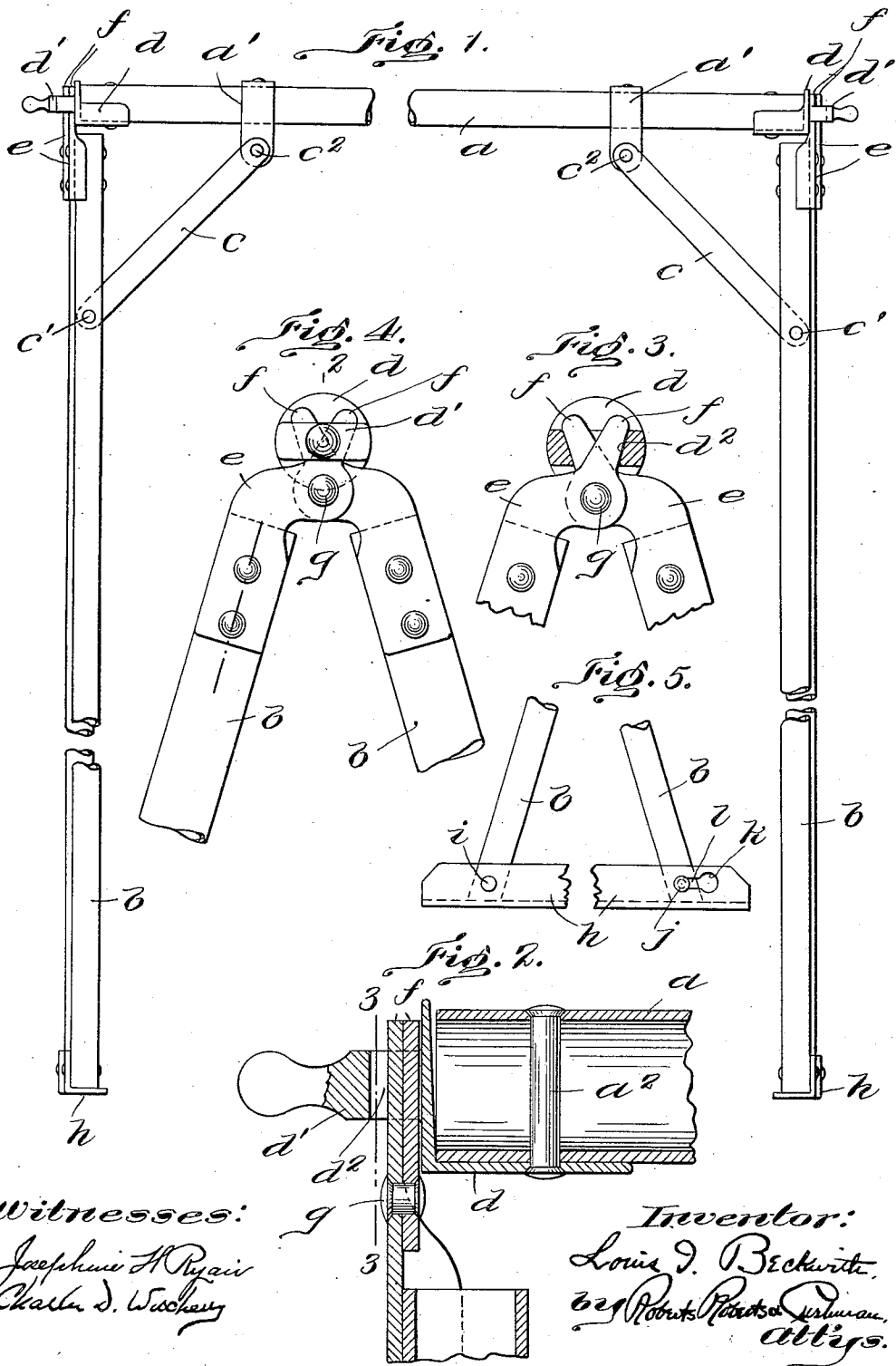


L. I. BECKWITH.
 FOLDING FRAME.
 APPLICATION FILED MAR. 19, 1913.

1,069,102.

Patented Aug. 5, 1913.



Witnesses:
 Joseph H. Ryan
 Charles D. Wickersham

Inventor:
 Louis I. Beckwith,
 by Robert Parsons, Attorney.

UNITED STATES PATENT OFFICE.

LOUIS I. BECKWITH, OF EVERETT, MASSACHUSETTS.

FOLDING FRAME.

1,069,102.

Specification of Letters Patent.

Patented Aug. 5, 1913.

Application filed March 19, 1913. Serial No. 755,281.

To all whom it may concern:

Be it known that I, LOUIS I. BECKWITH, a citizen of the United States, and resident of Everett, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Folding Frames, of which the following is a specification.

This invention relates to folding frames or knock down frames of the kind used for hammock supports and for similar purposes, and consists essentially in the novel and improved construction of the joint or coupling between the top bar and the legs, affording a structure whose parts are few and simple, strong and rigid, and which can be easily set up or knocked down without the manipulation of screws, bolts or other fastening devices usually employed in such frames.

In the accompanying drawings, which illustrate an embodiment of the invention,—Figure 1 is a side elevation, partly broken away, of a folding frame suitable for a hammock support, containing the invention; Fig. 2 is an enlarged, vertical section through one end of said frame; Fig. 3 is a cross section on line 3—3 of Fig. 2; Fig. 4 is an end elevation of the top part of said frame; and Fig. 5 is an end elevation, partly broken away, showing the construction of the bottom of the frame.

The top bar a and the legs b may be of ordinary construction and as herein shown consist of tubular iron. Each leg is pivotally connected with the top bar by a brace or link c , which is preferably permanently pivoted at one end to the leg at c' , and at the other end at c'' to a yoke a' fastened to the top bar a . These links c serve as braces to stiffen the structure when the frame is set up in operative position, and as the pivotal connections on which the legs and the top bar are folded together when the frame is knocked down.

At each end of the top bar is a casting d fastened to the top bar by a rivet a^2 and made with a lug d' projecting lengthwise of the bar a , through which there is the aperture d^2 constituting a locking socket with its entrance opening on the under side. The outer part of the lug d' extending across outside the socket d^2 , constitutes a stop to prevent the locking fingers, presently to be described, from becoming dislodged from the socket lengthwise of the top bar.

The socket d^2 tapers from its upper side downwardly to a restricted throat or opening at the under side of the casting as best shown in Fig. 3.

At the top of each leg b is a casting or pressed steel member e , riveted to the end of the leg and made with an upwardly extending locking projection or finger f . Said castings or pressed steel members e are oppositely curved or offset as is best shown in Fig. 3 and 4, to permit the legs b to be folded together on the pivot g by which the two members e of each pair are connected.

To set up or assemble the device, the legs b of each pair are folded together, thereby folding the fingers f, f together, so that one will overlie the other. The two fingers f, f thus closed together may be passed through the restricted opening at the under side of the socket d^2 into said socket. The legs b are then again swung apart thereby opening or expanding the fingers or projections f, f in an angular relation as shown in Figs. 3 and 4, in which position they engage the tapering walls of the socket above the restricted throat, securely locking the legs to the top bar. To knock down the frame all that is necessary is to close together the pivoted fingers f, f , which may be termed the locking member, and withdraw them while in closed position from the socket. The pivoted fingers f, f thus constitute a locking member, which may be contracted to be inserted into or withdrawn from the narrow entrance of its socket member, or expanded within the socket by swinging the legs on their pivot.

When the frame is set up, the expansible and contractible locking member is held in expanded position within the socket d^2 by the bar h between the bottom ends of the legs. The bar h which is preferably of angle iron, has its horizontal web extending under the ends of the legs, and its vertical web permanently pivoted near the end of one leg by a rivet i , (Fig. 5) and separably attached near its other end to the other leg, by a headed stud j , which passes through an eye k formed in the vertical web of angle bar h , the shank of the stud j then slipping into slot l opening from the eye k . The eye k is placed at such distance from the pivot i of the opposite leg that in order to insert the stud j into eye k the legs must be bent or sprung apart a little, so that when re-

leased the legs will spring back until the stud assumes the position in slot *l*, shown in Fig. 5, thereby holding the legs spread at their lower ends and the locking member at the top of the legs in expanded position. When the frame is knocked down the bar *h* may be folded upon its pivot *i*.

I claim:

1. A folding frame comprising a top bar provided at its end with a socket, a pair of supporting legs pivoted at the top, and socket engaging means at the top of said pair of legs actuated by the relative movement of said legs and cooperating with said socket for locking engagement therewith when said legs are unfolded.

2. A folding frame comprising a top bar provided at its end with a socket, a pair of supporting legs pivoted at the top, socket engaging means at the top of said pair of legs actuated by the relative movement of said legs and cooperating with said socket for locking engagement therewith when said legs are unfolded, and folding means to hold said legs in unfolded position.

3. A folding frame comprising a top bar provided at its end with a socket having a restricted opening, a pair of supporting legs pivoted at the top, and socket engaging means at the top of said pair of legs actuated by the relative movement of said legs adapted to pass through said restricted opening into said socket when the legs are folded together and cooperating with said socket for locking engagement therewith when said legs are unfolded.

4. A folding frame comprising a top bar provided at its end with a socket, a pair of supporting legs pivoted at the top, each leg terminating in a socket engaging finger cooperating with said socket for locking en-

gagement therewith when said legs are unfolded.

5. A folding frame comprising a top bar provided at its end with a socket, a pair of supporting legs pivoted at the top, each leg terminating in a socket engaging finger cooperating with said socket for locking engagement therewith when said legs are unfolded, said socket being open at the under side and having an end stop to prevent the dislodgment of said fingers lengthwise of the top bar.

6. A folding frame comprising a top bar having a casting secured at each end, each such casting having a socket open at its under side and an end stop, and a pair of legs for each end of the frame, each pair being pivoted together near their tops, and a socket engaging finger at the top of each leg, the socket engaging fingers at the top of each pair of legs being adapted when in closed position to pass into said socket, and when in open position to engage said socket to lock the legs to the top bar.

7. A separate coupling for a folding frame comprising a socket member having a downwardly opening socket tapering from the top to a restricted throat at the under side, and a locking member comprising two fingers pivoted to each other, adapted when closed together to pass through said restricted throat, and when opened apart in angular relation to engage the tapering walls of said socket and lock said members together.

Signed by me at Boston, Massachusetts, this 12th day of February, 1913.

LOUIS I. BECKWITH.

Witnesses:

ROBERT CUSHMAN,
CHARLES D. WOODBERRY.