

(No Model.)

2 Sheets—Sheet 1.

D. C. STORR.  
FOLDING COUCH BED.

No. 596,637.

Patented Jan. 4, 1898.

Fig. 1.

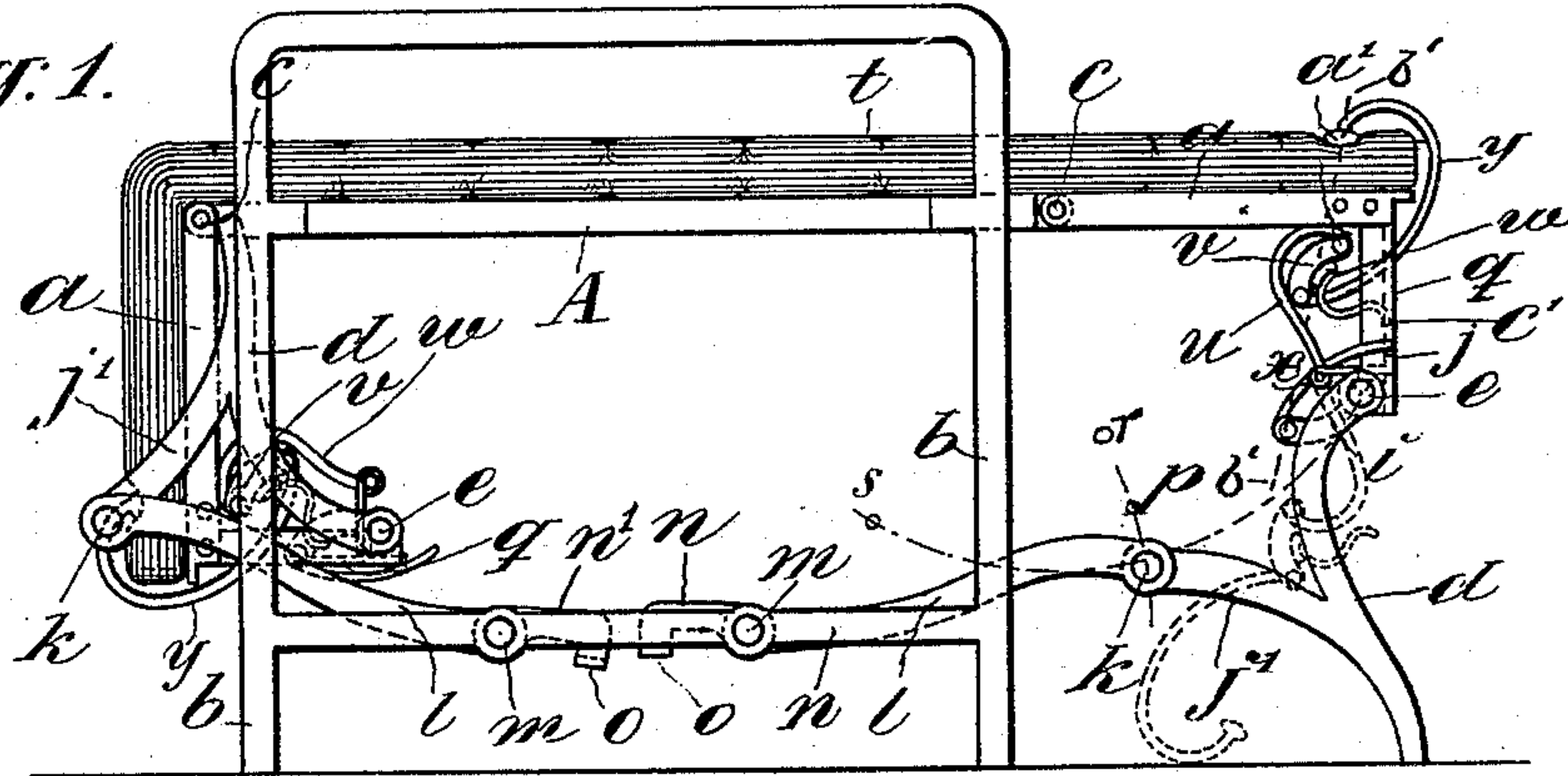


Fig. 3.

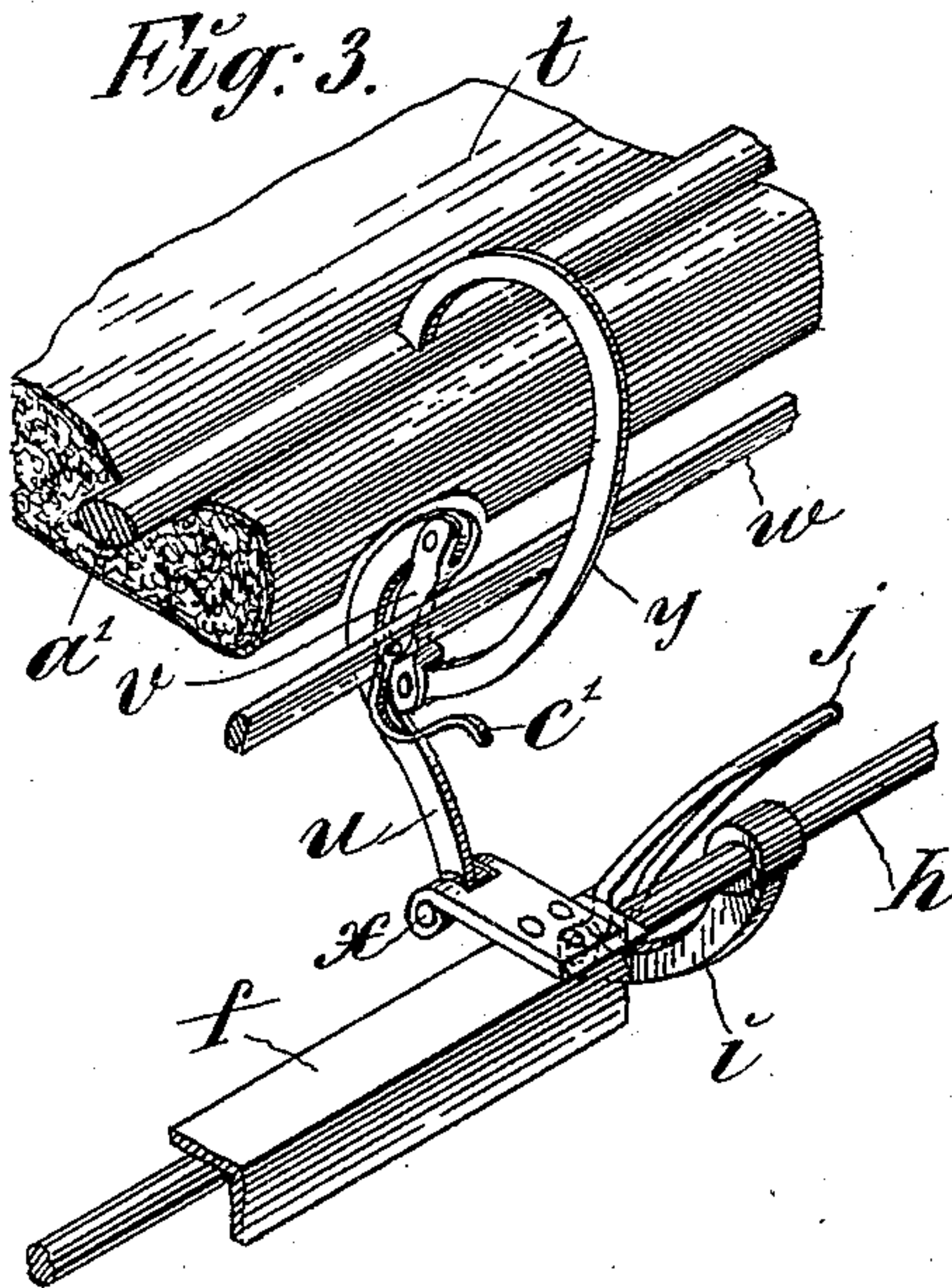
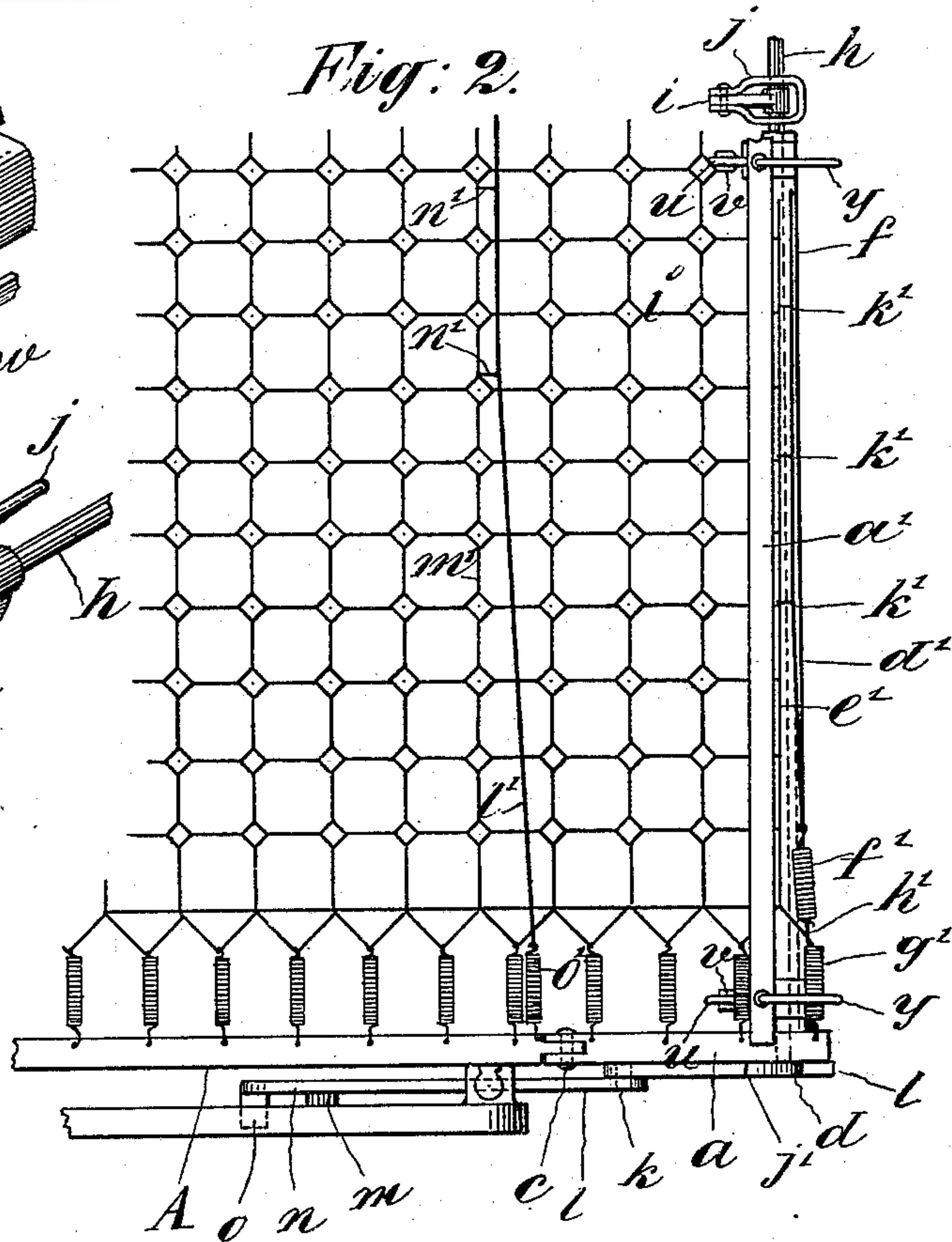


Fig. 2.



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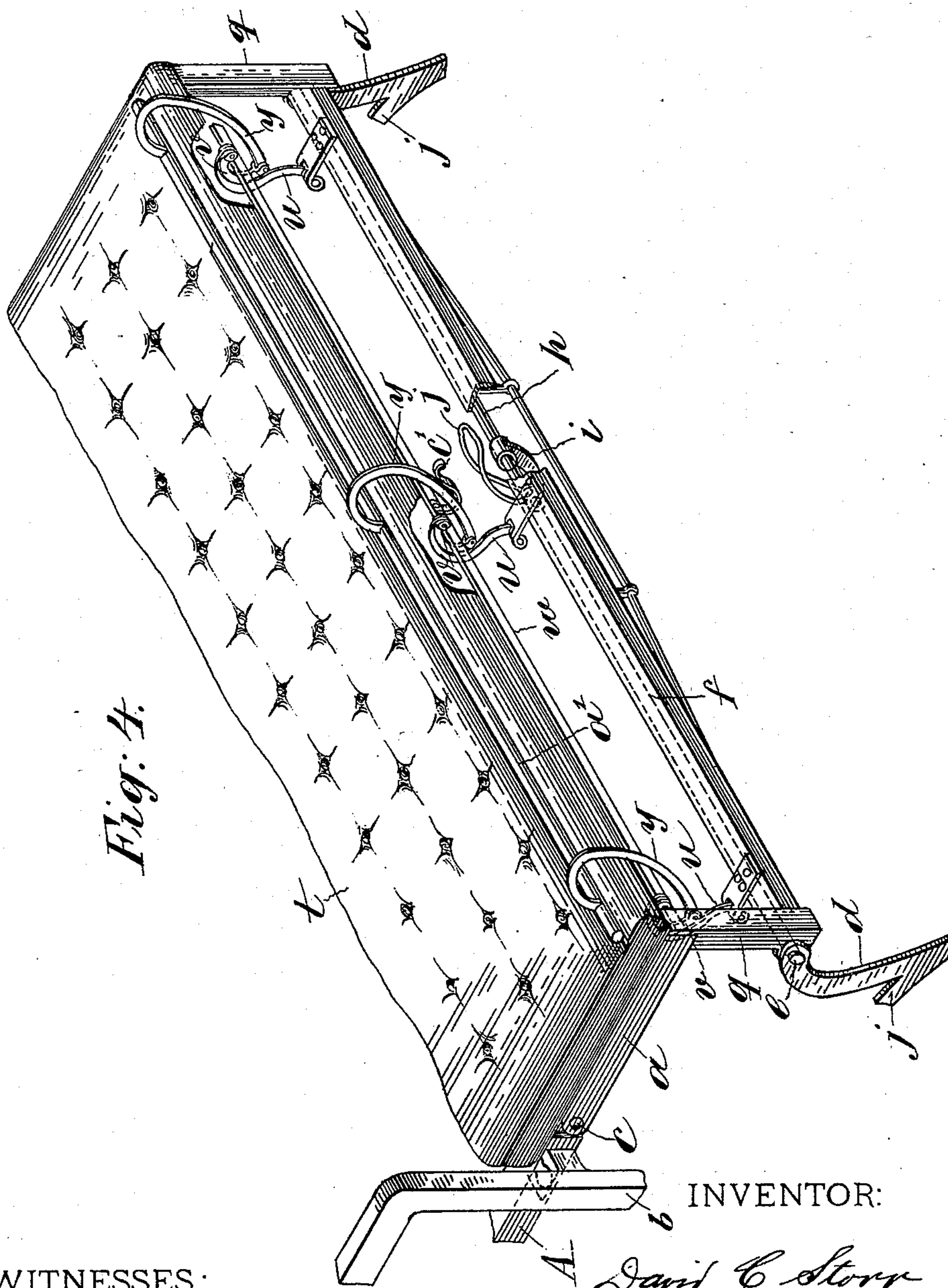
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2 Sheets—Sheet 2.

No. 596,637.

Patented Jan. 4, 1898.



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# UNITED STATES PATENT OFFICE.

DAVID C. STORR, OF NEW YORK, N. Y.

## FOLDING COUCH-BED.

SPECIFICATION forming part of Letters Patent No. 596,637, dated January 4, 1898.

Application filed March 11, 1897. Serial No. 626,967. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID C. STORR, a citizen of the United States, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in Folding Couch-Beds; 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.

My invention consists of improvements in the construction and arrangement of the folding legs for supporting the wings, whereby the construction is simplified and operation is rendered more satisfactory; and it also consists of like improvements in the apparatus for binding the edges of the mattress to the wings when they are to be folded for using the bed as a couch, as hereinafter described; reference being made to the accompanying drawings, in which—

Figure 1 is an end elevation of my improved couch-bed with the wing of one side set up for use as a bed and the wing of the other side folded down as for a couch. Fig. 2 is a plan view of part of the couch-bed without the mattress. Fig. 3 is a detail in perspective view. Fig. 4 is a perspective view showing one of the wings set up for use as a bed in full length.

A represents the end of the middle portion of the bed-frame standing on fixed legs *b*.

*a* represents ends of the wing-frames, which are jointed to the sides of the middle portion at *c* to fold up or down, according as the parts are to be adjusted for a bed or a couch.

The outer supports of the wing-frames consist of legs *d*, pivoted at *e* under the dropped side rails *f* of the wing-frames, which are mounted lower than the ends *a* on standards *g*, projecting downward from said ends, the legs being keyed fast to a rocking shaft *h*, extending from end to end of the wings, and at the middle, or thereabout, having the short rigid arm *i* and the pull-handle *j*, jointed to said arm, for use in swinging the legs inward in the first part of the movement for folding the wings down, this being accomplished by pulling outward on the handle, which being located above the shaft turns said shaft so as to swing the lower ends of the legs inward.

The legs *d* each have an arm *j'*, reaching

under the bed and jointed at *k*, with a lever *l*, pivoted at *m* to a cross-bar *n*, connecting the two legs *b* of the middle portion of the bed, and having a short arm *n'*, extending beyond the pivot and terminating in a downwardly and laterally projecting hook *o*, reaching under the cross-bar for a stop to limit the downward movement of the long arm of said lever *l* when the wing is folded up, as at the right-hand side of Fig. 1, and thereby lock the legs *d* in the right position for supporting the upfolded wing, the legs being secured against being thrust backward by joints *k* falling below the right line in which joints *m* and *e* lie. On the left-hand side of Fig. 1 the wing is represented as folded down. It will be seen that the legs *d* of that side are inverted, and the lever *l* is nearly in the same position as when the wing is folded up, the legs being also transferred under the middle portion of the bed, or mainly so. In the operation whereby the legs *d* are so disposed pulling on the handle *j* first thrusts the joints *k* upward along the dotted line *p* to the point *r*, or thereabout, and swings the lower ends of legs *d* inward past the vertical plane of said pivots, slightly raising the outer edge of the wing. Then the wing falls and as the pivots *e* go to points *s*, turning on pivots *c*, the legs swing over, as shown. Lifting the wing up again returns the legs *d* to the positions for supporting it in the upfolded position, as represented at the right hand of Fig. 1.

To confine the mattress *t* and its cover close on the wing-frame when folded down, a binder is provided, consisting of a bar *a'*, adapted to bear along the upper side of the mattress near the edge and being coupled near its ends and preferably at or near the middle also to the side rail *f* by two or more pairs of curved bars *u* and *y* and a short link *v*, the lower bars *u* being pivoted to said bar *f* at *x* and the links *v* of the several coupling devices being connected to a rocking bar *w*, to which a handle *c'* is attached for actuating the couplings together. It will be seen that the bars *y* are suspended by links *v* from the bar *w* in such a way that when the bar *a'* is swung up on the mattress downward pressure on the handle *c'* swings the pivots of links *v*, with the bars *u* and *y*, across the line *b'*, Fig. 1, in which the bar *a'* and pivots *x* lie, so as to lock the



binder in position, and upward pressure on said lever unlocks the binder, which is then swung down under the wing, as indicated in dotted lines, to be out of the way while the wing is up in the position for use.

The edges of the woven-wire web *i'*, on which the mattress is supported, are reinforced by a strong tension-wire *d'* in addition to the outer wire *e'* of the web, said wire connected to others at intervals, as at *k'*, to uphold the edge to a greater extent against sagging when the occupant lies or sits near or on the edge, said wire *d'* having its end springs *f'* arranged in line with the outermost springs *g'* of the wire web, the connecting-wire *h'* of said springs being extended through springs *g'* for connection with the frame to avoid further outward extension, and the said web is also reinforced in similar manner and for the same purpose by a wire *l'* where the web folds when the wings are turned down, said wire being connected to the wire *m'*, as at *n'*, and its spring *o'* being located in the range of the springs *g'*.

I claim—

1. In a folding couch-bed the combination of a folding wing, a rock-shaft carried on the wing, wing-supporting legs attached to said rock-shaft, an inwardly-projecting arm attached to each leg, cross-bar at each end of the middle bed-frame, and a lever pivoted to said cross-bar, with its long arm connected to the inwardly-projecting arm of a wing-supporting leg, and its short arm having a stop-hook engaging the under side of the cross-bar, said rock-shaft having the arm and handle for turning it substantially as described.

2. In a folding couch-bed, the combination of a folding wing having a dropped side rail, a rock-shaft carried on said dropped side rail, wing-supporting legs attached to said rock-shaft, an inwardly-projecting arm attached to each leg, cross-bar at each end of the middle

bed-frame, and a lever pivoted to said cross-bar with its long arm connected to the inwardly-projecting arm of a wing-supporting leg, and a short arm having a stop-hook engaging the under side of the cross-bar said rock-shaft having the arm and handle for turning it substantially as described.

3. In a folding couch-bed, the combination with a folding wing-frame, of a binder for the mattress consisting of upper and lower curved bars, the lower bars being pivoted to a support under the wing, as the dropped side bar, and the upper bars carrying a binder-rod in the upper ends, said upper and lower bars being coupled together by the intermediate links and the rocking bar, and said rocking bar having a lever-handle for turning it substantially as described.

4. The combination with the outer edges of the mattress-supporting wire web, of the reinforcing tension-wires and their springs, said springs being in line with the outermost springs of the wire web and their connecting-wires extended through said outermost springs of the wire web, substantially as described.

5. The combination with the mattress-supporting wire web of the reinforcing tension-wires connected in said web along the folding-line and connected to the wire web at intervals along said web, and the springs of said tension-wires also located in the range of the outermost springs of the wire web and with their connecting-wires extending through said springs of the wire web substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID C. STORR.

Witnesses:

W. J. MORGAN,  
GUSTAF SJOSTROM.