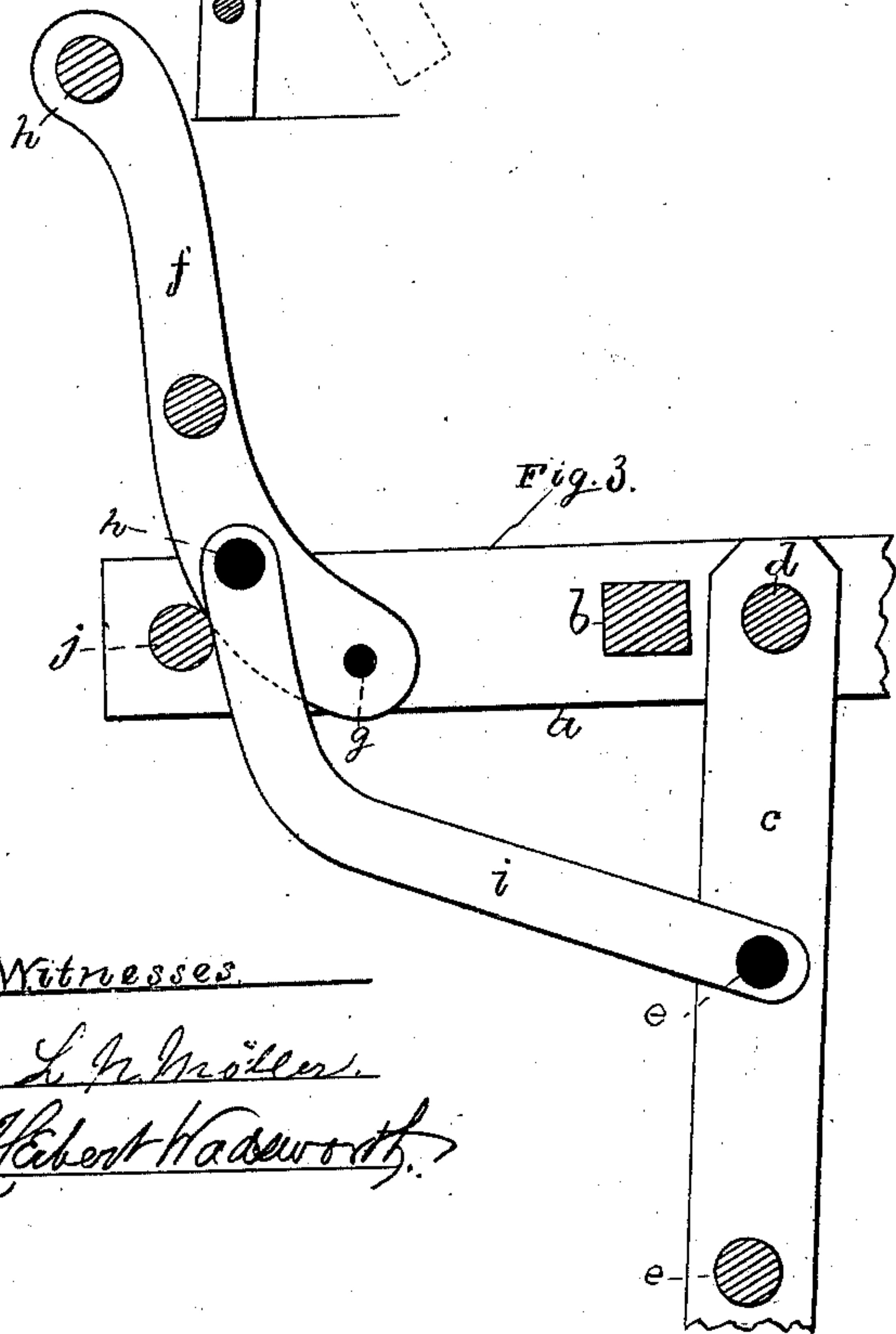
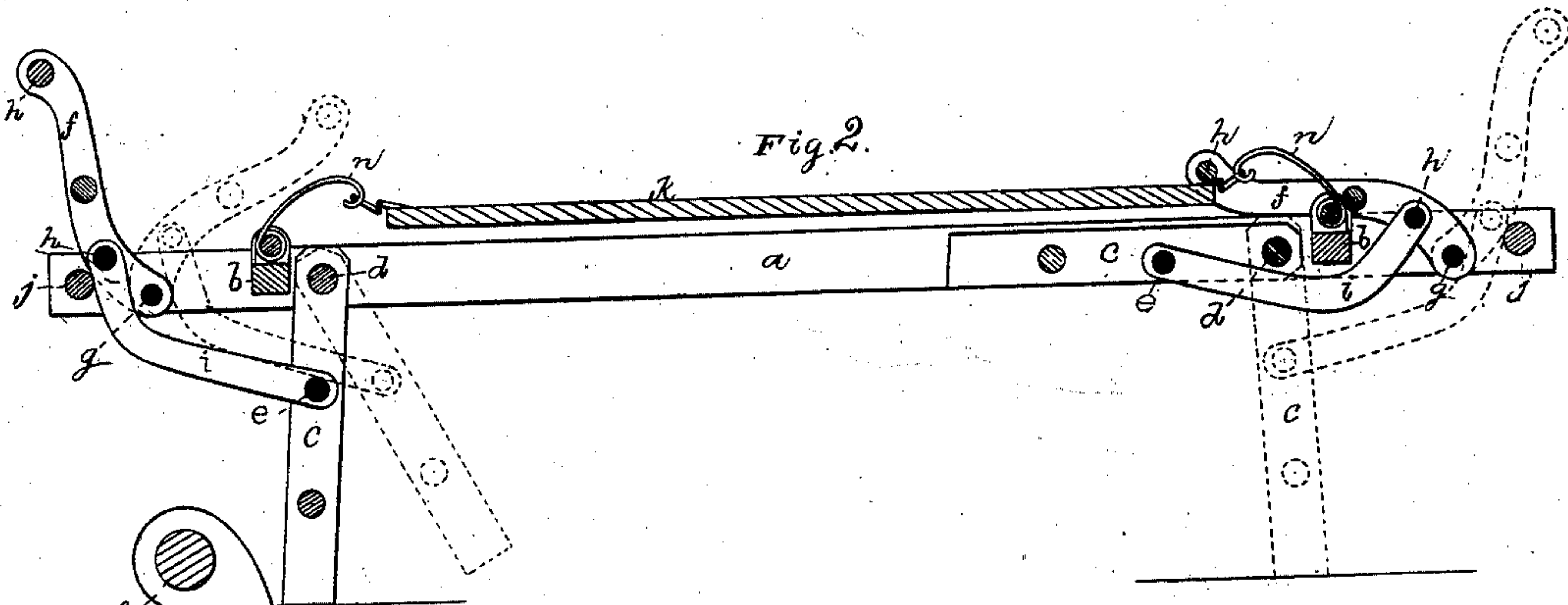
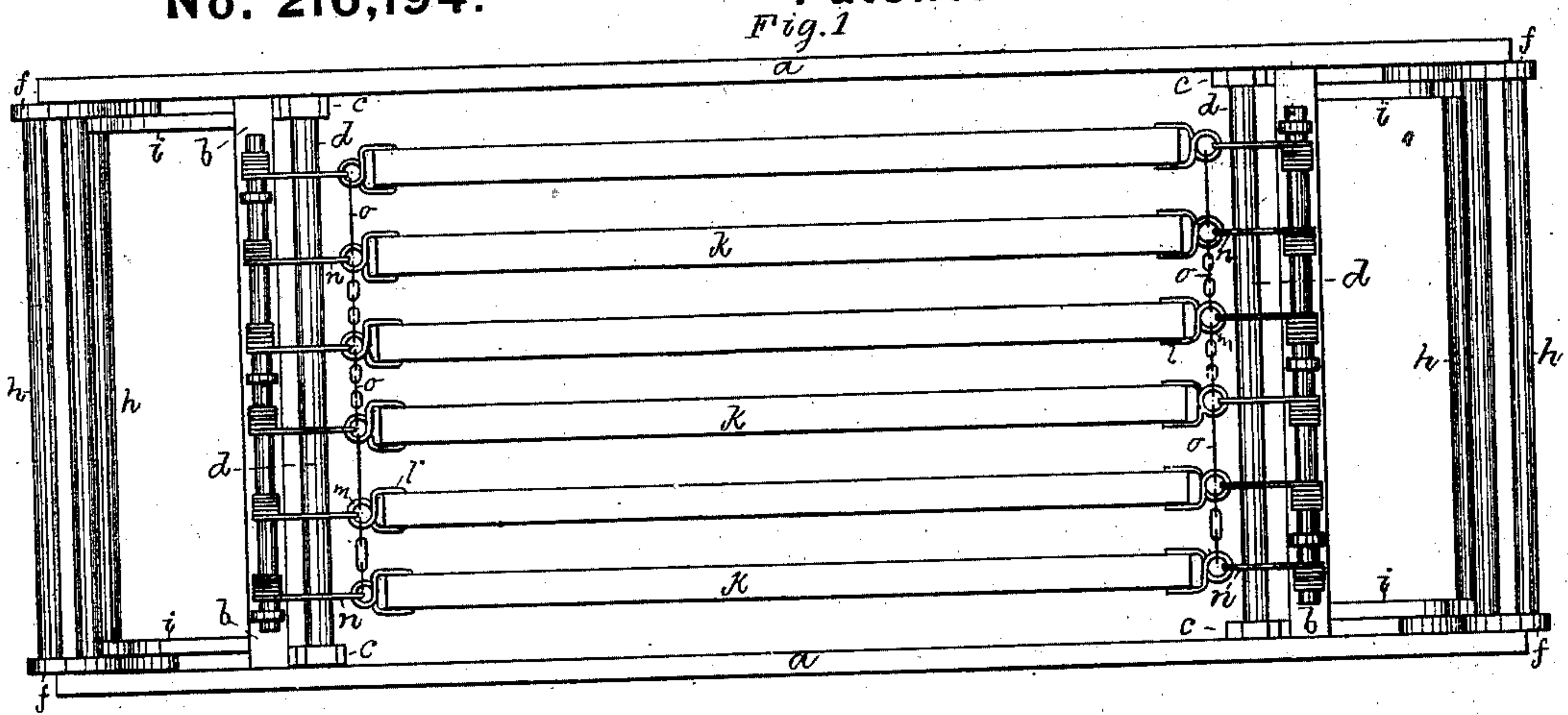


H. W. LADD, T. B. RAYMOND & J. I. SPENCER.
Folding Cot-Bed.

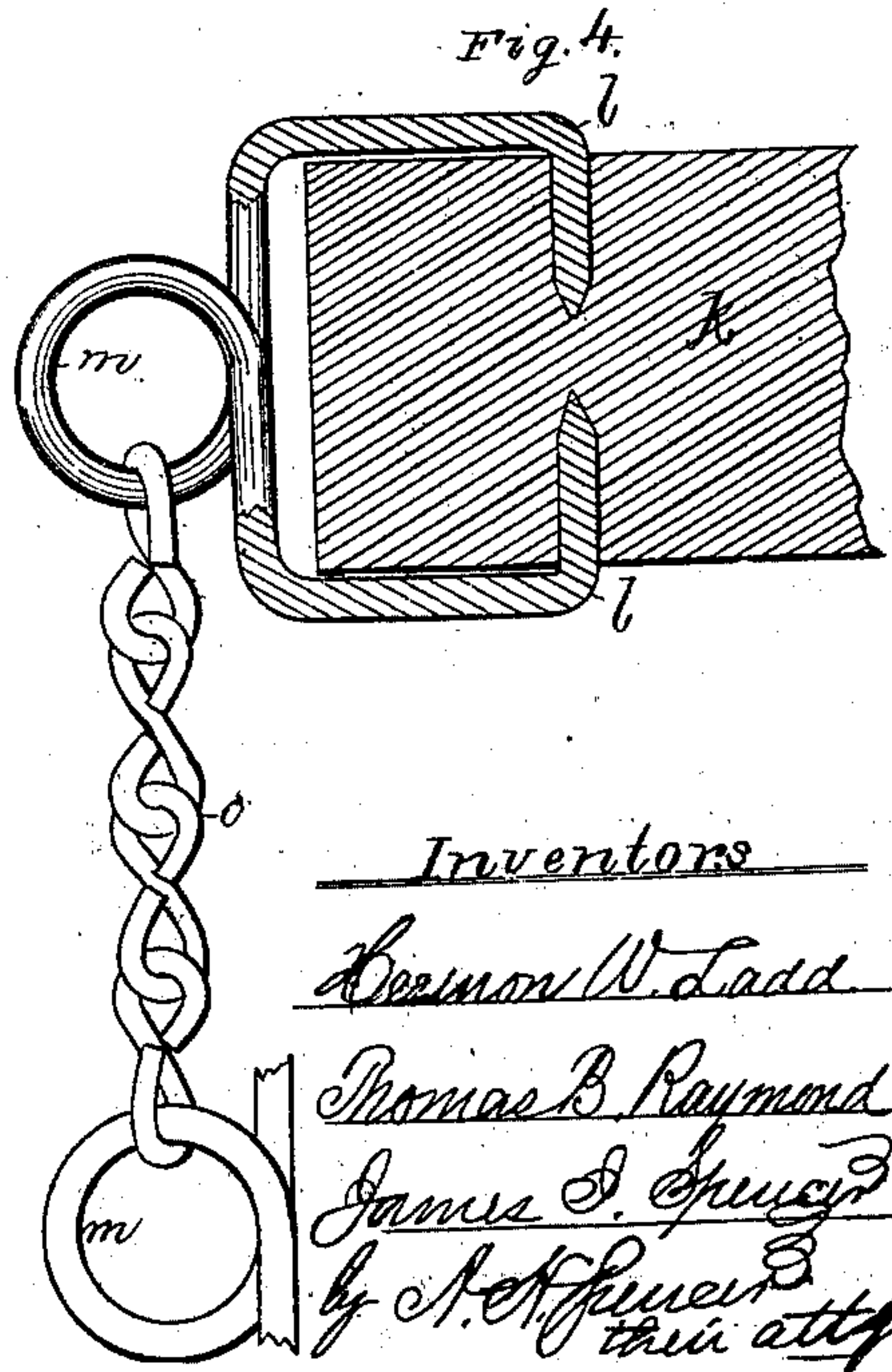
No. 216,194.

Patented June 3, 1879.



Witnesses

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UNITED STATES PATENT OFFICE.

HERMON W. LADD, OF CHELSEA, AND THOMAS B. RAYMOND, OF STONEHAM, MASSACHUSETTS, AND JAMES I. SPENCER, OF NEW YORK, N. Y.

IMPROVEMENT IN FOLDING COT-BEDS.

Specification forming part of Letters Patent No. 216,194, dated June 3, 1879; application filed July 8, 1878.

To all whom it may concern:

Be it known that we, HERMON W. LADD, of Chelsea, Massachusetts, THOMAS B. RAYMOND, of Stoneham, Massachusetts, and JAMES I. SPENCER, of New York, N. Y., have invented certain Improvements in Folding Cot-Beds; and that the same are fully described in the following specification and illustrated in the accompanying drawings.

Our improvements relate to the simultaneous unfolding and bracing of the legs and end sections, and to a novel means of suspension of the slats; our object being to combine in a cot-bed the requisites of strength, compactness, convenience, and cheapness.

Our invention consists in the combination, with a bed-frame, of folding leg-frames, braced to folding head and foot sections, so as to operate simultaneously and brace the legs firmly when unfolded.

It also consists in the combination, with a bed-frame, of a series of wooden slats, suspended from the frame by springs, and corresponding series of metallic eyes, formed, as shown, integral with spring-wire hooks entering perforations in the edges of the slats, the eyes of the adjacent hooks being connected by links or chains.

Figure 1 is a plan view of a cot embodying our improvements. Fig. 2 is a vertical section thereof, and Figs. 3 and 4 are enlarged detail views.

In the drawings, *a a* and *b b* are the longitudinal and transverse bars, firmly joined together to constitute the bed-frame. *c c* are the leg-frames, pivoted to the side rails by a round rod, *d*, running from side to side of the frame, and turning in the side rails, *a a*. Two similar cross-rounds, *e e*, are employed to join the legs of each pair firmly together to give them stability. *f f* are the corner-posts of the folding end sections of the bed, pivoted to the side rails by short pins *g*, which do not run across the frame. The corner-posts *f f* are connected by cross-rounds *h h*, for strength and convenience in folding.

At each end of the cot the leg-frame and the folding head or foot piece are connected by a curved link, *i*, extending preferably from the

upper round, *e*, of the leg-frame to the lower round, *h*, of the folding end section. It follows from this connection of the parts that the leg-frame and end section joined by each link must fold simultaneously, and also that the folding at each end of the bed is independent of that at the other end.

The extreme ends of the side rails, *a a*, are joined by a cross-round, *j*, which forms a stop, against which the posts *f* of the end sections or links *i* abut when the legs are opened to a vertical position. When this point is reached in unfolding, the links *i* become braces to lock the legs securely in the position for use, since their pivots *e h* are in line, or nearly in line, with the pin *g*, (the latter between the two former,) and the upper end of the link is then at the dead-point in its movement around the pivot *g*. (See Figs. 2 and 3.)

Outward pressure upon the head and foot sections serves to stiffen or intensify the bracing, since the posts or the braces will be thereby held firmly against the stop *j*.

It follows from the described arrangement of the folding parts and their pivots, and as a marked peculiarity of our invention, that no ordinary power applied to the legs could suffice to fold them until first unlocked by employing other means to throw the pivots out of line. The parts are readily folded, however, by pressing inwardly upon the upper bars or the posts of the end sections. The curvature of the posts and braces permits them to fold closely above and below the cross-bars *b* to the position shown in Fig. 2.

Our improvement in suspending the slats may be briefly described. The slats *K* run longitudinally of the frame, and are perforated near each end to receive in their edges the hooked ends *l* of bent wire eyes *m*, formed, as shown in Fig. 4, with a coil to receive the projecting end of the spring *n*, borne upon the cross-bar *b*. The coils form springs to retain the hooks *l* in the slat-edges, and serve also for the attachment of the chains or links *o*, which connect together the eyes of the adjacent slats of the series. By such connection excessive pressure upon any one slat is relieved or borne in part by the springs of the

adjoining slats. The strain thus applied through the links *o* tends to press the hooks *l* more firmly into their places in the perforations of the slats.

We claim as of our invention—

1. The combination of a bed-bottom and its supporting-frame with legs and end sections pivoted permanently to the frame, and linked to each other so that they shall fold simultaneously and without disconnecting the links, substantially as set forth.

2. In a cot-bed, a folding head or foot piece linked to the corresponding leg-frame so that they shall fold simultaneously above and below the slats, as described, in combination with a stop to limit the movement of the parts, substantially as set forth.

3. The combination, with a bed-frame, of end

sections and leg-frames, folding simultaneously above and below the slats, and joined by links or braces with the pivots of the folding parts, arranged for bracing the legs when spread, substantially as set forth.

4. A spring-eye for bed-slats, having the hooks *l* and coil *m*, formed integral with each other, in combination with the supporting-spring *n* and connecting-links *o*, arranged to engage directly with the coils, substantially as and for the purposes set forth.

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Witnesses:

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