

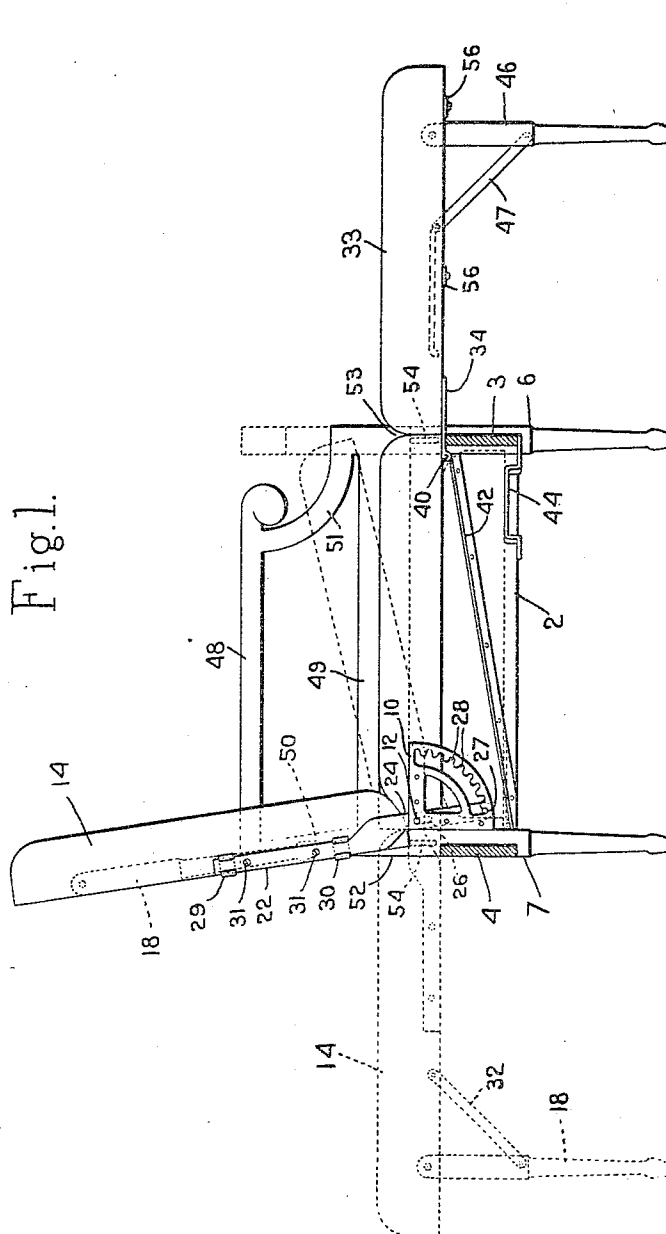
C. E. BARNES.
MULTIFORM CHAIR.

APPLICATION FILED MAY 19, 1917.

1,287,828.

Patented Dec. 17, 1918.

2 SHEETS—SHEET 1.



Inventor.
Charles E. Barnes
by *Heard Smith & Tennant*
Attys.

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Fig.2.

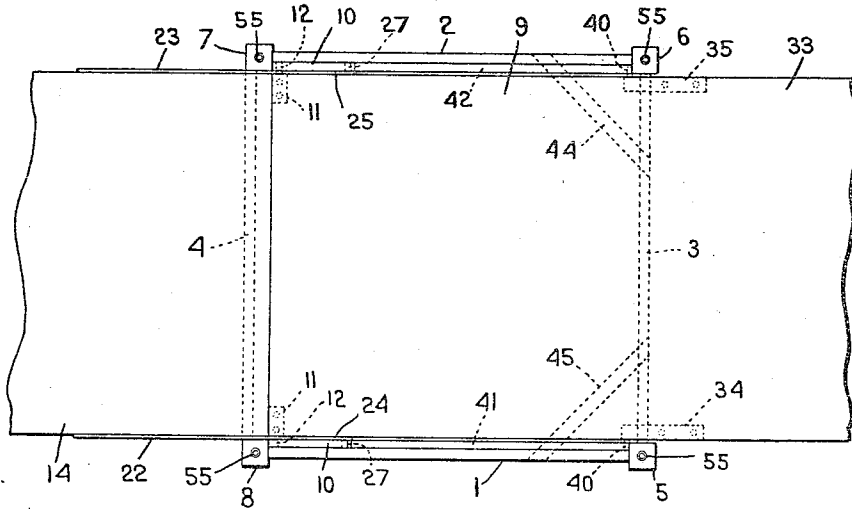


Fig.3.

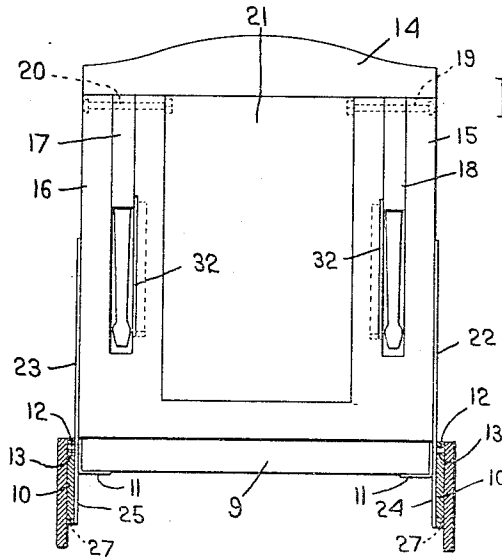


Fig.4.

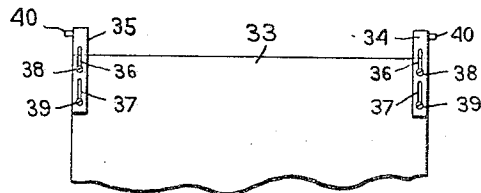
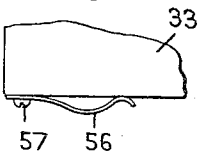


Fig.5.



Inventor.
Charles E. Barnes
by *Heard Smith & Tennant*
Attys.

UNITED STATES PATENT OFFICE.

CHARLES E. BARNES, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO THEODORE G. STRATER, OF BROOKLINE, MASSACHUSETTS.

MULTIFORM CHAIR.

1,287,828.

Specification of Letters Patent.

Patented Dec. 17, 1918.

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To all whom it may concern:

Be it known that I, CHARLES E. BARNES, a citizen of the United States, and resident of New York, county of New York, State of New York, have invented an Improvement in Multiform Chairs, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to improvements in multiform chairs and the object thereof is to provide a structure which may be converted into various forms, as a chair, a reclining chair, a chaise-longue, a couch, a settee or a bed.

Another feature of the invention is to provide a structure of the character described in which the parts may be assembled to form a chair of attractive appearance and which when extended to form a couch or a bed will also present an attractive appearance.

A further object of the invention is to provide an improved means for connecting the back of the chair to the frame in such a manner that it may be readily adjusted and positively retained in adjusted position without danger of slipping or breakage. A further feature of the invention consists in providing additional means for supporting said back when the same is moved to horizontal position.

Another object of the invention is to provide an extension for the seat of the chair which may be utilized to form a chaise-longue and which may be concealed within the frame beneath the seat or withdrawn and supported upon the same plane as the seat.

Another object of the invention is to provide a device of the character described with removable arm sections which may be attached to the sides of the frame to complete the chair or which may be secured transversely of the structure to form arms of a settee.

Further objects and features of the invention will more fully appear from the following description and the accompanying drawings and will be pointed out in the annexed claims.

The preferred embodiment of my invention is illustrated in the accompanying drawing in which,

Figure 1 is a side elevation partly in sec-

tion, showing in full lines the multiform chair as a chaise-longue the position of the extension when concealed being shown in dotted lines and the position of the back when folded down to form a bed also being shown in dotted lines.

Fig. 2 is a plan view, the arms being removed and portions of the back and extension broken away.

Fig. 3 is a view of the rear or outside of the back also showing the supporting frame partly in section,

Fig. 4 is an underside detail view of the portion of the extension showing the means for supporting the same upon the frame, and,

Fig. 5 is a detail view of means for clamping coverings upon the device when the same is to be used as a bed or for similar purposes.

A preferred embodiment of the multiform chair which is shown in the accompanying drawings comprises a frame consisting of vertical sides 1, 2 and ends 3, 4, said sides and ends being connected to corner posts 5, 6 and 7, 8 by suitable tenons of other usual fastenings. The sides 1 and 2 are wider than the ends 3 and 4 for purposes which will hereinafter appear. The end 3 desirably is connected centrally of said posts, while the end 4 is connected to the posts 7 and 8 so that its outer side is substantially in the plane of the outer side of said posts, in order to give clearance for the pivotal movement of the back in a manner which will hereinafter more fully appear.

The frame is rectangular in form and preferably its sides are of equal length to form a quadrangle so that the arms may be positioned either longitudinally of the frame as described to form a chair such as illustrated in Fig. 1 or transversely thereof as illustrated in dotted lines in Fig. 1 to form a settee.

The seat 9, which preferably is upholstered as illustrated herein, is of rectangular or quadrangular form to fit the frame and rests at its forward end upon the end piece 3. It is pivotally supported at its rear end upon the frame so that its front or free end may be raised to permit the introduction of an extension adapted to form a continuation of the seat when the device is to be used as a chaise-longue, couch or bed.

A convenient means for thus pivotally supporting the seat comprises a metallic

plate 10 preferably in the form of a toothed sector secured oppositely to the inner walls of the sides of the frame adjacent the rear end 4. The seat 9 is pivotally connected to the center of the sector, a desirable means for thus connecting the same comprising a pair of brackets 11 preferably bent at right angles to fit the bottom and side of the seat portion and provided with laterally extending pins or studs 12 which engage respectively apertures 13 at the center of the sectors 10. By reason of this construction the forward or free end of the seat portion 9 may be raised to permit the introduction of the extension member beneath the same as will hereinafter be described.

The back 14 preferably comprises a frame having side pieces 15, 16 and suitable end pieces and, as illustrated herein, may be upholstered in the usual manner. The side pieces 15, 16 of the frame may be bifurcated or formed in two sections spaced apart a sufficient distance to receive legs 17, 18 pivotally supported upon bolts 19, 20 extending through said side pieces, the legs 17, 18 being of a size and construction to fold within the plane of the back of said side pieces.

The central space between the side pieces 15 and 16 desirably is provided with upholstery 21 so that the back of the chair presents an attractive appearance.

The back of the chair is pivotally mounted upon the frame and provided with means for adjusting the same to various positions from substantially vertical to horizontal. A preferred means for pivotally supporting the back which is illustrated in the drawing comprises a pair of plates 22, 23 which are secured respectively to the sides 15 and 16 and have extended offset lower ends 24, 25 which are provided with slots 26 through which the pins or lugs 12 of the brackets 11 extend. The lower ends of the extensions 24, 25 are provided with laterally extending lugs or pins 27 which enter the recesses between the teeth 28 of said sectors. The plates 22, 23 may be secured to the side pieces 15, 16 of the back in any suitable manner but preferably are removably secured thereto by brackets 29, 30 which are secured to said side pieces and have laterally extending flanges embracing the edges of the plates 22, 23 so that said plates may slidably enter said brackets and be similarly removed therefrom. If desired the plates may also be connected to the side frames 15, 16 by one or more screws 31.

By reason of this construction the back may readily be removed from the sides 1, 2 when it is desired to crate and ship the chair or to place the same in the warehouse.

In the operation of the device the parts are assembled as illustrated in Fig. 1. When it is desired to place the back at a different position it is merely necessary to raise the

back sufficiently to remove the pins from the notches in the sectors in which they are located, then move the back pivotally about the pin 12 until the desired inclination or position is reached and thereupon thrust the back downwardly until the pins 27 engage a notch between another pair of teeth 28.

When it is desired to use the chair as a bed the head section will be moved to horizontal position illustrated in dotted lines in Fig. 1 and the legs 17, 18 swung from their full line position in the back shown in Fig. 3 to the dotted line position illustrated in Fig. 1. Any convenient means may be provided for securing the legs in the two positions indicated. A convenient means which is illustrated herein comprises a strut 32 pivotally secured to the leg at its lower end and at its upper end provided with an enlargement or pin slidably mounted in a way in the side member of the back, any usual means being provided to secure the leg either in the folded position shown in Fig. 3 or the extended position shown in Fig. 1.

A further feature of the invention comprises a section adapted to form an extension of the seat whereby the chair may be used either as a chaise-longue or a bed and which may be concealed within the frame beneath the seat when it is desired to use the chair in the ordinary manner. This extension may be of any desirable form but preferably comprises a cushion 33 of rectangular form of a size which will fit within the rectangular frame formed by the sides 1, 2 and ends 3, 4, suitable means being preferably provided for permanently attaching the extension to the chair but adapted to permit the same to be thrust beneath the seat portion 9 when the front end of the same is raised.

A preferred means for supporting the inner end of the extension 33 comprises plates 34, 35 preferably secured to the under sides of the frame of said extension in such a manner as to telescope beneath said frame when the extension is transferred to its concealed position within the frame of the chair, thus permitting as large an extension as possible to be utilized.

A convenient means for thus supporting the inner end of the extension is illustrated in Fig. 4 in which the plates 34, 35 are each provided with longitudinally extending slots 36, 37 through which screws 38, 39 extend into the frame, the screw and slot connection permitting relative movement between the plates and the frame. The plates 34, 35 are provided with laterally extending pins or lugs 40 which rest upon supporting guides 41, 42 preferably in the form of angle plates secured to the sides 1 and 2.

These guides extend diagonally across the frame from the upper portion of the front

end to the lower portion of the rear end thereof, so that when the free end of the seat portion 9 is raised about its pivot 12 the extension 33 may be thrust inwardly, causing the pins 40 to ride down the ways 41, 42 until they meet the end wall. The plates 34, 35 then move longitudinally to permit the cushion to be dropped within the body of the frame beneath the seat 9.

The front ends of the guides may be so located that when the extension is withdrawn the plates 34, 35 will rest upon the end piece 3, thus providing a rigid support for the extension.

Any suitable means may be utilized to support the outer or free end of the extension 33 when in concealed position, for example, plates or straps 44, 45 may be secured diagonally across the corners of the frame to the under edges of the sides 1, 2 and end 3.

Legs 46 similar to the legs 18, 19 may be pivotally secured to the frame of the extension 33 in the manner disclosed in respect to the latter which are attached to the free ends of the back and said legs may be provided with braces 47 similar to the braces 32, the construction being such that the legs 46 may be folded within the lower surface of the extension 33 when it is desired to place the extension 33 in the concealed position illustrated in dotted lines in Fig. 1.

Inasmuch as this multiform chair will ordinarily be used as a chair to furnish a living room it is desirable that suitable arms be provided, however as it is frequently convenient to use the device as a settee it is desirable that the arms shall be so constructed and secured to the frame that they may be moved from the sides of the chair to transverse positions so that the device may be changed into a convenient form of settee. In the preferred embodiment of the invention illustrated herein the arm members are of skeleton, substantially rectangular form comprising parallel top and base rails 48, 49 and end portions 50, 51 connecting the same, said end portions desirably having extensions 52, 53 projecting sufficiently below the lower rails 49 to cause the latter to lie substantially in the plane of the top of the upholstered seat when the same is in normal position. It will be understood however, that the arm sections may be of any desired character and of any suitable ornamental appearance.

Any suitable means may be provided for securing the arm sections to the frame, a convenient means which is illustrated herein comprises dowel pins 54 secured to the extensions 52 and 53 and adapted to enter sockets 55 in the upper ends of the posts 5, 6, 7 and 8. When, as illustrated herein the frame is quadrangular in form the arms may be placed either along and parallel with the sides 1, 2 or transversely and parallel

with the ends 3, 4. By reason of this construction the device may be assembled to form a chair or a chaise-longue or may be extended to form a bed. When the arms are placed transversely as illustrated in dotted lines in Fig. 1 the device forms an ornamental settee. When it is desired to use the device as a bed the arms may be removed so that the bed presents a continuous flat surface.

In order to anchor the coverings which may be used when the device is employed as a bed, suitable clamps for the coverings may be secured to the under side of the extensions or at any other convenient place. A desirable form of clamp which is illustrated in Fig. 5 comprises a leaf spring 56 secured by a screw 57 to the under edge of the frame of the extension 33, the free end of said plate being adapted to clamp the coverings between it and the frame.

It will be understood that the embodiment of the invention disclosed herein is of an illustrative character merely and that various changes in construction, arrangement of parts, ornamentation and other features may be made within the spirit and scope of the following claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A multiform chair comprising a frame having legs, a pair of internally toothed sectors connected oppositely to the inner sides of said frame, a seat, pivotal means connecting said seat to the centers of said sectors, a back having forwardly offset side pieces pivotally and slidably mounted upon said pivot and provided with means to engage said sectors and retain the back in adjusted position.

2. A multiform chair comprising a frame having legs, a pair of internally toothed sectors connected oppositely to the inner sides of said frame, a seat, pivots connecting said seat to the centers of said sectors, a back having detachable, forwardly offset side pieces pivotally and slidably mounted upon said pivot and means operable to engage the teeth of said sector whereby the back may be adjusted to any position from substantially vertical to horizontal.

3. A multiform chair comprising a frame having legs, a pair of toothed sectors connected oppositely to the inner sides of said frame, a seat, a pivot connecting said seat to the centers of said sectors, a back having flanged brackets secured to its sides, offset side pieces detachably secured in said brackets pivotally and slidably mounted upon said pivot, means on said side pieces operable to engage the teeth of said sector whereby the back may be adjusted to any position from substantially vertical to horizontal.

4. A multiform chair comprising a frame

having legs, a pair of internally toothed sectors connected oppositely to the inner sides of said frame, a seat, a pivot connecting said seat to the centers of said sectors, a back having forwardly offset side pieces pivotally and slidably mounted upon said pivot, means operable to engage the teeth of said sector whereby the back may be adjusted to any position from substantially vertical to horizontal, means foldable within the outer plane of said back to support the free end of said back when in horizontal position and an extension pivotally and slidably connected to said frame adapted to be concealed within said frame or withdrawn to form a continuation of said seat and means for supporting the free end of said section.

5. A multiform chair comprising a square frame having corner posts, a seat and a back, means pivotally connecting said back to said frame adapted to support the back in adjusted positions, a seat extension mounted upon said frame, means for supporting said seat extension in horizontal position adapted to be folded to permit said seat extension to be moved from horizontal position, arm sections and means for detachably connecting the same to said posts adapted to permit the positioning of the arms intermediate of the ends of the device when the back and extensions are in horizontal position to divide the device into sections.

6. A multiform chair comprising a square frame having corner posts, a seat and a back, means pivotally connecting said back to said frame adapted to support the back in adjusted positions, a leg adjustably secured to said back adapted to support the same when in horizontal position, a seat extension mounted on said frame, means for supporting said seat extension in horizontal position adapted to be folded to permit said seat ex-

45 tension to be moved from horizontal position, arm sections and means for detachably connecting the same to said posts adapted to permit the positioning of the arms intermediate of the ends of the device when the back and extensions are in horizontal position to divide the device into sections. 50

7. In a multiform chair comprising a square frame having corner posts, a seat within said square frame, a back pivotally connected thereto and adapted to be positioned horizontally in the plane of said seat, an extension and means for supporting the same in horizontal position in the plane of said seat, arm sections and cooperating dowel pins, upon said arm sections, and sockets, in said posts adapted to receive said dowel pins, said sockets being so positioned that the arm sections may be placed longitudinally of said frame to form a chair or transversely thereof when the back and extensions are in horizontal position to divide the device into sections. 65

8. A multiform chair comprising a rectangular frame having legs, a movable seat, a back, an extension for said seat having extensible supporting members slidably mounted upon guides secured to the inner walls of the sides of said frame and means for supporting the free end of said extension. 70

9. A multiform chair comprising a frame having legs, a seat pivotally mounted upon said frame, a back and an extension for said seat having plates extensibly connected to said extension by pin and slot connections, means carried by said plate engaging inclined guides secured to the inner walls of the sides of said frame and extending downwardly from the front portion of the outer edge thereof toward the rear and means for supporting the free end of said extension. 85

In testimony whereof, I have signed my name to this specification.

CHARLES E. BARNES.