lateral wing sections hinged to said main section, said wing sections being arranged at substantially right angles to said main section when said main section is in its upright position, and embracing the rear ends of said seat frame, means automatically locking said wing sections in said last named position, means for releasing said wings from their locked position and means carried by said standards tending to move said wing sections outwardly into substantially the plane of said main back section when said wings have been released from their locked engagement with said seat frame.

8. A device of the kind described comprising a substantially horizontal seat frame, standards rising from said seat frame, a normally upright back member fulcrumed to said standards and adapted to be swung from its normal upright position into a horizontal position, said back member consisting of a central main section pivoted to said standards and lateral wing sections hinged to said main section, said wing sections being arranged at substantially right angles to said main section when in upright position and embracing the rear ends of said seat frame, means automatically locking said wing sections in said last named position, means for releasing said wing sections from their locked position, a tube connecting said standards together and spring pressed plungers mounted in said tube and operatively engaging said wing sections to move said wing sections substantially into the plane of said main back sections after said wing sections have been released from locking engagement with said seat frame.

9. A device of the kind described comprising a substantially horizontal seat frame, standards rising from said seat frame, a normally upright back member fulcrumed to said standards and adapted to be swung from its normal upright position into a horizontal position, said back member consisting of a central main section pivoted to said standards and lateral wing sections hinged to said main section, said wing sections being arranged at substantially right angles to said main section when in upright position, and embracing the rear ends of said seat frame, means automatically locking said wing sections in said last named position, means for releasing said wing sections from their locked position, plungers engaging said wing sections and adapted to move them into substantially the plane of said back member after said wing sections have been released from their locked position, and devices mounted on said wing sections adapted to engage said plungers when said back member as a whole is being swung into a horizontal position to fully move said wing sections into the plane of said main section, said plungers and said last mentioned devices locking said wing members in the plane of said main back section when said back as a whole is in a horizontal position.

10. A device of the kind described comprising a substantially horizontal seat frame, standards rising from said seat frame, a normally upright back member fulcrumed to said standards and adapted to be swung from its normally upright position into a horizontal position, said back member consisting of a central main section pivoted to said standards and lateral wing sections hinged to said main section, said wing sections being arranged at substantially right angles to said main section when in upright position and embracing the rear ends of said seat frame, means automatically locking said wing sections in said last named position, means for releasing said wings from their locked position, said main central, back and wing sections concealing said standards and wing section locking means when the back member as a whole is in its normal upright position.

11. In a device of the kind described, the combination of a horizontally arranged seat frame, a seat member carried by said frame and capable of being extended outwardly thereon, a normally upright back member fulcrumed to said frame in a plane above the same, said back member being adapted

to be swung from its normal upright position substantially parallel to said seat frame, said back member consisting of a main central back section and wing sections hinged thereto, said wing sections being normally arranged at right angles to said main section and adapted to embrace the rear part of said seat frame, means on said seat frame automatically locking said wings in said position to said seat frame, means mounted on said seat frame for releasing said locking means, means operating to move said wing sections outwardly into substantially the plane of said main section when released, means operating to move said wings from the last named position into the plane of said main back section when said back as a whole is being moved about its fulcrum from an upright to a horizontal position and means operating during said movement to provide a brace between the rear end of said back member and said seat frame when said back member is in its final horizontal position.

In testimony that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 27th day of May A. D. 1916.

JOHN P. SANDELL.

Witnesses:
T. H. ALFREDS,
KARL W. DALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."