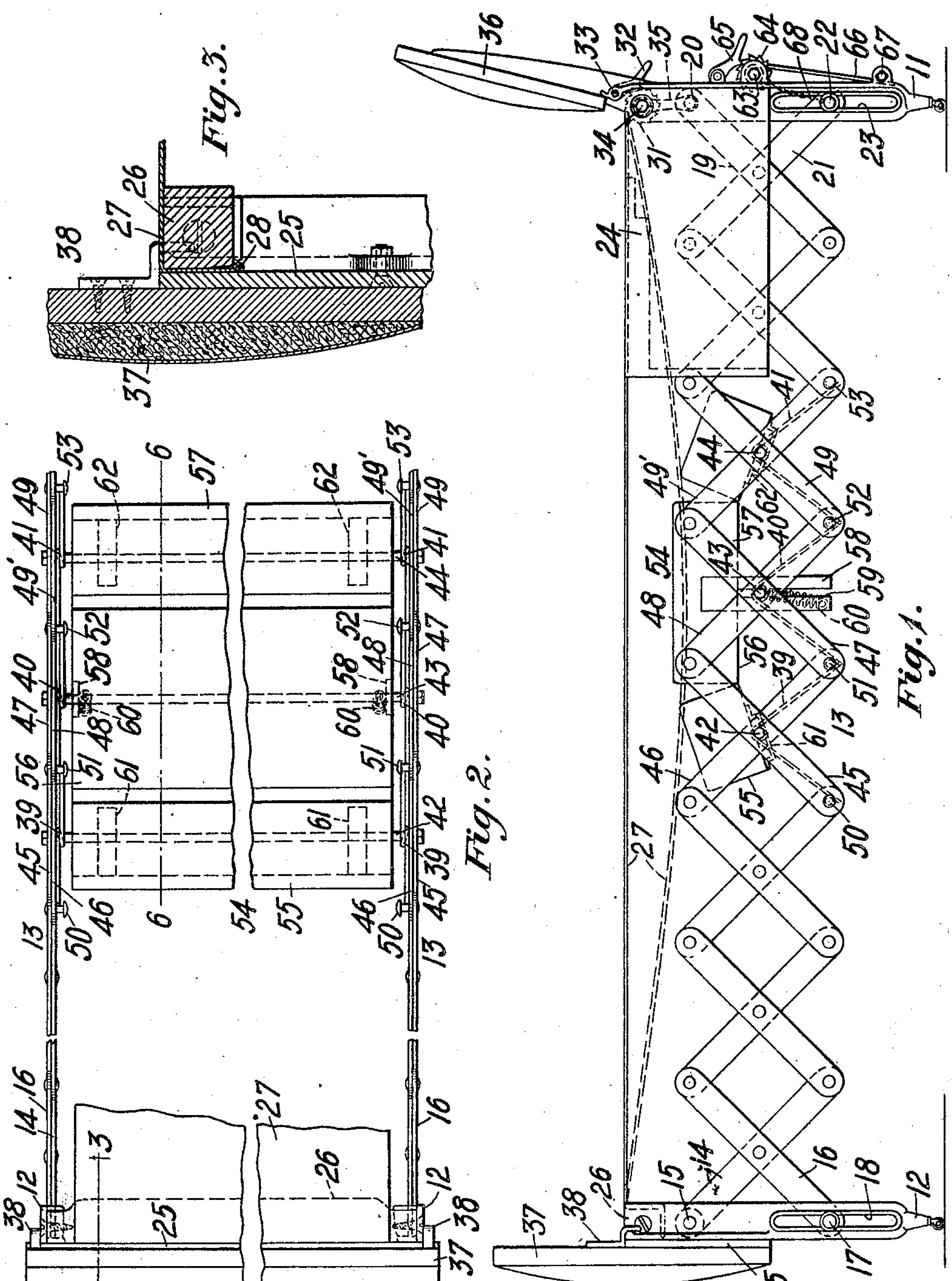
No. 887,198. PATENTED MAY 12, 1908.

J. KIEWICZ.

COLLAPSIBLE COUCH BED.

APPLICATION FILED NOV. 1, 1907.

2 SHEETS—SHEET 1.

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*Inventor:*

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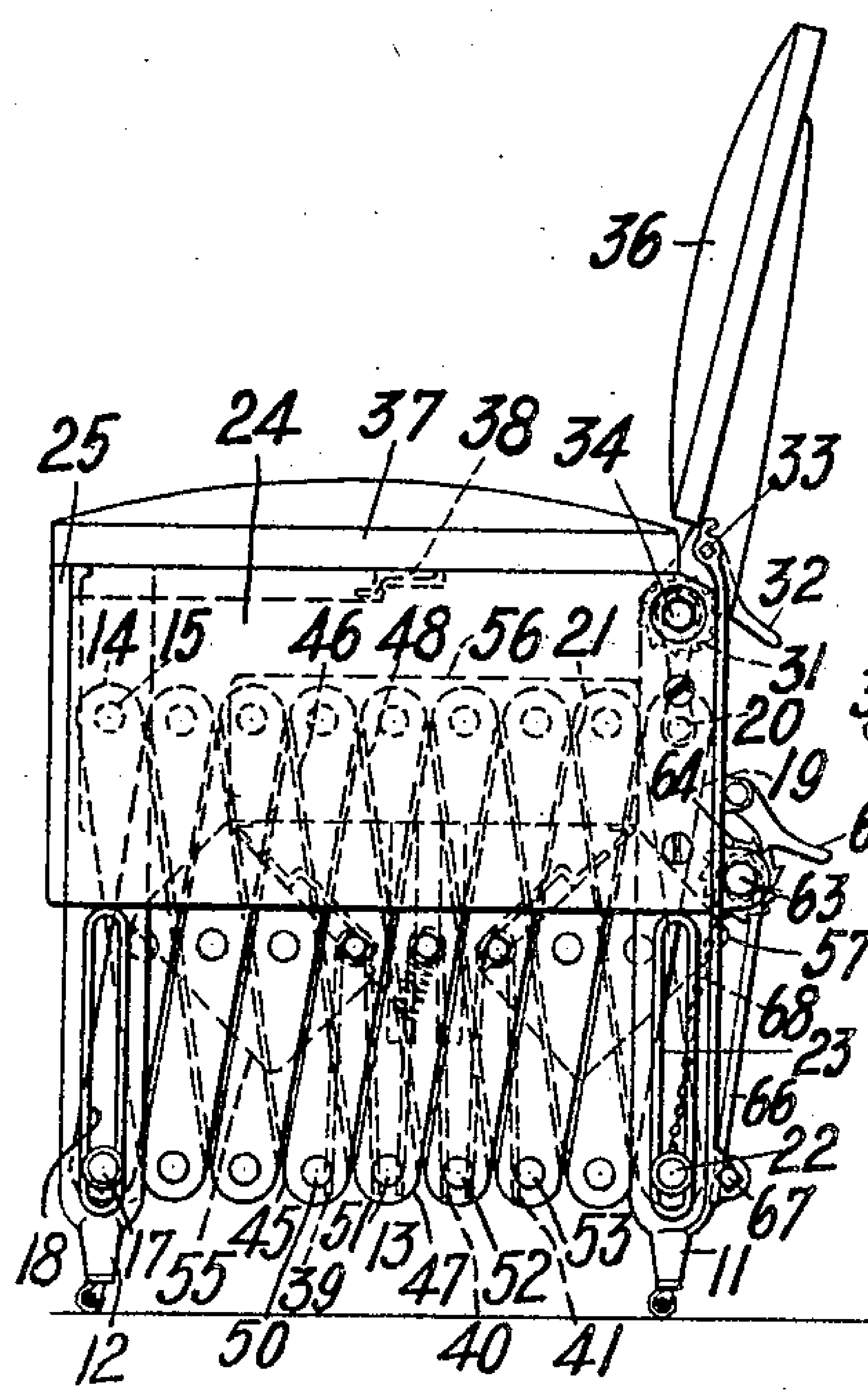



Fig. 4.

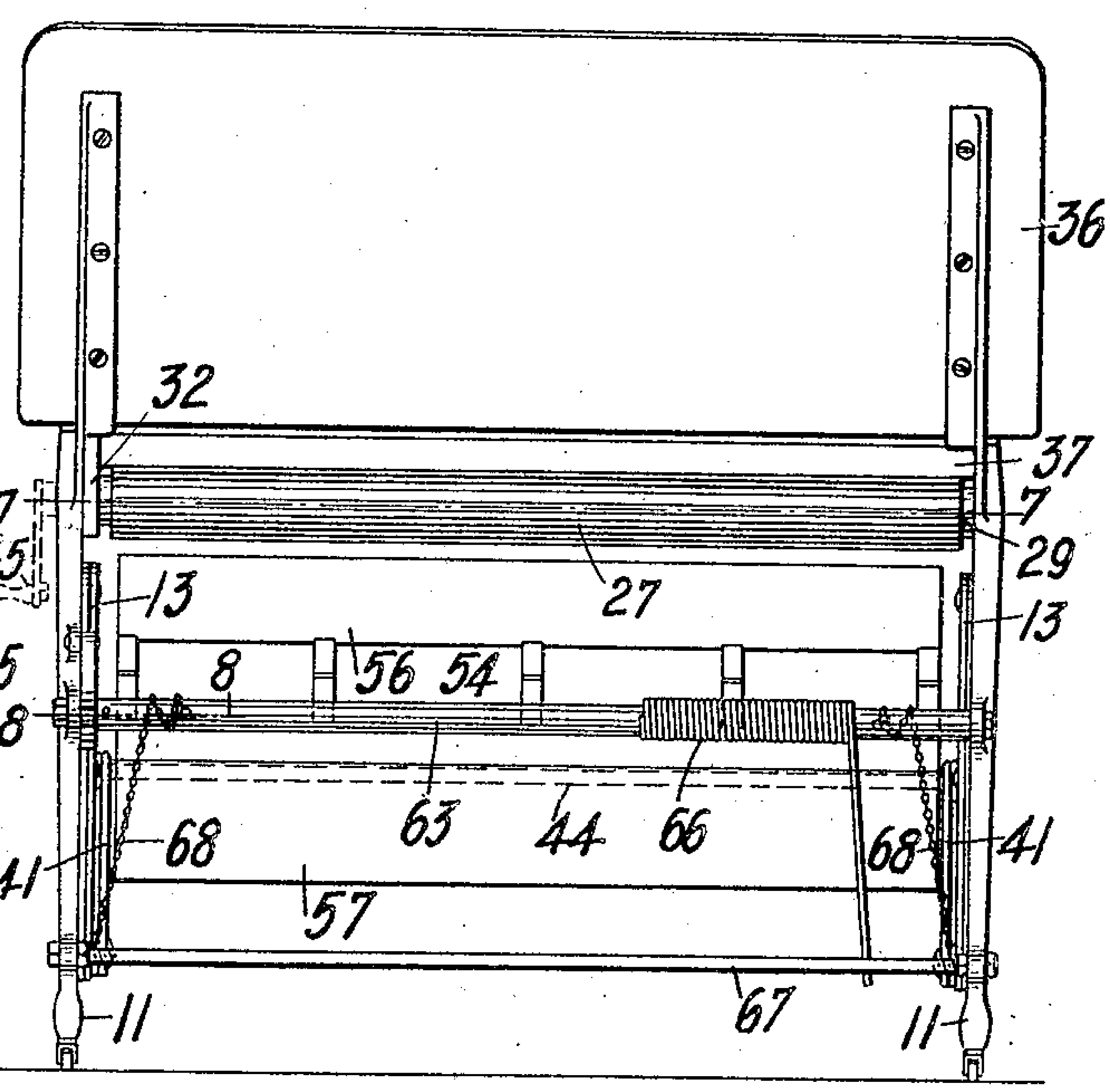
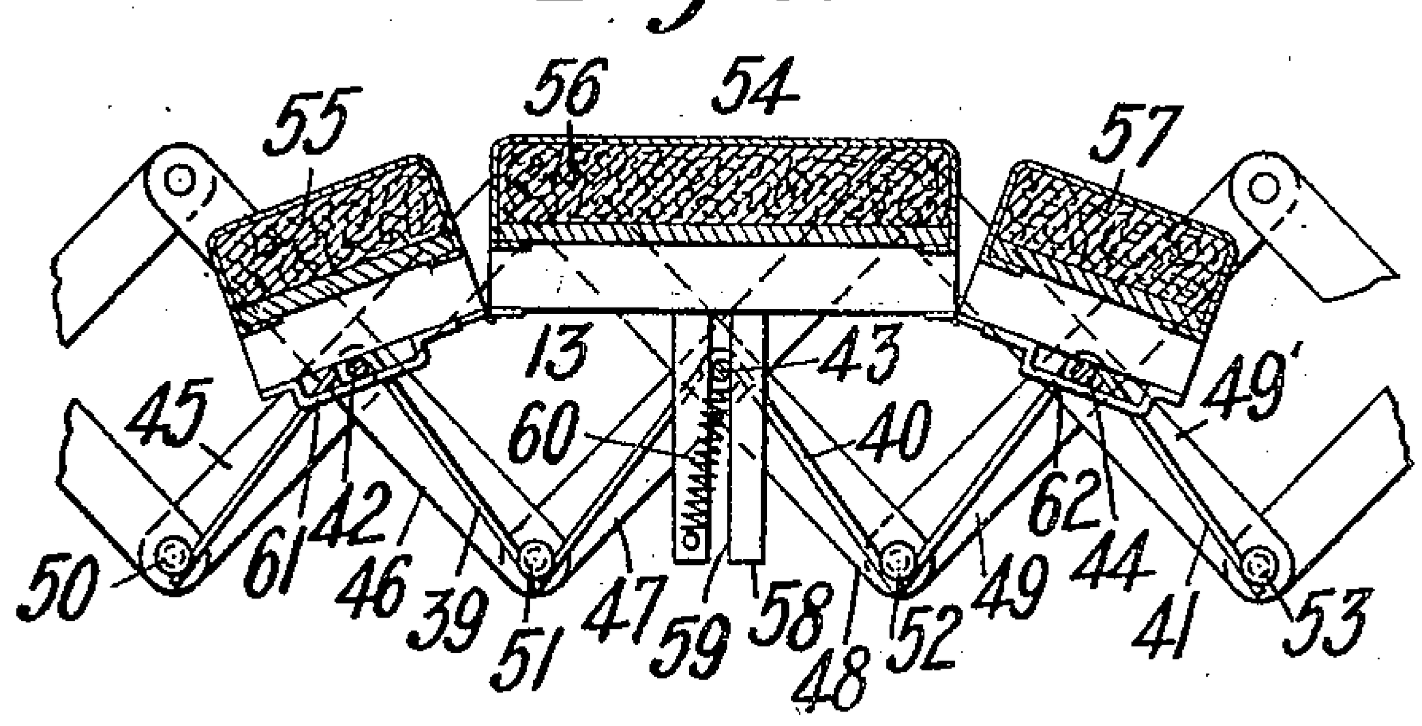



Fig. 5.

Fig. 6.



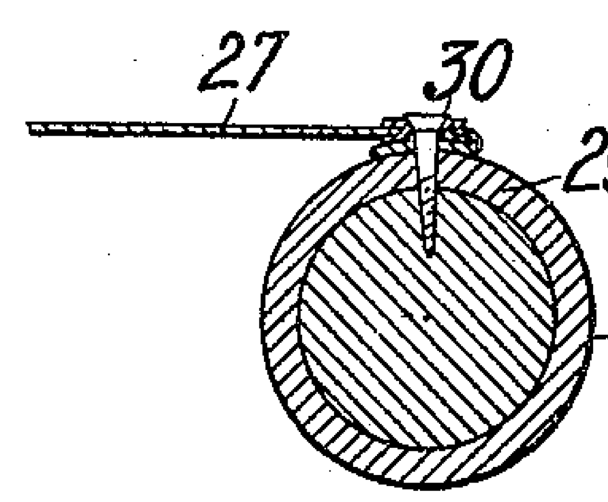




Fig. 10.

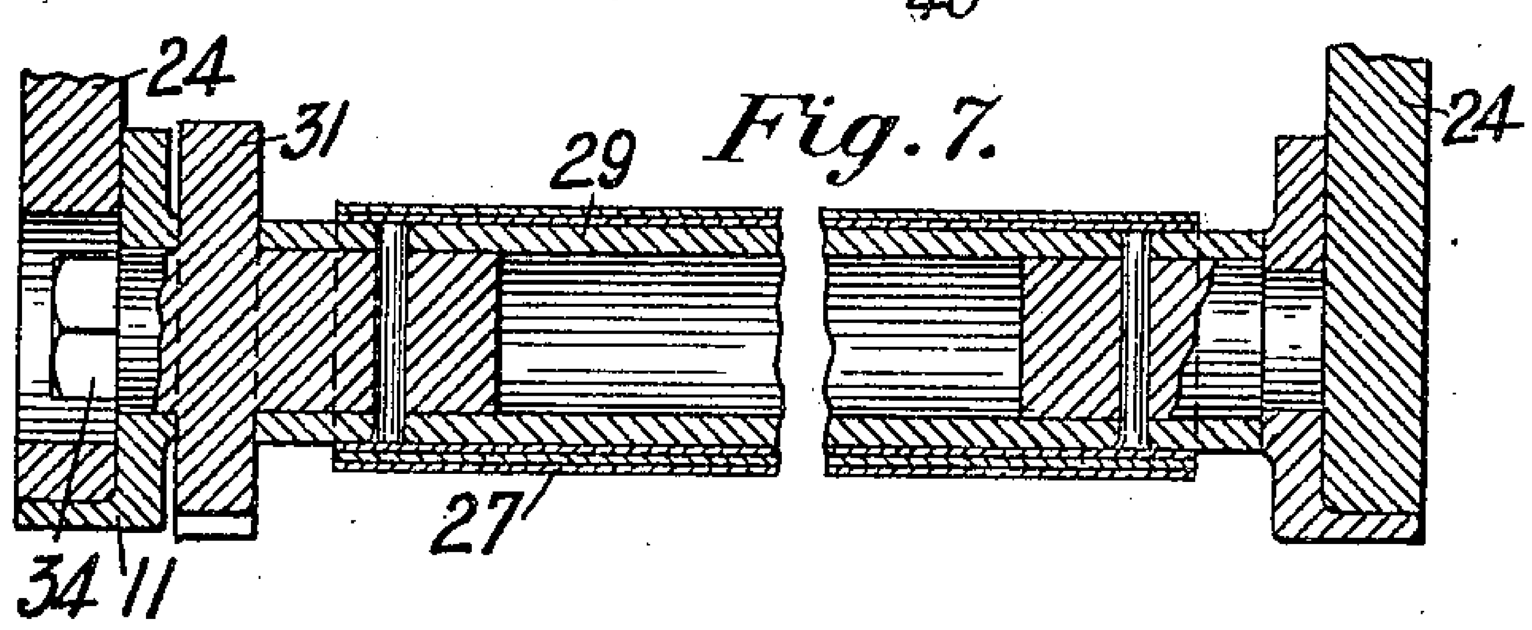



Fig. 7.

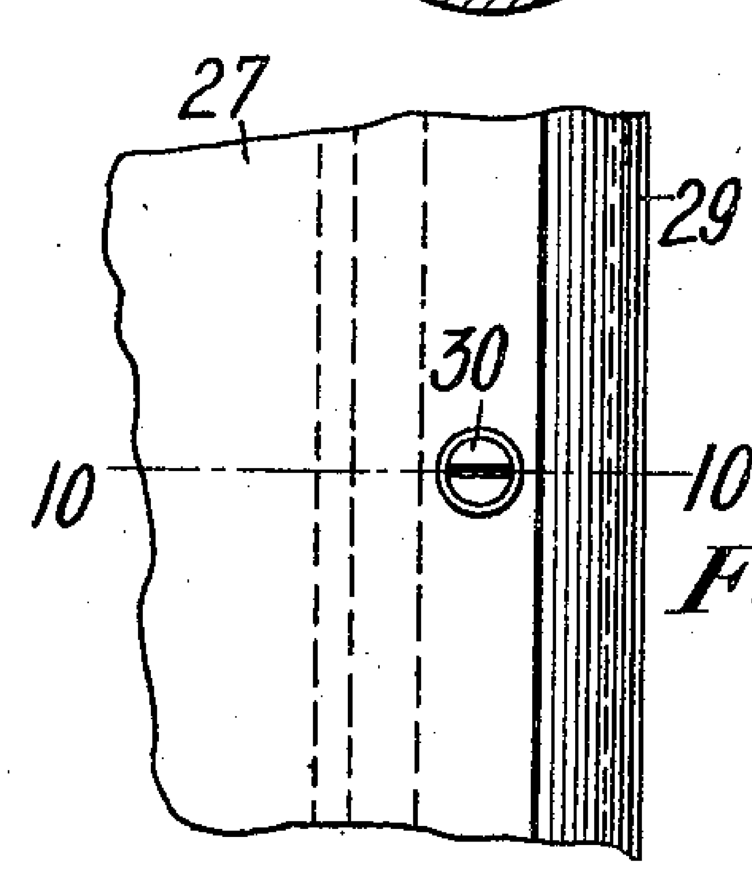



Fig. 9.

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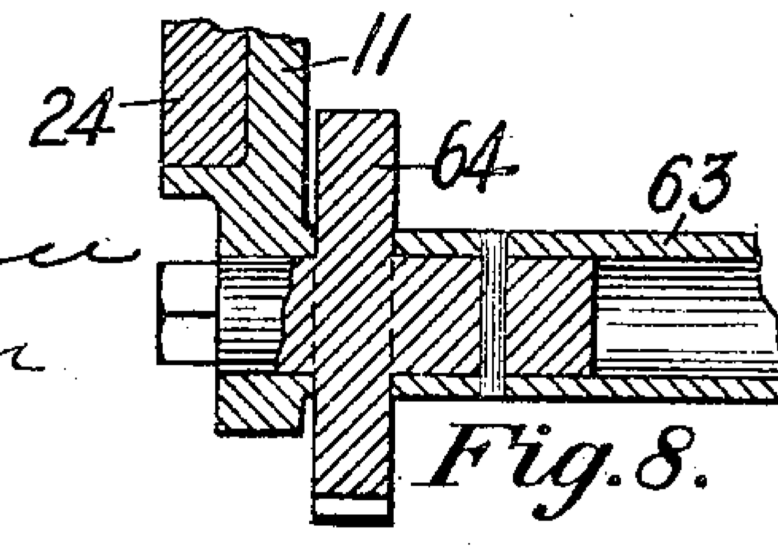


Fig. 8.

Inventor:

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# UNITED STATES PATENT OFFICE.

JOHN KIEWICZ, OF HYDE PARK, MASSACHUSETTS.

## COLLAPSIBLE COUCH-BED.

No. 887,198. Specification of Letters Patent. Patented May 12, 1908.

Application filed November 1, 1907. Serial No. 400,273.

*To all whom it may concern:*

Be it known that I, JOHN KIEWICZ, a subject of the Czar of Russia, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Collapsible Couch-Beds, of which the following is a specification.

This invention relates to improvements in folding bedsteads or couches, and the object is to provide a collapsible couch bed which when in its collapsed state will constitute a compact neat appearing chair or seat which may be used as a window seat and which can be operated with ease in expanding and collapsing it, and the object is further to provide a couch bed which will give one the maximum of comfort with a minimum of trouble in preparing it for use.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is a side elevation of my improved collapsible bedstead in its extended position. Fig. 2 is a plan of a portion of the same partly broken away to save space. Fig. 3 is an enlarged detail sectional elevation taken on line 3—3 of Fig. 2. Fig. 4 is a side elevation of the bedstead in its collapsed state arranged to be used as a window seat. Fig. 5 is an elevation viewed from the right of Fig. 4. Fig. 6 is an enlarged detail sectional elevation taken on line 6—6 of Fig. 2. Fig. 7 is an enlarged detail plan section, partly broken away, taken on line 7—7 of Fig. 5. Fig. 8 is an enlarged detail plan section taken on line 8—8 of Fig. 5. Fig. 9 is an enlarged detail plan showing the method of securing the canvas to the roll. Fig. 10 is a sectional elevation taken on line 10—10 of Fig. 9.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, a pair of posts 11, 11 and a pair of posts 12, 12 are connected by two sets or series of levers which constitute two lazy tongs 13, 13, one pair of levers 14, 14 being pivotally connected to the posts 12, 12 by pivots 15, 15 and the second pair of levers 16, 16 being both pivotally and slidably connected to the posts 12, 12 by means of pins 17, 17 fast to said levers and arranged to slide in slots 18, 18 formed in said posts. At the other end of the lazy tongs 13, 13 a pair of levers 19, 19 are pivotally connected to the posts 11, 11 by means of pivots 20, 20 while another pair of levers 21, 21 are both pivotally and slidably connected to the posts 11, 11 there being two pins 22, 22 fast to said levers and arranged to slide in slots 23, 23 formed in said posts. Thus it will be seen that the posts 11, 11 posts 12, 12, and the lazy tongs 13, 13 constitute a collapsible frame so arranged that if one pair of said posts is moved toward the other pair of said posts said frame is collapsed, as shown in Fig. 4, and the pins 17, 17 and 22, 22 move downwardly in their respective slots. Two side members 24, 24 which may be made of wood are fast to the posts 11, 11, respectively, while an end member 25 which may be made of wood extends transversely of the frame and is fast to the posts 12, 12.

The posts 12, 12 are still further connected to each other by a cross member 26 while a sheet of flexible material 27 such as canvas or the like extends across the top of the member 26 and between the members 26 and 25 and is preferably secured therebetween by means of a rod 28 which is hemmed into the end of the canvas 27 and prevents upward movement of said canvas between the members 25 and 26. The canvas 27, as shown in Figs. 9 and 10, is fast to a roll 29 in any suitable manner, such as by means of screws 30, said roll being journaled on the posts 11, 11. A ratchet 31 fast to the roll 29 engages a pawl 32 pivoted at 33 on one of the posts 11, said ratchet being provided with a hub bearing in said post and having a hexagonal end 34 on which a socket wrench or crank 35 shown in dotted lines in Figs. 1, 4 and 5 may be placed, whereby said roll may be rotated. The posts 11 extend upwardly beyond the roll 29 and secured to their upper portions is a back rest 36 which constitutes the head board of the bedstead and which is used as a back rest when the bedstead is collapsed.

A seat 37 which when the bedstead is collapsed is used to sit upon is provided with two hooks 38, 38 by means of which when the bedstead is extended, as shown in Figs. 1 and 2, said seat may be hung on the posts 12, 12 and when thus placed constitutes the foot board of the bedstead. When the pawl 32 is moved out of engagement with the ratchet 33 as hereinafter described, the lazy tongs 13, 13 are extended by means of springs

39, 39, 40, 40, and 41, 41. The springs 39, 39 surround a rod 42 the springs 40, 40 surround a rod 43, and the springs 41, 41 surround a rod 44, said rods constituting the pivots of levers 45, 45, 46, 46, 47, 47, 48, 48, 49, 49 and 49′, 49′ which are a part of the lazy tongs 13, 13. The springs 39, 39 are wound around the rod 42 and the free ends of said springs bear against pins 50, 50 and 51, 51. The springs 40, 40 are wound around the rod 43 and the free ends of said springs bear against the pins 51 51 and pins 52, 52. The springs 41, 41 are wound around the rod 44 and the free ends of said springs bear against the pins 52, 52 and against pins 53, 53. A body support 54 formed in three members 55, 56 and 57 having hinged connection with each other is supported on the rods 42, 43 and 44, said members being preferably suitably upholstered. The member 56 is provided with ears 58, 58 provided, respectively, with slots 59, 59 in which the rod 43 is located, whereby the member 56 is adapted to slide vertically.

Two springs 60, 60 are connected at one pair of ends to the rod 43 and at their other pair of ends to the ears 58, 58, respectively, so that the member 56 is thereby resiliently supported on the rod 43. The member 55 is provided with guides 61, 61 fast thereto, said guides inclosing the rod 42 while guides 62, 62 are fast to the member 57, said guides 62, 62 inclosing the rod 44. When the bedstead is collapsed, as shown in Fig. 4, the rods 42, 43 and 44 approach each other and the members 55 and 57 are folded into the position shown in Fig. 4. When the bedstead is extended, as shown in Fig. 1, with the canvas 27 stretched tight ready for use and a person is lying thereon, said canvas stretches to more or less extent and in some instances stretches so much as to occupy the position shown in dotted lines in Fig. 1 so that the middle portion of a person's body rests upon the body support 54 and said body support yields downwardly against the tension of the springs 60, 60.

A shaft 63 journaled on the posts 11, 11 has fast thereto a ratchet 64 which engages a pawl 65, whereby said shaft may be locked against rotation in one direction. A helical torsional spring 66 surrounding the shaft 63 is fast at one end to said shaft and the other end of said spring bears against a tie rod 67, said spring tending to rotate the shaft 63 clockwise, Fig. 1. Two flexible members 68, 68 fast to the shaft 63 and wound therearound are connected at their free ends to the pins 22, 22, respectively, the arrangement being such that the spring 66 acting on the shaft 63 maintains a constant tension on said chains and the pawl 65 locks the shaft 63 against rotation counterclockwise and thereby the lazy tongs 13, 13 are locked in their extended position, as shown in Fig. 1.

The general operation of extending and collapsing the bedstead hereinbefore specifically described is as follows: Assuming the parts to be in the position shown in Fig. 4, the seat 37 is first lifted and placed in the position shown in Fig. 1, the crank 35 is then placed onto the end 34 of the shaft 29 and the pawl 32 is withdrawn from engagement with the ratchet 31. The springs 39, 39, 40, 40 and 41, 41 at once cause the lazy tongs 13, 13 to extend and the operator by grasping the handle of the crank 35 checks and controls the opening movement of the bedstead. As the parts move into the position shown in Fig. 1, the canvas 27 unwinds from the roll 29. Should the springs 39, 39, 40, 40 and 41, 41 fail to extend the lazy tongs 13, 13 to the fullest extent which is desired, the operator places the crank 35 on the end of the shaft 63 and rotates said shaft clockwise so that the pins 22, 22 are thereby drawn upwardly and said lazy tongs are thus extended to the proper distance. The operator then by means of the crank 35 rotates the shaft 29 clockwise, Fig. 1, and as the pawl 65 acts to lock the frame and prevent it from collapsing the canvas 27 is thereby stretched and ready for use. When it is desired to collapse the bedstead, the operator lifts the pawl 65 out of engagement with the ratchet 64 and by rotating the shaft 29 clockwise collapses the bedstead into the position shown in Fig. 4 and the seat 37 is then returned into its horizontal position, as shown in Fig. 4.

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

1. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to said frame and lying in a horizontal position, and a body support located beneath said sheet of material and supported on said frame.

2. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to said frame, and lying in a horizontal position, and a collapsible body support located beneath said sheet of material and supported on said frame.

3. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to said frame and lying in a horizontal position, a body support located beneath said sheet of material, and a spring on which said body support is supported.

4. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to said frame and lying in a horizontal position, a plurality of rods connecting said lazy tongs and extending

transversely thereof, and a body support located beneath said sheet of material and supported on said rods.

5. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to said frame and lying in a horizontal position, three parallel rods connecting said lazy tongs and extending transversely thereof, and a body support formed in three parts pivotally connected together and supported on said rods, respectively.

6. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to one end of said frame, a roll on which said flexible material is arranged to be wound, said roll being rotatably supported on said frame, a shaft rotatably supported on said frame, means operatively connecting said shaft to one pair of said levers, and means to lock said shaft against rotation, whereby said frame may be locked in its extended state.

7. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to one end of said frame, a roll on which said flexible material is arranged to be wound, said roll being rotatably supported on said frame, a shaft rotatably supported on said frame, means operatively connecting said shaft to one pair of said levers, means to lock said shaft against rotation, whereby said frame may be locked in its extended state, and means to lock said roll against rotation.

8. In a folding bedstead, two sets of levers constituting lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to one end of said frame, a roll on which said flexible material is arranged to be wound, said roll being rotatably supported on said frame, a shaft rotatably supported on said frame, a flexible member fast to one of said levers and wound around said shaft, means to lock said roll against rotation, and means to lock said shaft against rotation.

9. In a folding bedstead, two sets of levers constituting lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to one end of said frame, a roll on which said flexible material is arranged to be wound, said roll being rotatably supported on said frame, means to lock said roll against rotation, a shaft rotatably supported on said frame, a pair of flexible members connected to a pair of said levers and wound around said shaft, a spring arranged to rotate said shaft in one direction, and means to lock said shaft against rotation in the opposite direction.

10. In a folding bedstead, two sets of levers constituting two lazy tongs connected to form a collapsible frame, a sheet of flexible material connected to one end of said frame, a roll on which said flexible material is arranged to be wound, said roll being rotatably supported on said frame, means to lock said roll against rotation, a shaft rotatably supported on said frame, a pair of flexible members connected to a pair of said levers and wound around said shaft, a spring arranged to rotate said shaft in one direction, means to lock said shaft against rotation in the opposite direction, a shaft rotatably supported on said second pair of posts, a pair of flexible members connected to said second pair of levers and wound around said shaft, a spring arranged to rotate said shaft in one direction, whereby said members are maintained under tension, and means for locking said shaft against rotation in the opposite direction.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN KIEWICZ.

Witnesses:
Louis A. Jones,
Sadie V. McCarthy.