

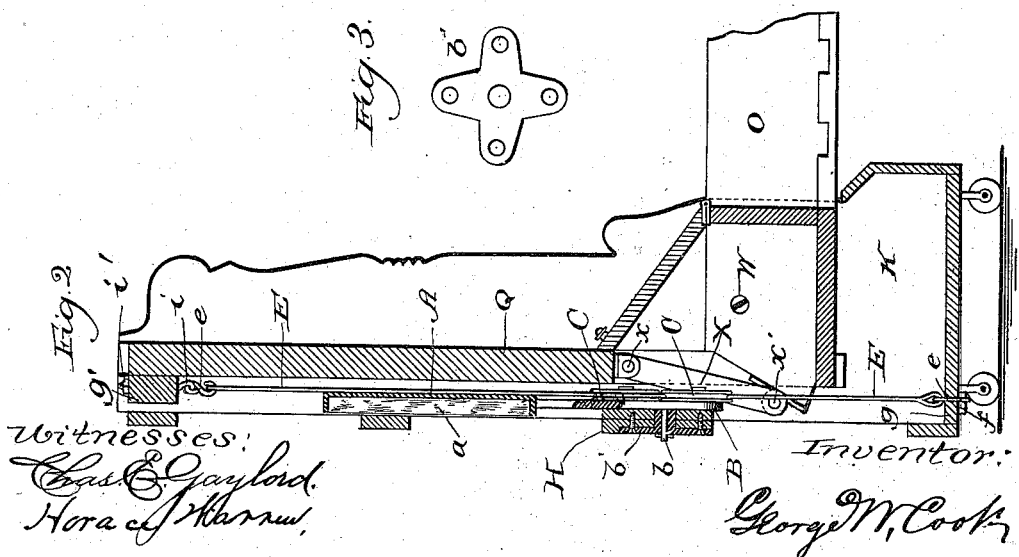
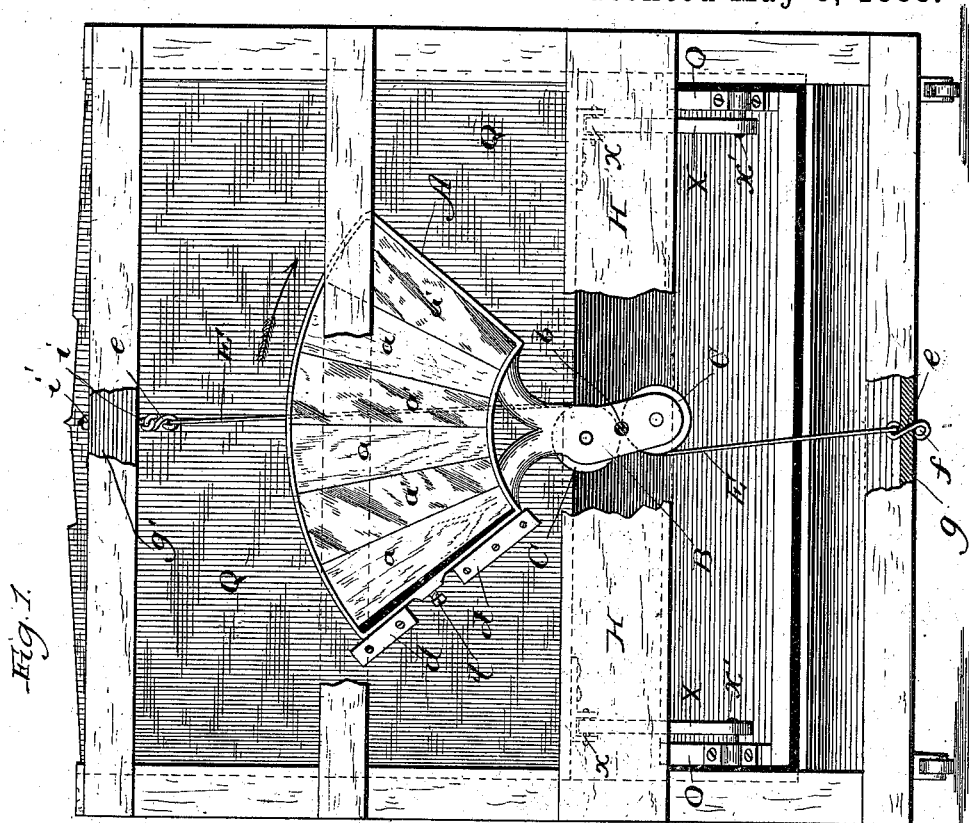
(No Model.)

G. W. COOK.

FOLDING BED.

No. 382,460.

Patented May 8, 1888.



Witnesses:
Charles Gaylord.
Hercules Harner.

Inventor:
George W. Cook

UNITED STATES PATENT OFFICE.

GEORGE W. COOK, OF CHICAGO, ILLINOIS, ASSIGNOR TO MYRA J. HOOVER,
OF SAME PLACE.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 382,460, dated May 8, 1888.

Application filed January 24, 1887. Serial No. 225,238. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. COOK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Folding Beds, of which the following is a specification.

My invention relates to improvements in the manner of balancing upright folding beds which are opened and closed by the canting principle.

The objects of the improvements are, first, to avoid the use of springs entirely, as they are dangerous on account of their liability to pull the upright bed over and also to break; second, to furnish a counterbalancing principle for folding beds which will not require as much weight as beds of this class in present use, and which are weighted so heavily that it makes it impossible for a lady or servant to move them, as they would often desire; third, to simplify and cheapen the beds, in order that they may come within the means of the poorer class. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a back view of the bed when open, with parts broken away, showing my invention; Fig. 2, a side sectional view of the open bed, showing position of the pivoted front rail, O; Fig. 3, an end view of the flanged socket *b'*.

Similar letters refer to similar parts.

In Fig. 2, O represents the front and adjustable part of the bed; K, the upright or frame; Q, the back or sliding head-board, all as usually constructed by others. I hinge and pivot these parts together by any of the known devices, making no claim thereto.

My invention is principally confined to the lever composing the arm B and pan A, provided with the two sheaves CC at one end and the weights *a* at the other end, operating in combination with other known parts. Across the top of the head-board or sliding back is the cleat *g'*, through which (edgewise) the bolt *i* is placed, the lower end of which is formed into a hook, the upper end provided with the thread and nut *i'*. Attached to this bolt and extending to the bottom of the frame K is the cable E, each end of which is provided with the eyes *e*, one of which is hooked to the bolt

i. A portion of the other eye is let through the bottom of the frame and held by the key *f*, which passes through the lower end of the eye and under the bottom of the frame. (Shown in Fig. 2.) By the use of these eyes and bolts the tendency to wear the cable is avoided, and by the use of the thread and nut *i'* the proper tension can be had on the cable. On the back of the frame, about two-thirds of the distance from the top to the bottom, is placed the brace and support H. Between this brace and the cable E is placed the pivoted end B of the lever, which is hinged to the brace near the center by means of the flanged socket *b'* and the arbor *b*, the arbor projecting from the face of the lever through the socket. On the opposite or back side of the lever the two eccentric acting sheaves CC are placed, and pivoted as close to the pivoted center of the lever as the cable which passes between them or the edges of the sheaves will permit. The sheaves are placed in such a position on the lever that when the outer and weighted end of the lever is elevated to the highest point, as in Fig. 1, the cable passes upon the cable which passes between the sheaves in close proximity to the fulcrum *b* of the lever, the cable running to the right of the upper sheave and to the left of the lower sheave. This is the position of the lever where the greatest purchase is had, and a point where the greatest purchase is required, owing to the fact that while the lever is in this position the pivoted frame O, (shown as a part of the bed proper, and which is to be tilted upward,) is at its heaviest position, being parallel with the floor.

To operate the bed it will readily be understood that as the frame O is pivoted to the sides of the frame K, (shown at W in Fig. 2,) and the sliding head-board Q hinged to the frame O by means of the bars XX, one end of which is hinged to the bottom of the head-board, as shown at *x*, the other end hinged to the frame O, (shown at *x'*,) the operator has only to lift at the front end of the bed-frame, when the weighted end of the lever will swing in the direction of the arrow, the sheaves will revolve in opposite directions, the cable and head-board will draw down from the top, the lower sheave will take the position of the upper one, and by the connections described the

front of the bed will be properly counterbalanced and easily closed or opened.

In order to adjust the weights for balancing the bed at the two extreme points up or down, and where beds are constructed of light or heavy material, I use one or more blocks of wood formed in shape and size as the iron weights, by a proper adjustment of which an accurate adjustment is had in balancing the bed shown in Fig. 1—*a* representing the wood, *a'* the iron. The weights are held in position by the set-screw *t*. The cleats *d d* are attached to the sliding back to prevent the lever from swinging too far in opening the bed.

If desired, in order to get strength and durability, chains can be used instead of the cable.

What I claim as new, and desire to secure by Letters Patent as my invention, is—

1. The combination, in folding beds of the class herein shown, having the sliding back or head-board *Q*, of the chain or cable *E*, one end of which is permanently attached at the bot-

tom of the frame *K*, the other end attached to the top of said head-board, the lever *B*, pivoted to the support *H* and provided with the pan *A* for holding weights *a'*, and the purchase-bearing sheaves *C C*, pivoted to said lever and arranged to revolve against said cable, all substantially as set forth.

2. In a folding bed, the combination of the stationary section provided with the support-piece *H*, the weighted lever *B*, pivoted to said support and provided with the sheaves *C C* on the short arm thereof, the folding section of the bed pivotally attached to the stationary section having the sliding head-board, and the cable *E*, running between the sheaves *C C* and having one end attached to the bottom of the stationary case and the other end to the sliding head-board, substantially as described.

GEORGE W. COOK.

Witnesses:

HORACE WARREN,
CHAS. F. WHITCOMB.