Feb. 10, 1925. 1,526,038

C. W. ALLMAN

COLLAPSIBLE BED

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Fig. 1.

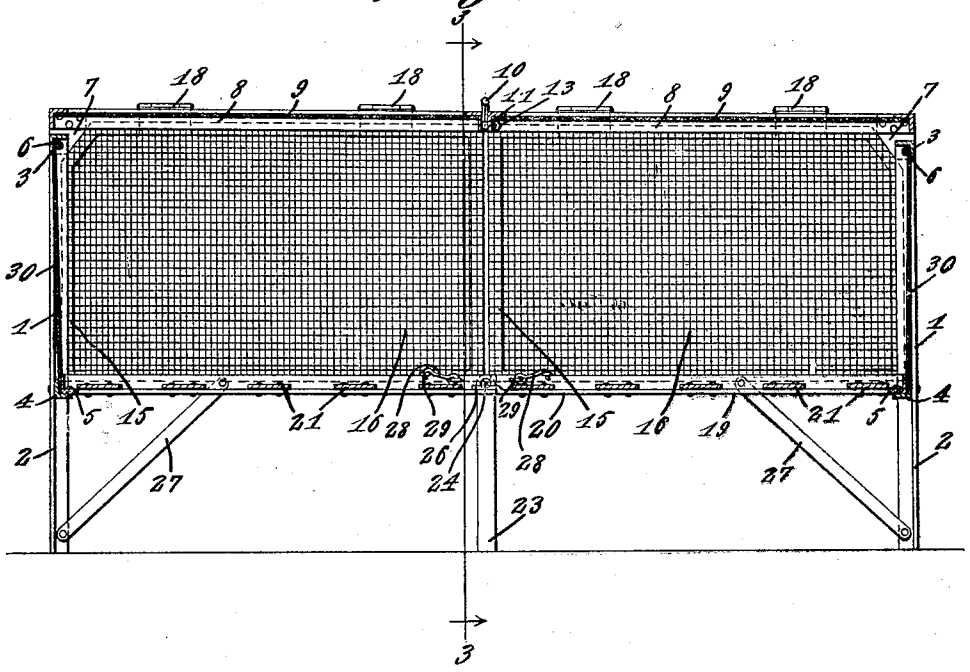

Fig. 2.

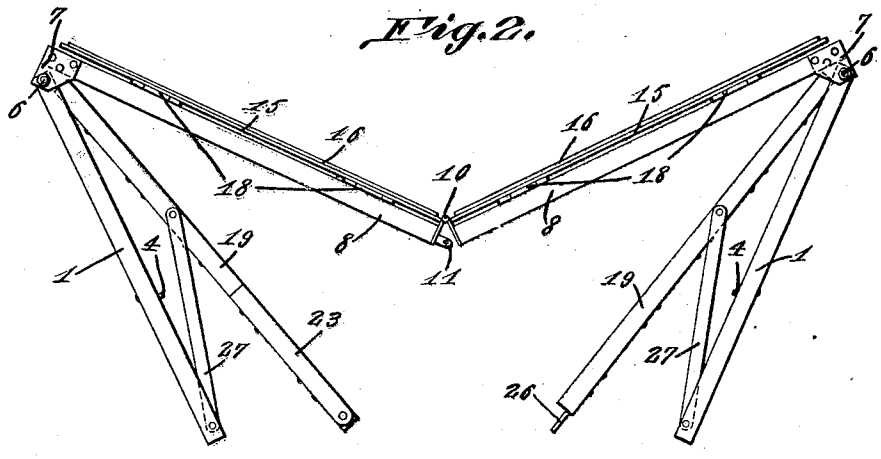

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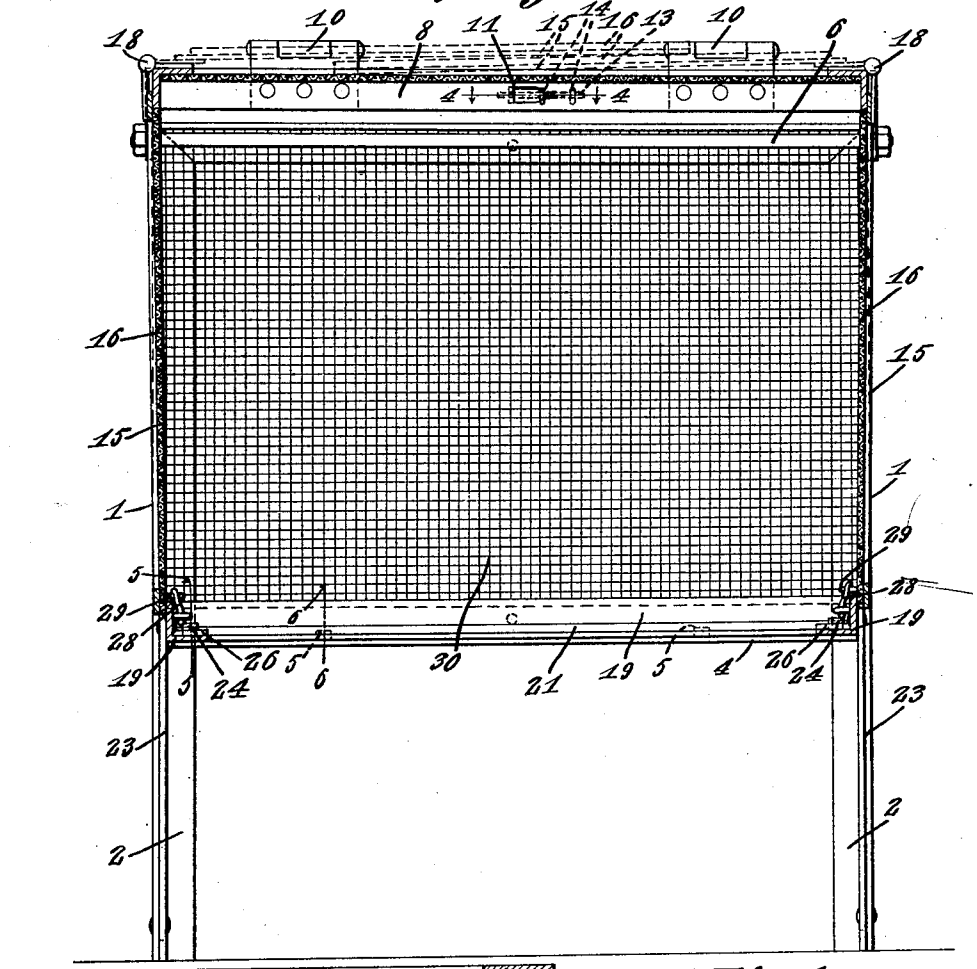
Fig. 3.



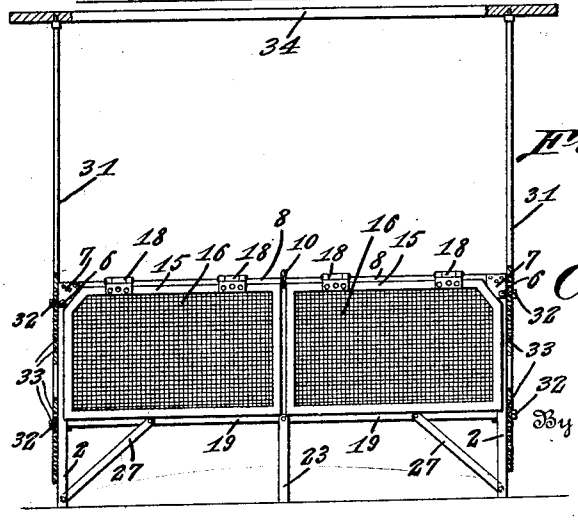


Fig. 4.

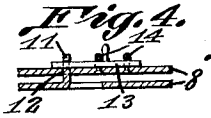


Fig. 6.

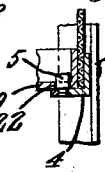
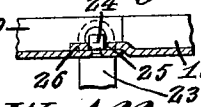


Fig. 7. Fig. 5.



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Patented Feb. 10, 1925. 1,526,038

UNITED STATES PATENT OFFICE.

CHARLES W. ALLMAN, OF OTTUMWA, IOWA, ASSIGNOR OF ONE-HALF TO J. F. HARMAN, OF OTTUMWA, IOWA.

COLLAPSIBLE BED.

Application filed October 15, 1923. Serial No. 668,657.

To all whom it may concern:

Be it known that I, CHARLES W. ALLMAN, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented a new and useful Collapsible Bed, of which the following is a specification.

This invention relates to collapsible beds, one of its objects being to provide a structure of this character having combined therewith a canopy.

A further object is to provide a bed which, when not in use, can be folded into a compact bundle, the canopy being likewise foldable so that the entire structure will occupy the minimum space.

A still further object is to provide novel means for mounting the bed bottom so that it will constitute a spaced support, it being possible, however, to collapse the bed bottom as well as the balance of the structure without removing bolts or other fastening devices.

Another object is to provide a collapsible bed the foldable canopy of which can be secured against collapse while the bed is in use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a vertical longitudinal section through the collapsible bed and canopy set up for use.

Fig. 2 is a side elevation of the complete structure partly folded prior to complete collapse thereof.

Fig. 3 is an enlarged section on line 3—3, Fig. 1.

Fig. 4 is an enlarged section on line 4—4, Fig. 3.

Fig. 5 is an enlarged section on line 5—5, Fig. 3.

Fig. 6 is an enlarged section on line 6—6, Fig. 3.

Fig. 7 is a side elevation of the combined bed and canopy, showing an attachment connected thereto for supporting a tent.

Referring to the figures by characters of reference 1 designates end frames each formed preferably of a length of angle iron bent to provide side supports or legs 2 and a top cross member 3. The sides of each end frame are connected by an angle strip 4 having an inwardly extending flange from which are provided upwardly projecting studs 5. This construction is shown particularly in Fig. 6.

Extending transversely through the sides of each frame 1 adjacent the upper end thereof is a rod 6 on the end portions of which are pivotally mounted plates 7 lapping the sides of the end frames and normally extending upwardly therebeyond. These plates are secured to the sides of canopy frames 8 each of which is preferably formed of angle iron bent to proper shape and having their upper inwardly extending flanges secured to the edge portions of a panel 9 preferably formed of wire fabric. The two frames are connected by hinges 10 so that the upper faces of the frames can fold together. For the purpose of holding the frames against relative swinging movement a keeper 11 is struck from the downwardly extending flange at the hinge end of one of the frames 8 and adapted to extend through an opening 12 provided therefor in the corresponding flange of the other frame 8. A bolt 13 is slidable on the apertured flange within guides 14 provided therefor and is adapted to extend through the keeper as shown in Fig. 4. When the parts are thus arranged the two frames 8 are held in alinement. By withdrawing the bolt 13 from the keeper 11, however, the hingedly connected ends of the frame can swing downwardly as shown in Fig. 2.

Hingedly connected to the sides of the frames 8 are side frames 15 preferably formed of flat strips of metal secured to the edge portions of panels 16 consisting of wire fabric. The hinges 18 of the side frames are so located that the said side frames can be swung upwardly onto the top frame. It will be noted that the hinges 10 of the top frames project upwardly above them so that when the side frames are positioned on the top frames, the parts can be folded together as will be apparent by referring to Fig. 2.

Detachably supported at one end by each of the cross strips 4 is a bottom frame 19 formed preferably of angle strips bent to provide side rails 20. Slats 21 are mounted at their ends upon the inwardly extending flanges of the side rails and are secured to them by rivets or the like. The end of each bottom frame has openings 22 therein for the reception of the studs 5. To the side arms of one of the bottom frames are pivotally connected legs 23 and projecting upwardly from the bottom flanges of the side arms close to the legs are studs 24. These studs are adapted to project upwardly through openings 25 formed in tongues 26 that are extended from the free ends of the side rails of the other bottom frame. Braces 27 are pivotally connected to the side rails of the bottom frame and to the lower portions of the legs 2. Hooks 28 or the like may be connected to the side rails of the two bottom frames and are adapted to engage eyes 29 extending inwardly from the side frames 15. Thus it will be seen that after a person has entered the structure the side frame can be closed and secured from within. The spaces between the sides of the end frames 1 and between the cross strips 4 and the tops of the end frames contain panels 30 of wire fabric or the like.

It will be apparent that by swinging the side frames onto the top of the canopy access can be had readily to the interior of the structure after which the side frames can be swung downwardly and fastened as before explained.

When it is desired to fold or collapse the structure the side frames are brought into position on top of the frames 8. The tongues 26 are lifted off of the studs 24 and the ends of the frames 19 are lifted off of the studs 5. Thus the bottom frames 19 can be swung toward the end frames 1 as shown in Fig. 2, the braces 27 folding during this action. The bolt 13 is disengaged from the keeper 11 and the top frames can therefore be folded together. In Fig. 2 the entire structure has been shown partially folded. When the structure is completely folded the frames 15 on the top frames 8 will be in contact while the frames 19 and 2 will also be substantially parallel with and against the frames 8.

For the purpose of setting up the structure for use the operation herein described is reversed. Obviously the structure can be collapsed and set up without the use of tools and without requiring the service of a skilled mechanic.

Under some conditions it is desirable to combine the structure with a tent support. Under these circumstances standards 31 may be fastened to the end frames 1 by means of bolts 32, there being a longitudinal series of apertures 33 in each standard any one of which is adapted to receive a bolt. Thus the standards can be adjusted readily. The upper ends of the standards project into and support a ridge pole 34 on which a tent can be mounted. This structure is especially suitable for use by campers.

What is claimed is:—

1. A collapsible bed including end frames, bottom frames, hingedly connected top frames pivotally attached to the respective end frames, cooperating means upon the end frames and the outer ends of the bottom frames for holding said frames assembled under the weight of a load, cooperating means upon the bottom frames for holding them detachably connected under the weight of a load, means for supporting the connected ends of the bottom frames, and pivoted brace connections between the bottom and end frames, said bottom frames being collapsible against the respective end frames to position them between the end frames and the respective top frames.

2. In a collapsible bed, the combination with end frames, of hingedly connected top frames pivotally mounted on the end frames, side frames hingedly connected to and foldable onto the top frames, bottom frames, cooperating means upon the bottom and end frames for holding them assembled under the weight of a load, cooperating means upon the bottom frames for holding them connected under the weight of a load, a shiftable support for the connected ends of the bottom frames, and pivoted brace connections between the bottom and end frames.

3. A foldable bed including end frames, top frames hingedly connected thereto and to each other, cooperating means on the top frames for holding them in alinement, side frames hingedly connected to and foldable downwardly upon the top frames, said top frames being foldable together with the side frames therebetween, bottom frames, pivoted brace connections between the bottom frames and the lower portions of the end frames, said bottom frames and end frames being foldable together and against the top frames, cooperating means upon the bottom and end frames for holding them assembled for use under the weight of a load, cooperating means upon the bottom frames for holding them together under the weight of a load, and a pivoted support for the connected end portions of the bottom frames.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CHARLES W. ALLMAN.