

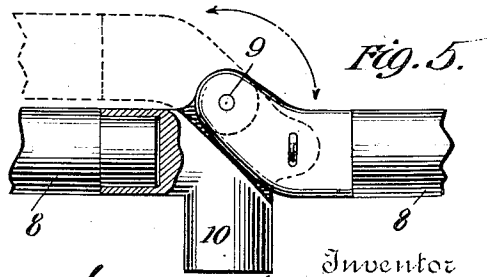
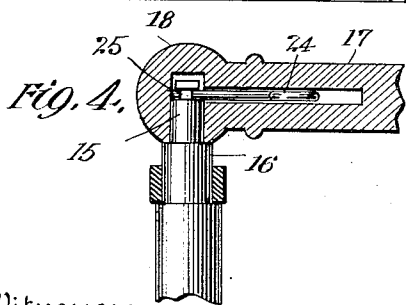
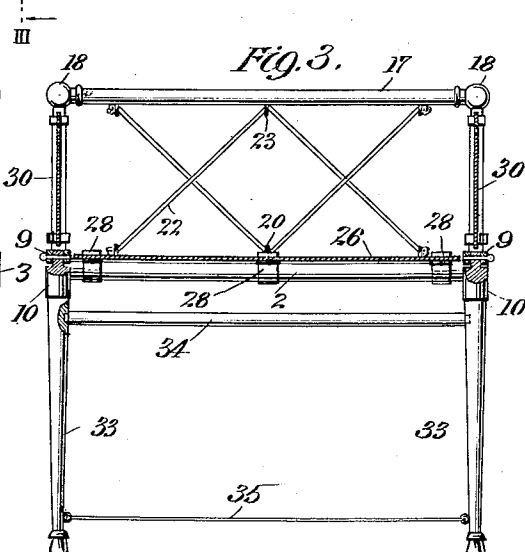
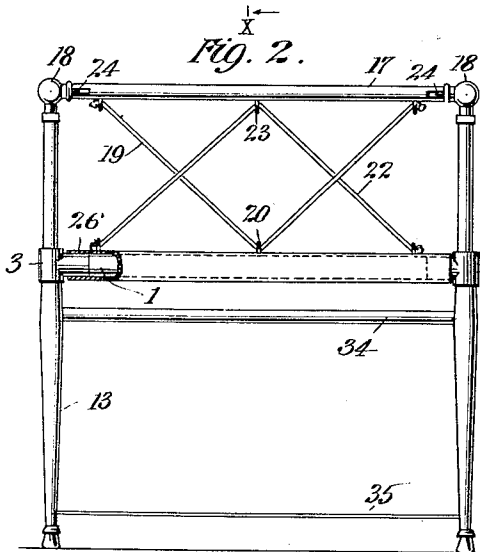
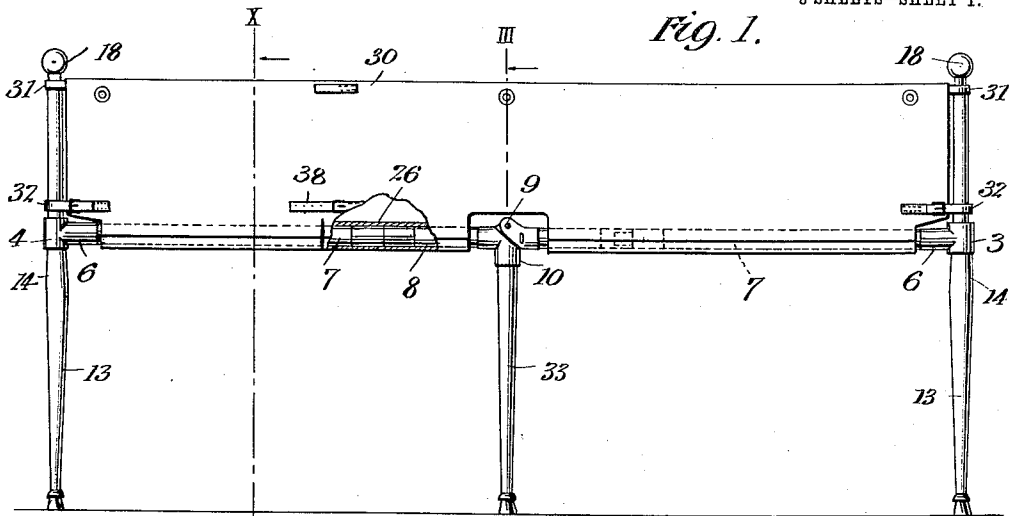
No. 885,995.

PATENTED APR. 28, 1908.

S. S. HANSON.
KNOCKDOWN BED.

APPLICATION FILED SEPT. 24, 1907.

3 SHEETS—SHEET 1.



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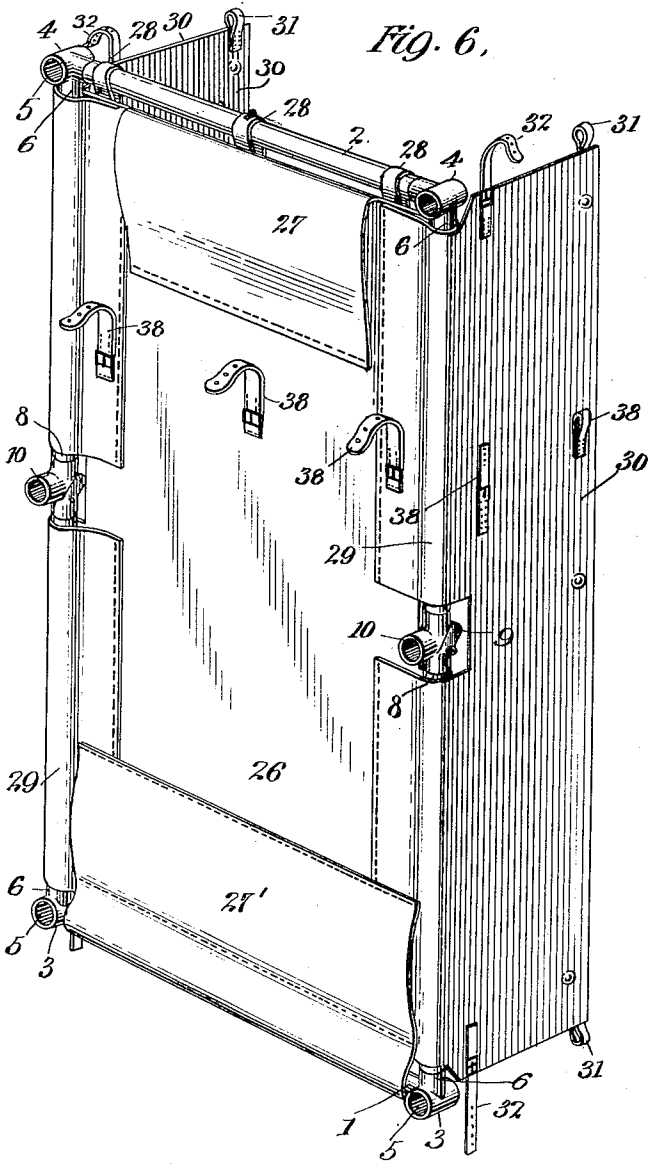


Fig. 6.

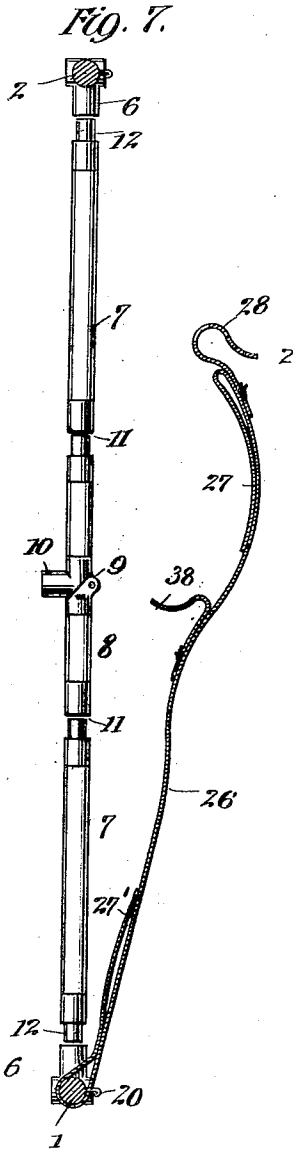


Fig. 7.

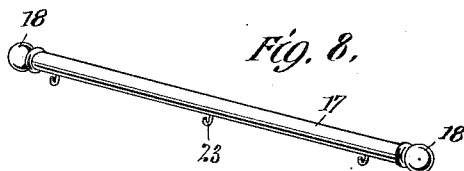


Fig. 8.

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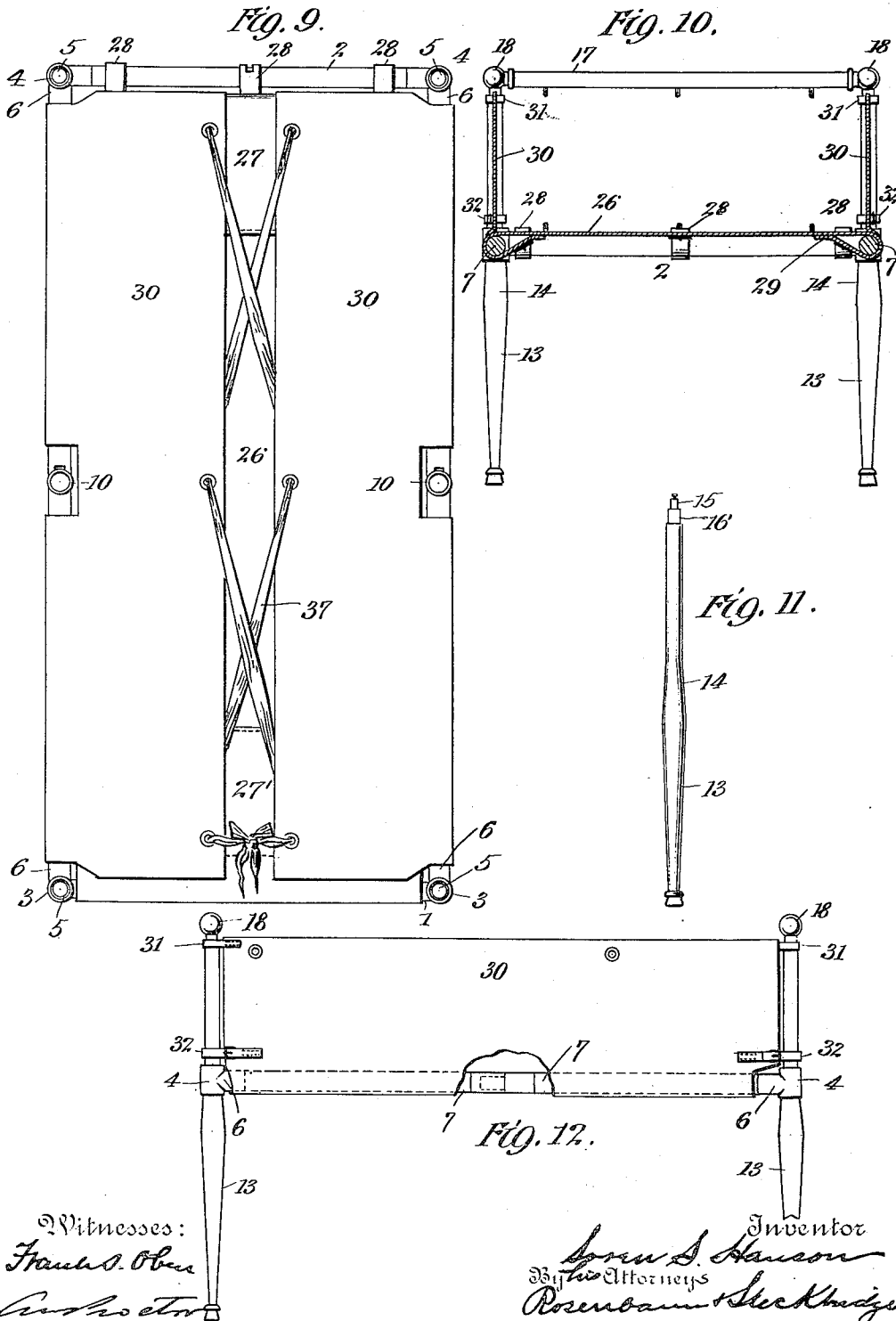
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

SOREN S. HANSON, OF NEW YORK, N. Y.

KNOCKDOWN BED.

No. 885,995.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed September 24, 1907. Serial No. 394,274.

To all whom it may concern:

Be it known that I, SOREN S. HANSON, a subject of the King of Denmark, residing at the city of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Knockdown Beds, of which the following is a full, clear, and exact description.

My invention relates to improvements in collapsible or knock-down beds or cribs, the main object being to provide a bed or crib, which is of light construction, which can be taken apart and folded into a very compact compass, and which is very strong and durable in use.

With these and other objects in view, the invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a side elevation of a knock-down bed or crib embodying the principles of my invention; Fig. 2 is an end view of the same; Fig. 3 is a section on the line III—III of Fig. 1, looking in the direction of the arrows; Fig. 4 is a detail sectional view of a portion of the corner post and top rail showing the form of connection employed; Fig. 5 is a detail view showing a form of the hinge joint employed in the side bars or members; Fig. 6 is a perspective view showing the bed partly taken apart; Fig. 7 is a side view showing the sectional construction of one of the side rails; Fig. 8 is a perspective view of one of the top rails; Fig. 9 is a view of the bed folded up into a form for temporary storage, etc. Fig. 10 is a section on the line X—X of Fig. 1, looking in the direction of the arrows. Fig. 11 is a side view of one of the corner posts; Fig. 12 is a view showing the manner in which a full-sized bed may be made up to form a crib of smaller size.

Referring to the drawings in which like parts are designated by the same reference sign, 1 and 2 indicate what may be termed the end frame bars or members, and which have specially constructed socketed ends to receive the various side bars and corner-posts which together make up a complete bed.

3 indicates the socket members for the end bar 1, and 4 those of the end bar 2. Each has a hole 5 in a direction to receive a leg of the bed, such opening being tapered longitudinally.

6 denotes additional lateral projections having sockets to receive the side bars.

A convenient construction of side bar is that illustrated in Fig. 7, and comprising a plurality of separate sections. 7 denote the end sections, and 8 the middle section, the middle section being centrally hinged at 9. 10 denotes a protuberance or extension on one of the hinged members which is socketed to receive a special middle leg for the bed, later described. The sections 7 and 8 are fitted with telescoping or socket joints 11, so that they can be assembled into a substantially unitary member. At the ends the sections are also provided with reduced portions 12 adapted to be received in the sockets 6 of the end bars.

A preferred construction of corner post is particularly shown in Fig. 11. This comprises a straight rod 13 conveniently of wood, which I find to be a very satisfactory material for all of the main frame members of the bed. At substantially its middle portion 14, the leg is enlarged, such enlargement being tapered in an upward direction corresponding to the taper of the holes 5 already described. The arrangement is such that when the legs 13 are inserted in said holes 5, the tapered portion 14 becomes firmly seated and the legs are organized rigidly upon the rest of the structure. At their upper ends the legs each have a reduced portion 15, conveniently formed by a metallic pin driven into the end of the leg which is strengthened at this point by a ferrule 16.

17 indicates the top rails having knobs 18, at their ends, with openings to receive the pins 15. Each of the top rails has a downwardly depending flexible loop 19, which can be hooked at the point 20, to the middle of the corresponding end bar.

23 indicates a similar loop forming part of each end bar and adapted to be hooked at the point 23 on the top rails. In this way, the top rail is fastened in place and at the same time an ornamental and useful lattice is produced at the head and foot of the bed. As an additional fastening, I provide wire bolts 24 moving in suitable recesses of the top rails to engage sockets 25 in the pins 15.

26 designates a fabric or canvas strip which is permanently secured to the end bar 1 by being looped and sewed around the same.

27 indicates a flap or pocket formed by the loose end of this strip which is sewed into the form of a loose flap to receive the legs and various sections of the bed when the latter is knocked down, as will be later more fully

described. At its other end the strip 26 has straps 28, with buckles so that the canvas can be stretched very tight in use, which not only renders it a good substitute for a bed spring, but also serves to hold the end bars and the side bars together. At its sides the strip 26 also has loops or pockets 29 through which the side bars or members of the bed may be passed. 30 indicate side flaps sufficiently wide to extend upward to the height of the top rails 17. At their upper ends these side flaps may be provided with straps or loops 31, adapted to be stretched over the ends of the posts 13 so as to keep the said flaps tightly stretched in place.

32 indicate additional straps having buckles for straining the side flaps tight along their lower surfaces where they join the side frames of the bed.

The bed is completed for use by inserting the middle legs 33 in the sockets 10.

In order to stiffen the bed at its middle portion, I provide a compression bar 34, sockets in the middle legs 32, and a spring or cord 35 which constitutes a tie rod. In this way the side bars of the bed are prevented from being drawn together at the middle by the tension of the canvas 26.

The construction of the bed when it is set up for use will be obvious from the preceding description. In order to take down the bed it is merely necessary to remove the top rails 17, pull out the legs 13 from their socket holes 5, and then release the straps of the canvas 26. In many cases it may not be necessary to wholly disassociate the bed, for example, when it is merely desired to put it out of the way during the day time, or for any reason when it is not in use. Under these circumstances, the canvas 26 need not be loosened from the side and end bars, the two flaps 30 being merely laid on the main portion 26 and directed toward one another, as shown in Fig. 9, whereupon they may be tied or lashed together by a ribbon 37.

In order to still further take apart the bed for the purposes of transportation, the canvas 26 is loosened at the points 28, whereupon the end bar 2 can be removed. The side bars can then be slid out of their containing loops or pockets and taken apart, being in separable sections. All of the various end posts, top rails, and side bar sections may be inserted in the pockets or flaps 27, 27', at any time, but when the bed is completely taken apart and rolled up for the purpose of transportation, I prefer to simply roll the canvas tightly around the end bar 1 to which it is permanently connected and afterwards grip the various legs and sections tightly around the roll of canvas. This disposition is found to be more compact than the former when the bed is completely disassociated or taken apart.

It will be observed that by reason of the

hinged construction of the side bars having the central legs 33, that it is possible to fold one end of the bed over on the other, assuming that the legs and top rail at the folded-over end have been removed. Folded over in this way, the bed is in the nature of a chair, stool or ottoman, and when supplied with cushions is a not unattractive piece of furniture. Inasmuch as the present bed is particularly adapted for persons who travel and for use at summer resorts, etc., the means of obtaining an extra chair or piece of furniture of this sort during the day time is a distinct advantage.

In some cases, it may be desired to transform the full length bed into a crib for children. In this case, the section 8 of the side bars may be simply removed and the two remaining sections 7 joined together by the splices or joints provided at their ends which are made similar or interchangeable for this purpose. Under these circumstances the side view of the bed appears as in Fig. 12, and the canvas 26 is stretched tightly by means of supplemental straps 38 provided at a suitable point along its length. In this shorter construction it is of course not essential to have a middle support so that the removal of the central section 8 having the legs 33 is of no consequence.

What I claim, is:

1. A knock-down bed comprising wooden posts having tapered portions at substantially the middle of their length, end bars having metal socket members at their ends with vertical tapered holes adapted to receive the tapered portions of said legs, said socket members also having laterally extending socket holes, wooden side bars having ends adapted to be received in said lateral sockets, top rails having openings to receive the tops of said legs, means on said top rails and the said end bars for connecting said parts together, and a canvas strip permanently attached to one end bar and having means by which it can be adjustably fastened to the bar at the other end of the bed.

2. In a knock-down bed, end bars having socket members, legs received in said socket members, top rails having holes to fit over the tops of said legs and cords attached to said end bars and to said top rails, and means engaging said cords to connect said top rails and end bars whereby a latticed partition is established therebetween.

3. A knockdown bed comprising end bars permanently formed with vertical tapered and lateral sockets, legs with tapered portions corresponding to the taper of said sockets received in the vertical sockets and having reduced portions at their upper ends, side bars received in the lateral sockets, and top rails having holes to receive the reduced portions of said legs, and flexible strips for lacing said top rails to the end bars.

4. A knock-down bed comprising end bars permanently formed with vertically tapered and lateral sockets, legs with tapered portions corresponding to the taper of said sockets received in the vertical sockets and having reduced portions at their upper ends, side bars received in the lateral sockets, top rails having holes to receive the reduced portions of said legs, flexible cords for lacing said top rails to the end bars, a canvas strip connected to one end bar, and means on said canvas strip for joining it to the end bar at the opposite end of the bed.

5. A knockdown bed comprising end bars having sockets, legs and side bars received therein, and a canvas strip permanently attached to one end bar having means, whereby it may be stretched in connection with the other end bar, said canvas strip having a pocket or flap to receive the legs and side bar sections when the bed is knocked down or taken apart.

6. A knockdown bed comprising end bars having sockets tapered upward from their lower sides and having additional lateral sockets, legs having tapered portions received therein, side bars having reduced extensions, and a canvas strip attached to one end bar, and having side flaps adapted to be secured to the legs, and means whereby said side flaps may be tied to each other.

7. A knockdown bed comprising end bars having vertical sockets, legs received therein, a fabric strip permanently attached to one end bar and having side loops, and side bars received in said loops and socketed in end bars.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

SOREN S. HANSON.

Witnesses:

WALDO M. CHAPIN,
JAMES D'ANTONIO.