A. C. KLOPPING.

BED DAVENPORT.

APPLICATION FILED APR. 9, 1913.

1,143,974.

Patented June 22, 1915.

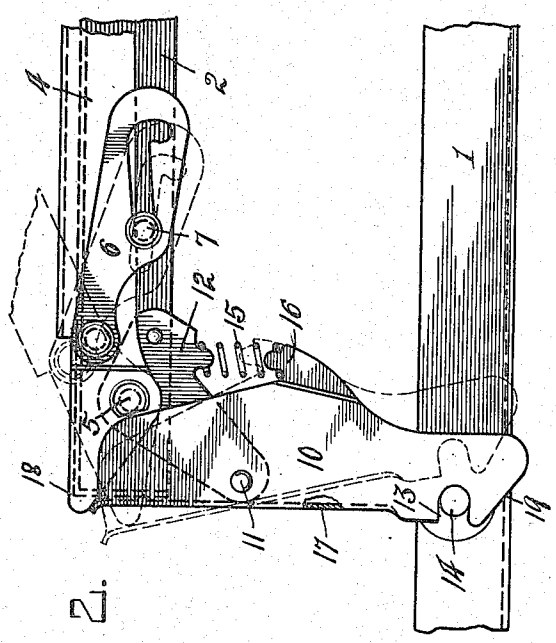


Fig. 2.

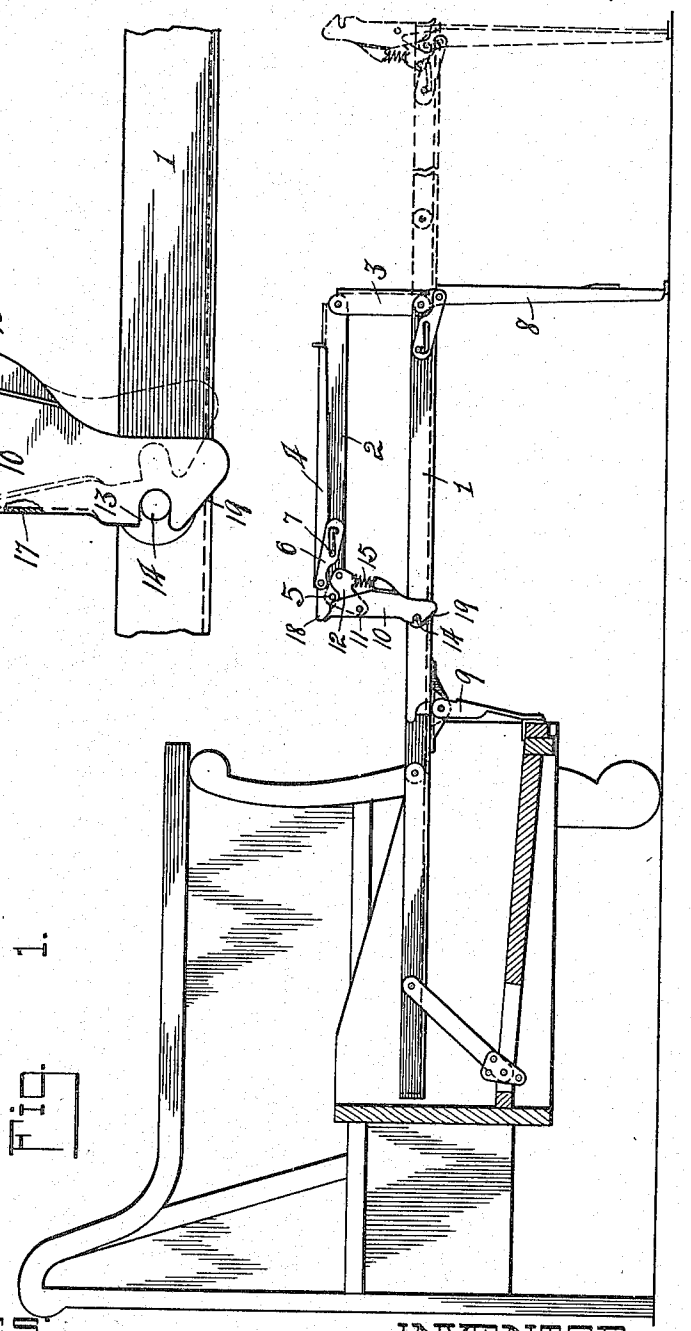


Fig. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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BED-DAVENPORT.

1,143,974. Specification of Letters Patent. Patented June 22, 1915.

Application filed April 9, 1913. Serial No. 759,835.

To all whom it may concern:

Be it known that I, ADOLPH C. KLOPPING, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Bed-Davenport; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates particularly to means for locking the sections of folding bed davenport frames in folded form, but is not restricted to such use as it may be used in any connection for which it may be adapted or appropriate.

The object of my invention is the provision of improved means for locking two bed frame sections together in spaced folded relation, and which is automatically operable by the unfolding movement of a leg pivotally carried by one frame section to release the locking connection of the sections, whereby to enhance the practicability and commercial value of apparatus of this class.

The invention is fully described in the following specification, and while, in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation of a bed-frame partly unfolded and equipped with the invention, and with the complete unfolded position thereof shown in dotted lines, and Fig. 2 is an enlarged side elevation of the invention in section locking position, with the released position thereof shown in dotted lines.

Referring to the drawings, 1 and 2 designate two adjoining sections of a bed-frame, which, in the present instance, are pivotally connected at each side by a link 3 to permit such sections to be folded one over the other with the adjoining ends spaced by the links 3, as shown, to allow for the thickness of a mattress disposed on the bedframe and foldable therewith. A supporting leg 4 is pivoted to each of the outer corner portions of the frame section 2, as at 5, for rearward folding movements against the side thereon, and, when in upright or frame supporting position, is braced by a link-member 6, which is pivoted at one end to the leg and has its other end portion provided with a hook-shaped slot in which a pin 7 on the frame section works. The outer end of the frame section 1 is supported at its sides in a similar manner by legs 8, and its inner or opposite end is supported by a supporting frame 9, or in any other suitable manner, as is well understood in the art.

A catch-member 10 is pivoted to each outer corner portion of the frame-section 2 for rocking movements longitudinally thereof, being pivoted, in the present instance, as at 11, to a plate or part 12, which projects downward from the section side when such section is in its folded position relative to the section 1. When the sections are in the folded relation shown, each catch-member 10 (it being understood that one is disposed at each side of the frame) depends or hangs in suspended manner from the section 2 and has a notch 13 in the front or outer edge of its nose portion in engagement with a stud 14 on the side of the frame section 1, which stud coöperates with the catch member to hold the sections in rigid spaced relation.

A coiled compression spring 15 is disposed between a spur or projection 16 on the inner edge of the catch-member 10 and a registering portion of the part 12 to yieldingly hold the catch-member in engagement with the stud 14. The inner end of the catch member 10 is extended beyond its pivot and is provided at its outer edge with a transversely projecting flange 17, which coacts with the outer end of the bed frame section 2 to limit the spring influenced movements of the catch member 10 when not in engagement with the stud 14. The inner end of the leg 4 projects beyond its pivot, as indicated at 18, in position to coact with the inner end portion of the catch-member flange 17 to effect a stud-releasing movement of the catch-member when the leg is moved from its folded position relative to the section 2, as shown by the dotted line positions of the leg and catch-member in Fig. 2.

The nose portion of the catch-member 10 is beveled or tapered, as at 19, to facilitate an automatic engagement of the catch mem-

ber with the stud 14 upon a lowering of the catch-member with the section 2 into stud-engaging position.

The operation of my improved section-locking and spacing means is as follows: Upon a folding of the outer section 2 over the inner section 1 of the bed frame the catch-members 10 lower into position for their tapered ends to coact with the respective studs 14 and a continued lowering of the catch-members in such contact causes a retracting movement of the members against the tension of the spring 15 until the members have lowered sufficiently to place the stud-receiving notches thereof into register with the studs 14, the springs then acting to force the members into notched engagement with the studs, as is apparent. The studs 14 coact with the opposite walls of the member notches to prevent a longitudinal movement in either direction of the members relative to the frame section 1, thus retaining the two sections in rigid spaced relation. The legs 4 may be folded against the section 2 either before or after the engagement of the members 10 with the studs 14, but it is preferable to first fold the legs against the frame section as a movement of the legs from upright to folded position causes a momentary stud-releasing movement of the catch-members. When it is desired to unfold the frame sections the operator grasps the legs 4 and imparts sufficient unfolding movements thereto relative to the section 2 to cause their inner ends 18 to act on the flanges 17 of the catch-members to retract the notched ends of the members from engagement with the studs 14, thus permitting the outer frame section to be unfolded from over the section 1.

It is evident that this construction of section locking means is entirely automatic in its engaging action upon a relative folding movement of the sections 1 and 2, and that its releasing movements are controlled by unfolding movements of the legs 4, thus providing a locking means which is exceedingly simple to operate and requires no attention on the part of the operator. It is also evident that the yielding pressure of the inner flanged end of the catch member 10 on the projected inner end 18 of the leg 4 tends to retain such leg in its folded position, as shown in the drawings, until an unfolding stress is applied thereto, thus preventing a free pivotal movement of the leg from folded position when the frame sections 1 and 2 are inverted from the position shown upon a further folding action of the bed frame.

I wish it understood that my invention is not limited to any specific construction or arrangement of the parts except in so far as such limitations are specified in the claims.

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

1. In combination, a set of foldable hinged sections, one section having a projection, a latch member pivoted to the other section and operable to engage said part and to cooperate therewith to firmly space the sections when in folded position, means urging an engagement of the member with said projection when in engaging position, and a leg pivoted to the section carrying said member and having its inner end portion extended and operable to coact with a portion of said member to move it from engagement with said part when initial unfolding movements are imparted to the leg.

2. In combination, a bed frame having outer and inner foldable hinged sections, a leg pivoted to the outer section, and a pivoted catch-member carried by the outer section and operable to have locking engagement with a part of the inner section when the outer section is folded thereover, means urging a movement of said member in one direction, said leg and member having their inner end portions in yielding contact whereby a movement of the leg from folded position imparts a releasing movement to said member.

3. In combination, a bed frame having an outer and inner section foldable one over the other, a leg pivoted to the outer section and having a projection at its inner end, a catch-member pivotally carried by the outer section and normally standing in upright position relative thereto, said member being adapted to have locking engagement with a part of the inner section when the sections are in folded position and having a flange projecting laterally from one edge thereof in the path of oscillatory movements of the inner end projection of said leg whereby a movement of the leg from folded position will communicate a section-releasing movement to said member, and means influencing a movement of the catch-member in one direction.

4. In combination, a plurality of foldable bed frame sections, a leg pivoted to one of said sections, a section locking device movably carried by the section with said leg and controlled by movements of the leg, and means acting on said device to cause it to yieldingly retain the leg in either set-up or folded relation to the carrying section.

5. In combination, a plurality of foldable bed frame sections, a leg pivoted to one of said sections, a catch member yieldingly carried by one section for yielding movements relative thereto and adapted to engage a part of another section to retain the sections in folded relation, and means acting through said catch member to yieldingly retain the leg in folded position relative to its carrying section.

6. In combination, a plurality of foldable bed frame sections, a leg pivoted to one of said sections, and a catch member carried by the section with said leg for pivotal movements relative thereto and operable to have catch engagement with a part of another of said sections, means urging a movement of said member in one direction, said catch member and leg having parts thereof in camming coaction whereby the catch member yieldingly acts on the leg when in folded position to retain it in such position and a movement of the leg from folded position imparts unlocking movements to the catch member.

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

ADOLPH C. KLOPPING.

Witnesses:
C. W. OWEN,
F. E. AUL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."