No. 894,344. PATENTED JULY 28, 1908.

H. RAYMOND.

COLLAPSIBLE OR FOLDING FURNITURE.

APPLICATION FILED DEC. 19, 1906.

3 SHEETS—SHEET 1.

Fig. 1

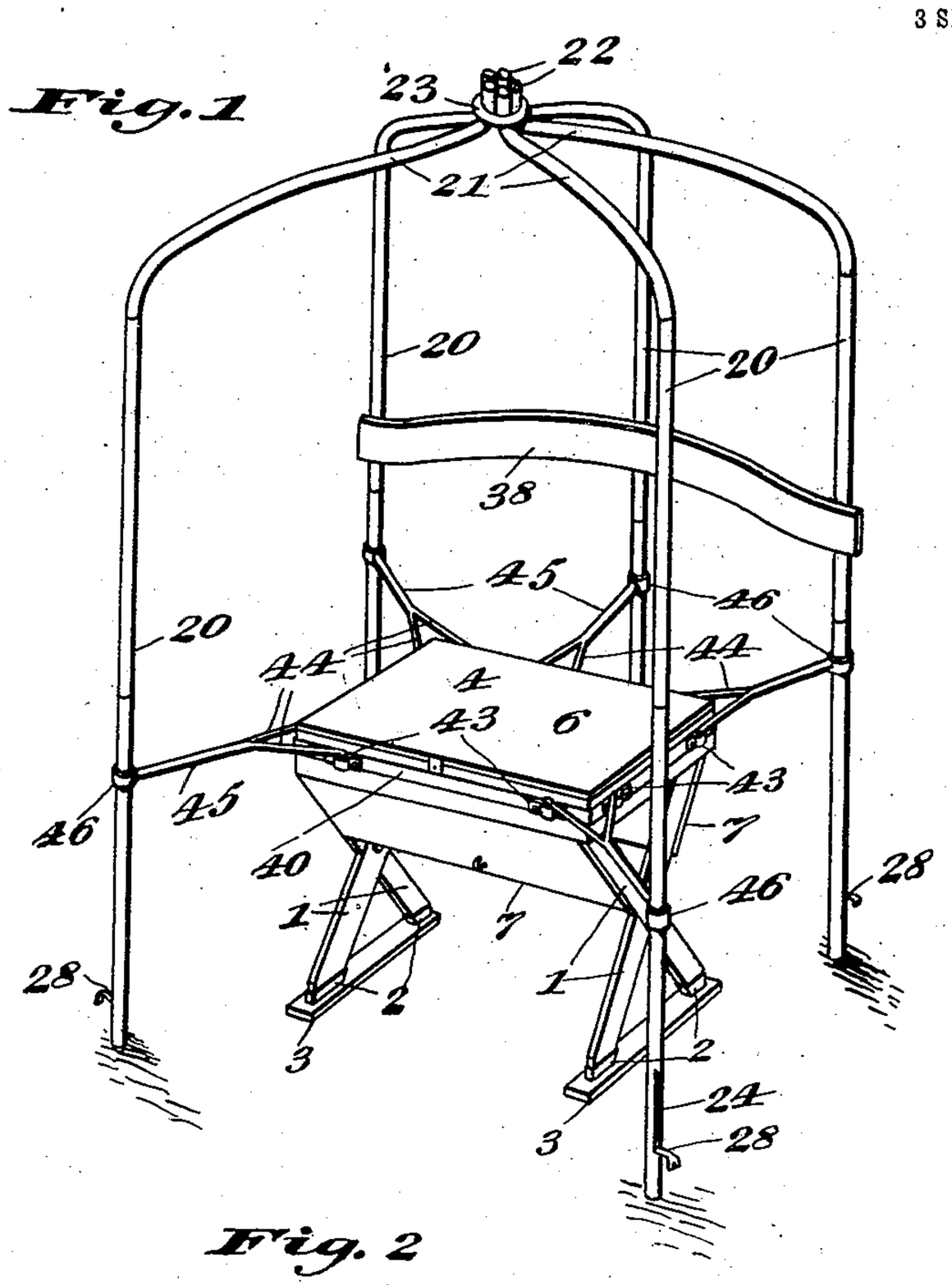
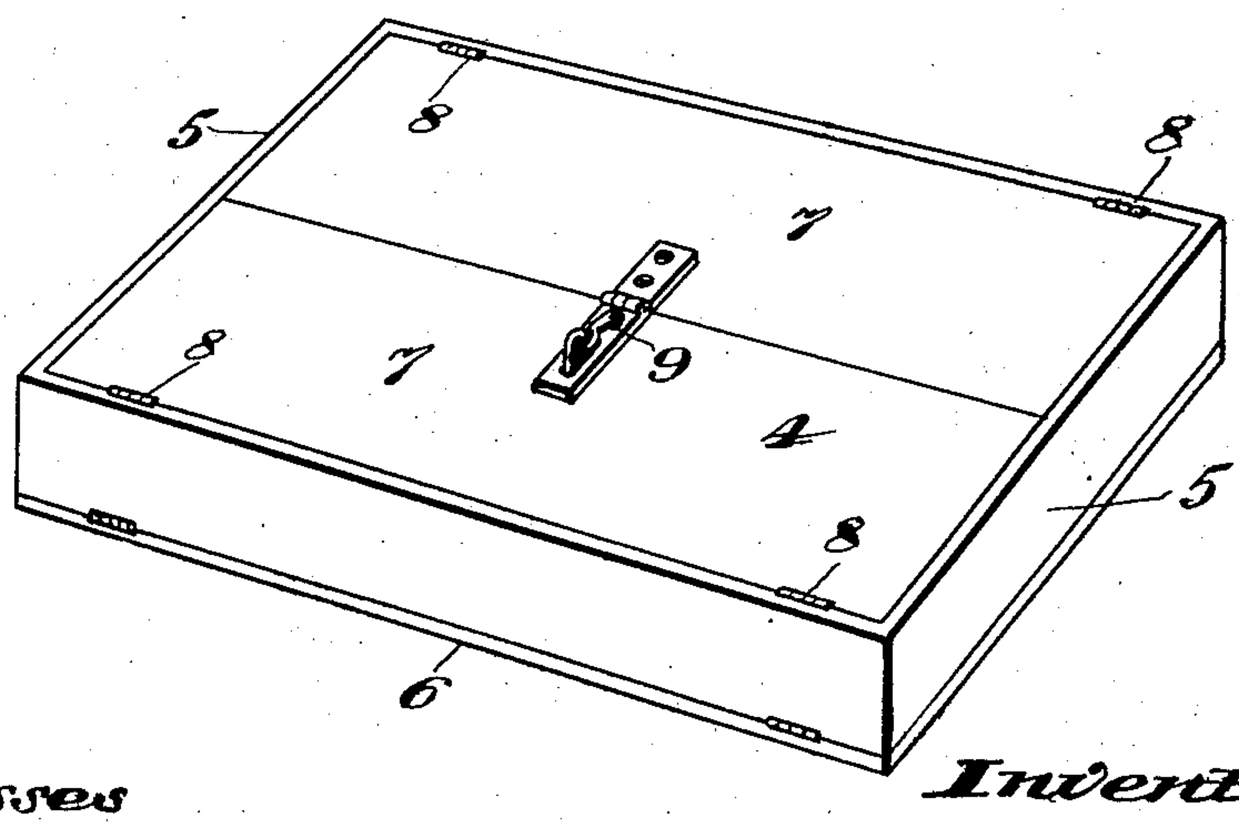


Fig. 2



Witnesses

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3 SHEETS—SHEET 2.

Fig. 3

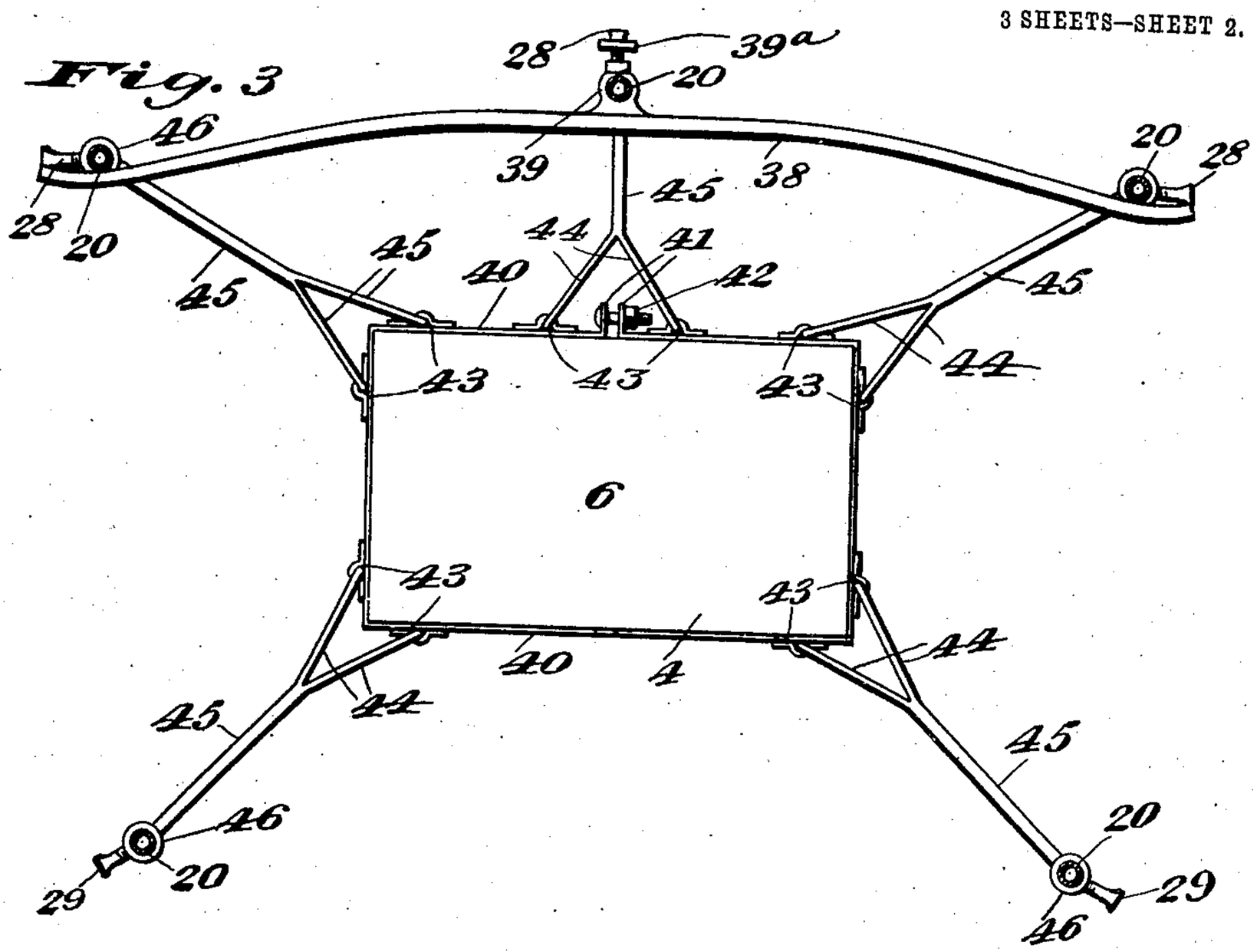


Fig. 4

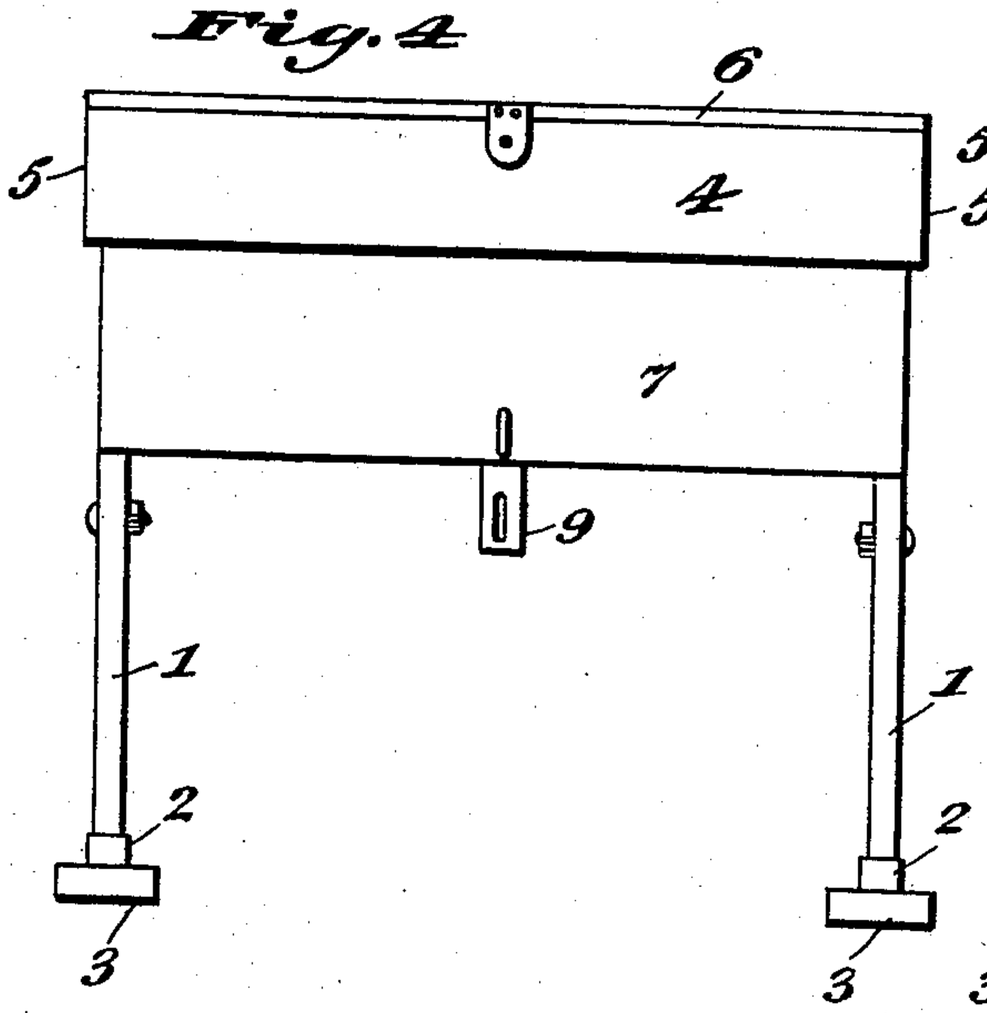
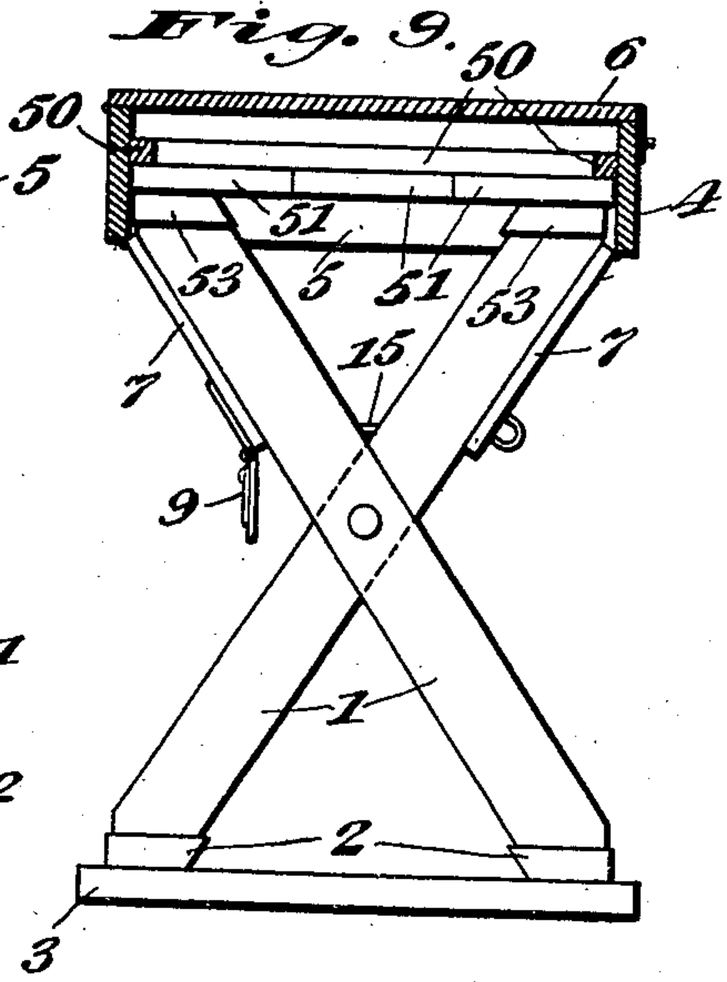


Fig. 9.



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3 SHEETS—SHEET 3.

Fig. 5

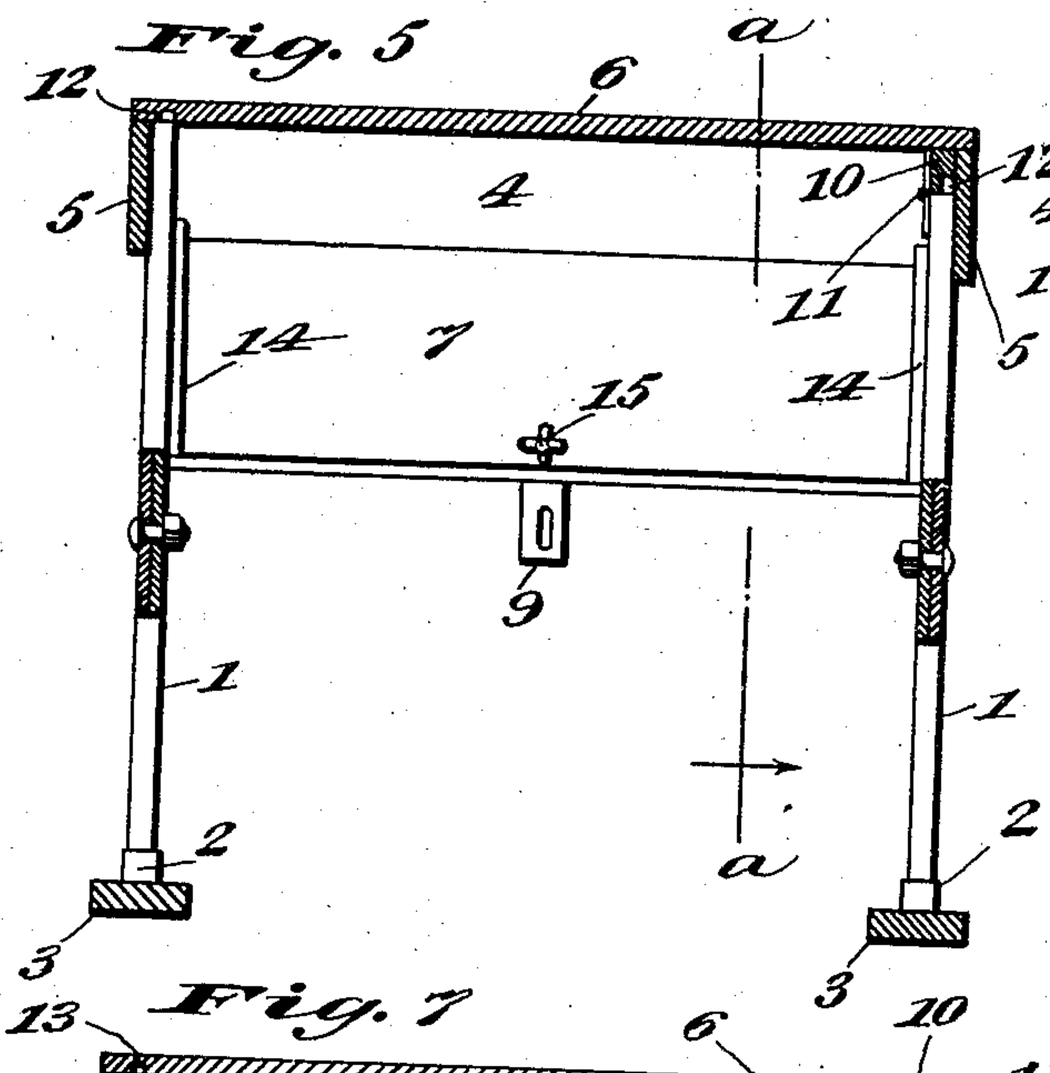


Fig. 6

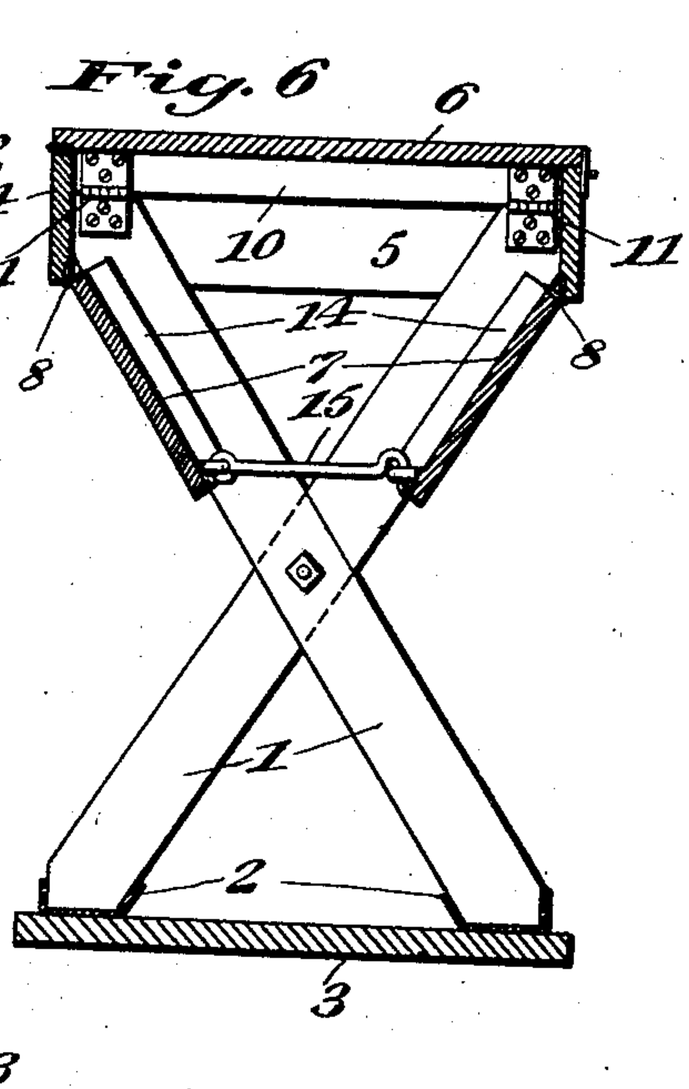


Fig. 7

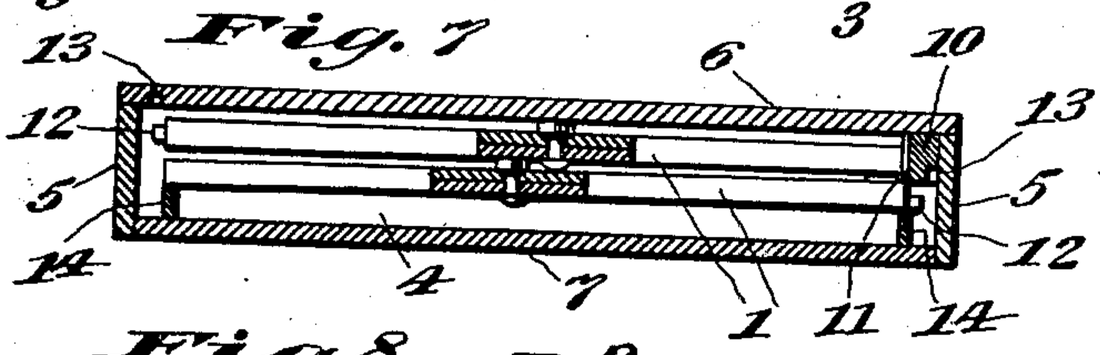
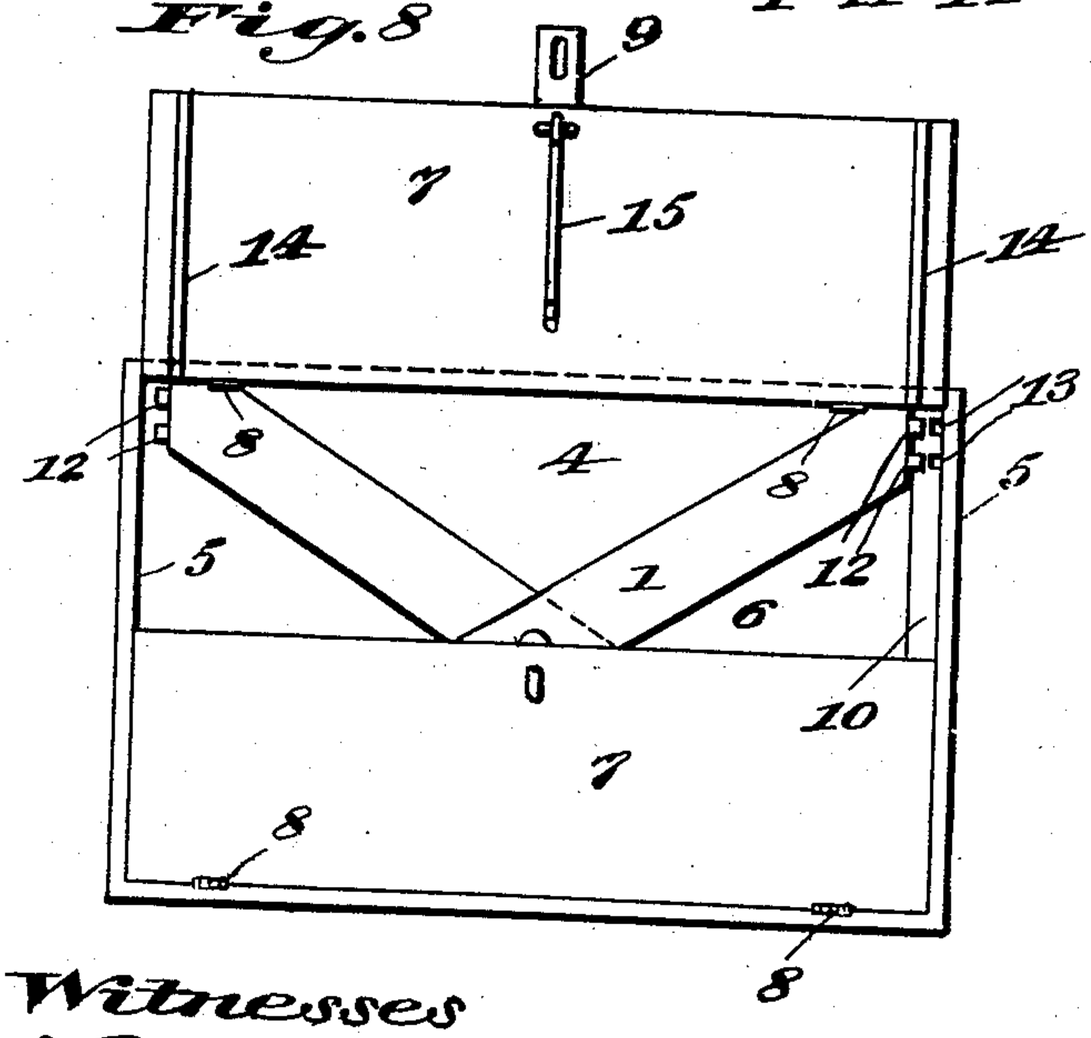


Fig. 8



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UNITED STATES PATENT OFFICE.

HOYT RAYMOND, OF CHICAGO, ILLINOIS.

COLLAPSIBLE OR FOLDING FURNITURE.

No. 894,344. Specification of Letters Patent. Patented July 28, 1908.

Application filed December 19, 1906. Serial No. 348,572.

To all whom it may concern:

Be it known that I, HOYT RAYMOND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Collapsible or Folding Furniture, of which the following is a specification.

This invention relates to certain improvements in collapsible or knock-down furniture such as is adapted to be compactly folded up when not required for use, while being capable of ready assemblage when desired, and the object of the invention is to provide furniture of this general class of a novel and improved structure adapted for compact and orderly arrangement in folded or knocked down condition so as to be capable of being readily transported and stored, and which shall, at the same time, be adapted for quick and convenient assemblage to produce a structure of sufficient size and strength for effective and practical use whenever desired.

The invention consists in certain novel features and principles of the construction, combination and arrangement of the several parts of the improved collapsible furniture, whereby certain important advantages are attained and the same is rendered simpler, cheaper and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, wherein I have shown my improvements embodied in a collapsible chair or seat with tent or canopy attachment—Figure 1 is a perspective view of the device with the tent or canopy covering omitted to show the structure of the underlying parts; Fig. 2 is a perspective view of the device in compacted or folded arrangement; Fig. 3 is a horizontal section, drawn to an enlarged scale and taken through the tent or canopy frame in a plane above the top of the chair or seat portion; Fig. 4 is a face or front elevation of the chair or seat portion, detached from the tent or canopy; Fig. 5 is a central sectional view taken vertically and longitudinally through the chair or seat portion of the device shown in Fig. 4; Fig. 6 is a vertical section taken transversely through the chair or seat portion of the device in the plane indicated by the line *a*—*a* in Fig. 5; Fig. 7 is a central longitudinal section taken vertically through the chair or seat portion of the device when in folded or compacted condition; Fig. 8 is an underside view of the compacted chair or seat portion with one of its bracing members or covers raised to illustrate the parts within; and Fig. 9 is a sectional view, somewhat similar to Fig. 6, but illustrating a modified arrangement of the seat or chair portion of the device.

Although my improvements are herein shown as embodied in a collapsible or knock down chair or seat, it is evident that the invention may be applied with equally good results and with but slight modification as regards its detailed construction to other forms of collapsible or knock down furniture as, for example tables, cots, etc., and for this reason I do not desire to be understood as limiting myself to the use of my improvements in folding or knock down chairs or seats alone. Also, while I have herein illustrated the improved collapsible or knock down chair or seat as employed in connection with the tent-like or canopy attachment, it is evident that this is also immaterial to my present invention, since said seat or chair portion may be separately employed, in some cases, with great advantage.

Referring first to Figs. 1 to 8, inclusive, the seat or chair portion of the device comprises crossed legs 1, 1, at opposite ends of the device with lower ends detachably engaged in sockets produced in clips 2, 2, at opposite ends of cleats 3, 3, one of which underlies each of the crossed legs 1, 1 and is designed to rest upon the ground, so that when the device is set up in soft ground or gravel, for example, there shall be little or no tendency for the lower ends of the legs to sink therein to disturb the balance of the device under the weight imposed thereon in use.

4, represents as a whole the box-like top of the chair or seat portion of the device made in the form of a rectangular shell or casing of sufficient interior capacity to receive the several parts of the device when taken apart, so that upon the inclosure of the said parts within said shell or casing, the latter will afford a neat and convenient parcel as indicated in Fig. 2, which may be conveniently stored or carried about from place to place. For convenient access to the interior of the box-like shell or casing 4, the top thereof is hinged and adapted to be raised and is provided with a suitable fastening for holding it in closed adjustment as shown at 9 in the drawings, and for a similar and additional purpose to

be hereinafter referred to, the bottom of said shell or casing is formed with brace members 7, 7, extended along its opposite sides, being hinged as shown at 8, 8, at their outer edge portions and being of such dimensions that when in closed adjustment, as shown in Fig. 2, their inner edge portions are adapted to fit closely together to retain the inclosed parts within the shell or casing. 9 represents a hasp fastening for holding the cover members in closed relation.

The crossed legs 1, 1, may be replaced by legs of other construction, as will be evident. Said legs, as shown in Figs. 5 and 6 have upper parts engaged at their outer sides upon the end walls 5, 5, of the box-like shell or casing 4, and when the legs are arranged, in setting up the device for use, with said upper ends housed within and engaged on the ends 5, 5, of said shell or casing, it is evident that the cover or brace-members 7, 7, at the base of the shell or casing may be drawn up beneath the inclined under surfaces of said legs as shown in the drawings, and may be secured in this position by means of a hook 15 carried upon one of said members and engageable with an eye upon the opposite member as shown in Fig. 6. By this arrangement it is evident that said members serve to retain the legs in position beneath the seat or box-like shell 4 so that the device may be lifted and carried about and the parts are held against accidental dislocation. The members 7, 7, have at their ends inwardly directed stops or projecting parts 14, 14 adapted, when the parts are assembled, as shown in Figs. 5 and 6, to be engaged against the inner faces of the legs 1, 1, opposite the end walls 5, 5, so that the said legs are effectively held between said parts, whereby an exceedingly strong and substantial construction is attained.

10 represents a cleat transversely extended across the top of the shell or casing 4, adjacent to one end wall 5 thereof and 11, 11, represent hinges whereby the upper ends of the crossed legs 1, 1, at that end of the device are pivotally held to said cleat in such a manner as to permit said legs to be swung pivotally either so as to be completely housed within the interior space of the shell or casing as shown in Figs. 7 and 8, or so as to be pendent below the shell for the proper support of the same at the top of the seat as shown in Figs. 5 and 6. The upper ends of the legs 1, 1 which are hinged at 11, 11, to cleat 10, carry dowels 12, 12, adapted, in the pendent position of the parts, to be engaged in sockets 13, 13, suitably formed in the cleat 10 so as to further strengthen and brace said legs.

The legs 1, 1, at the end of the device opposite to the cleat 10 are not hinged to the shell or casing, as herein shown, but are capable of complete disconnection therefrom, their upper ends being engaged, in the assembled position of the parts, upon the underside of the top cover 6 of the shell or casing and having dowels 12, 12, similar to those of the previously described legs and engaged similarly in sockets 13, 13, in the underside of said cover 6 so as to effectively brace and strengthen the device, the stops 14, 14, of the brace members 7, 7, also acting to securely hold each pair of crossed legs against the end portion 5, whereby said legs are held against accidental folding movement. Said legs opposite to the cleat 10, are designed to be withdrawn from engagement with the cover 6 when the device is knocked down, after which the said legs are laid in the inverted shell or casing beneath the hinged legs and opposite the said cleat 10, whereby an extremely compact arrangement results.

In connection with said seat or chair portion constructed as above described, I employ a tent or canopy and support therefor and within which said seat or chair portion is designed to be set up for use, so that the person using the device may be sheltered from the weather or from the sun and may, when desired enjoy a certain measure of privacy. The support for the canopy or tent comprises a plurality of uprights or standards 20, 20, ranged in suitable order around the lateral and rear sides of the seat or chair portion, there being five of such supports or uprights in the structure herein shown, although this number is in no way arbitrary. The supports or uprights 20 are preferably formed from metal tubing or the like in detachably connected short lengths or sections of a character to be conveniently housed in the shell or casing 4 when the device is compacted, and each support or upright 20 has its upper end provided with an inwardly bent and detachably connected section 21, the extremity of which is upturned. Said inwardly bent extremities 21, 21, for the several uprights 20, are arranged to converge above the central part of the device and their upwardly extended end portions 22, 22 are adapted to fit closely together so that a ring 23 or similar fastening device may be detachably engaged about the several upturned parts to hold the frame of the canopy or tent in position at its upper part.

The lowermost sections of the supports or uprights 20, 20 have longitudinally slotted side walls as seen at 24 in Fig. 1, and in their bores are arranged to slide anchoring means comprising plungers or rods having their lower ends pointed. Each of these plungers or rod portions is provided with a handle 28 which project laterally through the slots 24 and may have their outer portions flattened as at 29, to the end that the hand or foot of the user may be applied to the handle 28, whereby the plungers or pointed rods may

be slid lengthwise and downwardly in the bores of the uprights to cause the pointed parts to penetrate the ground sufficiently far to securely anchor the structure in position.

38 represents a back rest having a central socket 39 at its central part adjustably held upon the central upright 20, at the back of the seat or chair portion by means of a set screw 39[a] or the like in convenient position to be engaged by the back or shoulders of a person sitting upon said seat or chair portion. The ends of said back rest 38 are engaged upon and supported by the uprights 20, 20, at opposite sides of that whereon the rest is adjustably held in the assembled structure.

40 represents a strap-like part extended horizontally around the four sides of the box-like shell or casing 4, being preferably detachably held thereon by means of a bolt and nut device 42 engaged with the outwardly directed end portions 41 of said strap-like part at the center of the back of the seat. The strap-like part 40 is provided with sockets 43, 43 one of which is located at each side of each corner of the shell or casing when the part 40 is in position thereon, and said sockets 43, 43 at each side of each corner of the shell or casing are designed to be engaged by the forked end portions 44 of angular braces 45 having eyes 46 at their outer ends engaged on the corresponding uprights 20 of the canopy support, whereby an effective connection of said support with the seat or chair is attained to hold the parts in relation and prevent dislocation of the canopy. Sockets 43, 43, are also provided at opposite sides of the center of the back of the shell or casing 4, to be engaged by the forked ends 44, of a rear brace 45, having an eye engaged on the central rear upright 20 whereon the adjustable back rest 38 is held.

In Fig. 9 I have illustrated a modified form of the seat or chair portion, wherein the shell or casing 4 may, at will, be removed from the legs 1, 1 without interfering with the device as a seat. In this form of the device there is provided a top plate formed of a plurality of narrow boards or slats 51, 51, there being three of these as herein shown, and said slats may be movably connected together at their meeting edges in any well-known manner so as to prevent their accidental separation and so as to permit them to be readily connected and disconnected whenever desired, and when disconnected may be compacted into a small compass. The outer slats 51, 51 have at their ends clips 53 with sockets wherein are received the upper ends of the crossed legs 1, 1 whereby an effective connection of the slatted top with said legs is attained, and the shell or casing 4 has a ledge 50 produced around its walls at a suitable distance below its hinged top 6, whereby, when the said shell or casing is applied over the top of the slats 51, the cover 6 of said shell or casing will be maintained spaced above said slatted top as shown in the sectional view, Fig. 9, and on raising of the said cover 6 access may be had to the intervening space above the slatted top, so that such articles as may be desired may be compactly arranged therein.

From the above description it will be evident that the improved collapsible or knock down furniture constructed according to my invention is of a very inexpensive and simple construction and is especially serviceable for camping and outing parties, pic-nics and the like, as well as by sportsmen, painters and tourists and by spectators at parades, games and the like by reason of its compact and readily portable form when collapsed and of the ease with which its several parts may be assembled when desired for use, and of the convenience afforded by it as a protection from sun and weather, and it will also be obvious from the above description that the device is susceptible of some modification without material departure from the principles and spirit of the invention and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts of the device herein set forth in carrying out my invention in practice.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In collapsible furniture, the combination of a top, legs adapted to be extended down below opposite ends of the top to support the same, and bracing devices movably held upon the top and extended lengthwise along opposite sides of the same and having means of engagement with the legs to brace the same against movement toward each other.

2. In collapsible furniture, the combination of a top, legs adapted to be extended down below opposite ends of the top to support the same, and bracing devices extended lengthwise along opposite sides of said top and hinged to said top for movement toward and from each other and having means of engagement with said legs to brace the same against movement toward each other.

3. In collapsible furniture, the combination of legs, a top having at its ends adjustable connection with said legs and into which said legs are adapted to be compacted, and bracing means held to said top and adapted for engagement upon the legs when in assembled position to brace the legs against movement toward each other.

4. In collapsible furniture, the combination of legs, a box-like top the ends of which have adjustable connection with the legs and into which the legs are adapted to be compacted, and bracing members hinged at opposite sides of the box-like top and having stops adapted, when the legs are extended

from the top, to be engaged therewith to hold the legs in extended position.

5. In collapsible furniture, the combination of a top, legs adapted to be extended down below opposite ends of the top to support the same, bracing devices movably held at opposite sides of said top and extended between and adapted for engagement with the legs to brace the same against movement toward each other, and means for holding said bracing devices against movement when engaged with said legs.

6. In collapsible furniture, the combination of a top, legs adapted to be extended down below opposite ends of the top to support the same, bracing devices extended lengthwise along opposite sides of the top and hinged to said top for movement toward and from each other and having means of engagement with the legs to brace the same against movement toward each other, and means for holding said bracing devices against movement toward and from each other when engaged with said legs.

7. In collapsible furniture, the combination of a top, legs adapted to be extended down below opposite ends of the top to support the same, bracing devices extended lengthwise along opposite sides of the top and hinged thereto for movement toward and from each other and having means of engagement with the legs to brace the same against movement toward each other, and a fastening extended between said bracing devices and comprising disengageable members adapted, when engaged, to hold said bracing devices against movement when engaged with the legs.

8. In collapsible furniture, the combination of pivotally connected crossed legs, a top the ends of which have sockets to receive the upper ends of the legs, a shell or casing in box-like form having a hinged cover and having interior means of engagement with said top, whereby when the shell or casing is applied over said top its hinged cover is sustained spaced above said top to produce a chamber to which access may be had by way of said hinged cover and means for bracing the legs.

9. In collapsible furniture, the combination of a frame comprising uprights, a seat or chair portion arranged between the uprights, and braces extended between and having at their ends detachable connections with the frame uprights and with said seat or chair portion.

10. In collapsible furniture, the combination of a frame comprising uprights, a seat or chair portion arranged between the uprights, braces extended between and having at their ends detachable connections with the frame uprights, and a back-rest adjustably connected with said frame.

11. In collapsible furniture, the combination of a frame comprising uprights, a seat or chair portion, a strap-like part passed around and detachably connected with said seat or chair portion and provided with sockets, and braces extended between the frame uprights and said seat or chair portion and having their outer ends detachably connected with the frame uprights and their inner ends detachably engaged in the sockets of said strap-like part.

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