

(No Model.)

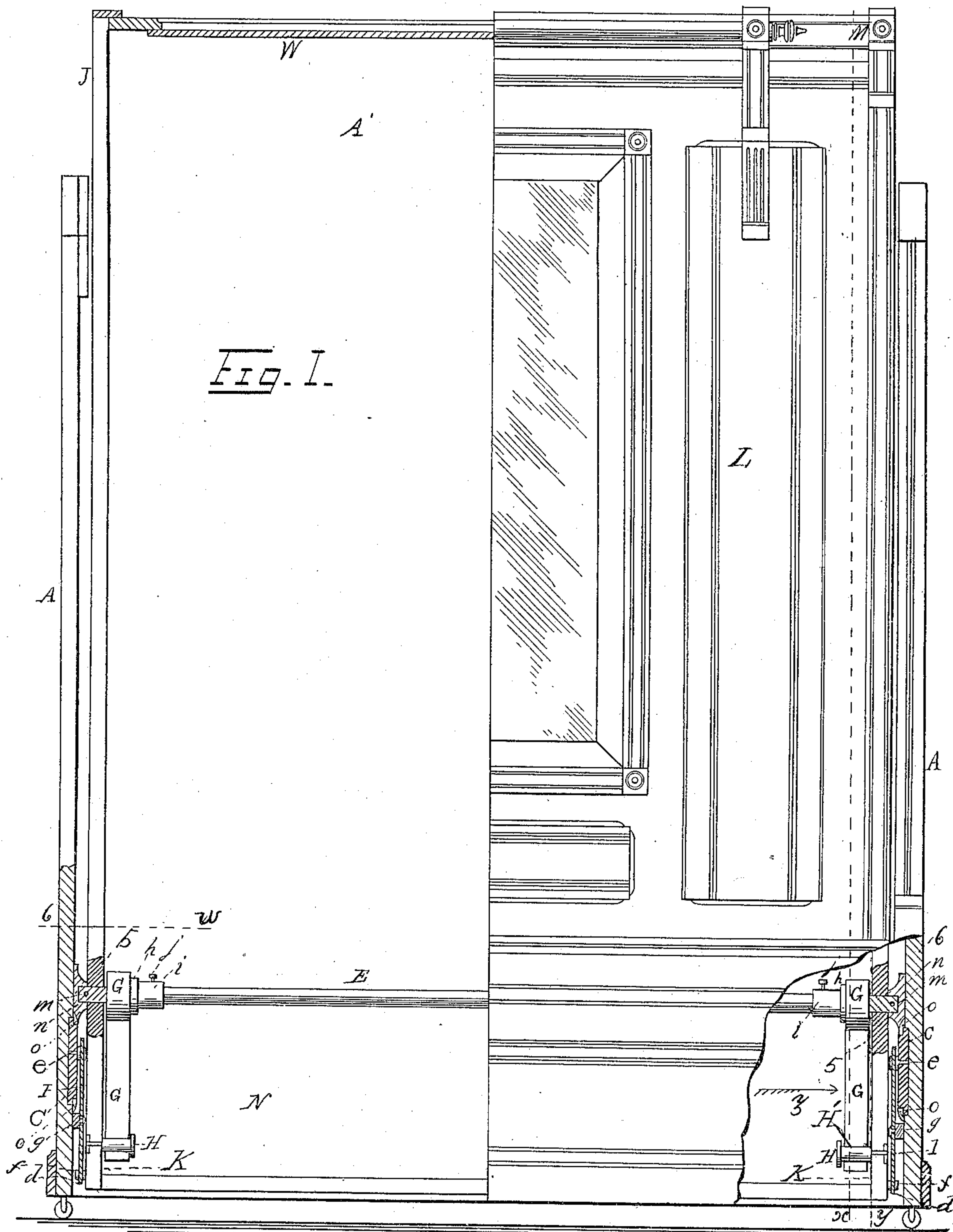
2 Sheets—Sheet 1.

F. R. WOLFINGER.

FOLDING BED.

No. 372,004.

Patented Oct. 25, 1887.



WITNESSES:

B. M. Whitaker.  
F. H. Moore.

INVENTOR

Francis R. Wolfinger.

BY G. H. Chapin.

ATTORNEY

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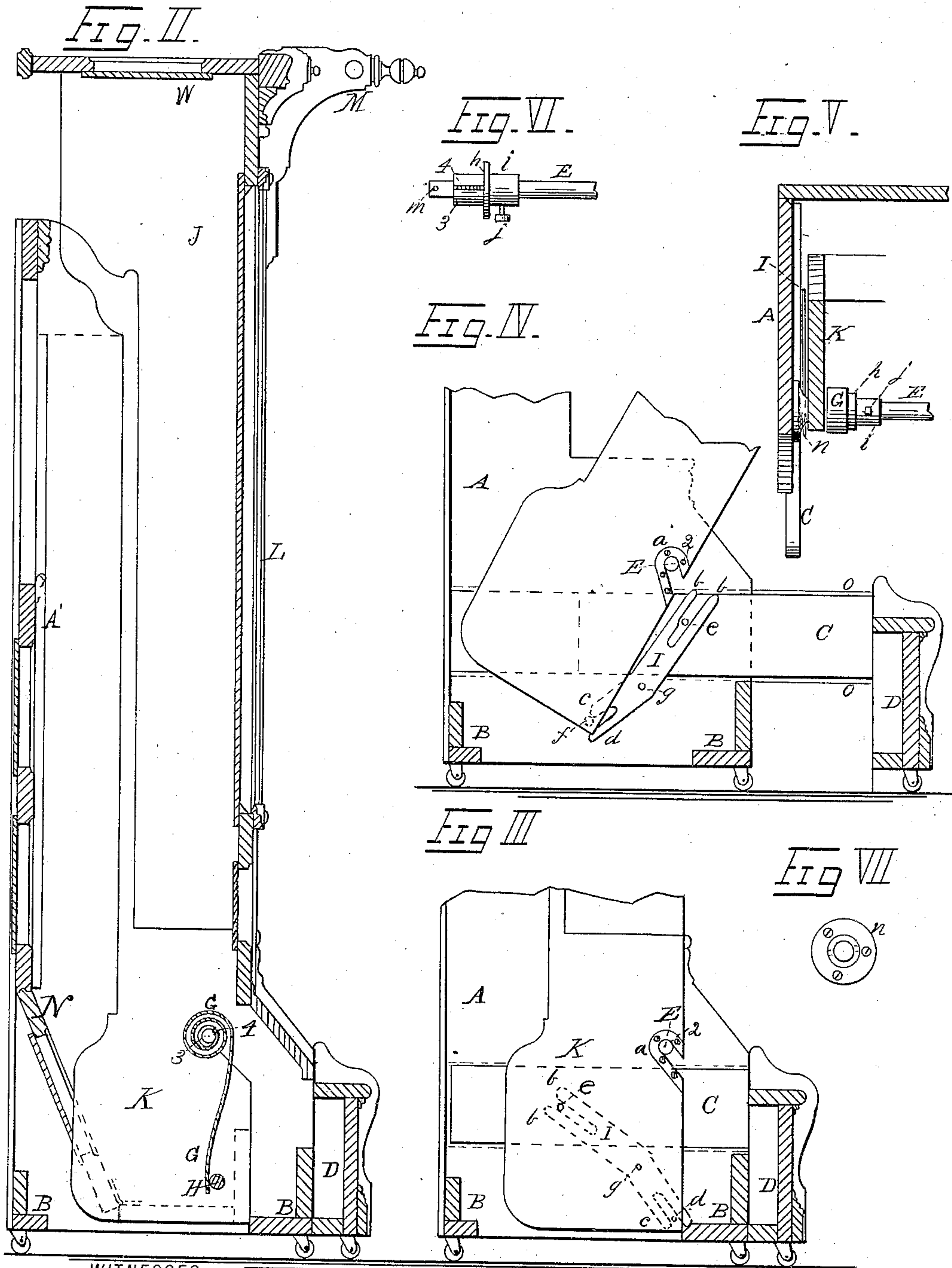
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# UNITED STATES PATENT OFFICE.

FRANCIS R. WOLFINGER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO PATRICK H. HEFFRON, OF SAME PLACE.

## FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 372,004, dated October 25, 1887.

Application filed February 17, 1887. Serial No. 227,859. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS R. WOLFINGER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Folding Beds, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure I, Sheet 1, is a front elevation and section of a folding bed in which is embodied my invention, one portion of the case being removed and the other broken away to show the construction; Fig. II, a vertical sectional and transverse elevation of Fig. I, on line *x*, with the front of the case in position, looking in the direction indicated by dart *z*; Fig. III, a side elevation of a lower portion of the bed-bottom, and a sectional elevation of the lower portion of the case complete, taken on the inner face of the right-hand side rail, K, on line *y*, Fig. I, looking toward said rail, and the bed-bottom frame being in vertical position, as when folded; Fig. IV, a sectional elevation of the same on line *y*, Fig. I, with the bed-frame partly swung out from the case, as in a movement to bring the top M of the case to the floor, showing also the sliding support drawn out from the case. Fig. V is a broken horizontal section of Fig. I on line *w*, looking down. Fig. VI is an elevation of one end of the shaft which supports the bed frame and the spring attachment thereon removed from the other parts; Fig. VII, a face elevation of one of the shaft bearings or seats.

This invention relates to an improvement in mechanism for operating folding beds which are hung to an upright case.

The nature of the invention consists, first, in brief, in the novel combination of sliding supports, forked levers, and operating-pins, whereby the said supports, bearing on the floor, are moved outward at the front of the case as the bed is being brought from a vertical position in the case to the floor, to form an extended bearing to prevent the case from tipping over to the front by the overhanging bed, the said supports being automatically returned into the case by the elevating of the bed, as hereinafter fully described and shown.

A A' N represent the ends and back of an

ordinary folding-bed case, and B B is the bottom portion thereof.

My improvements are applied to a bed-frame, which is hung to this case; but they may be applied to any case which has a form suitable to make the necessary connection.

J K represent each side rail to the bed-frame, and W shows the top connection or end rail.

L M represent what is the face of the case when the bed is closed, and that which is the under face of the bed-frame when the same is brought down so that the feet M rest on the floor.

E represents a shaft which extends from side A to the opposite side A, and is supported at its ends by seats N N, which are secured to the sides A A by screws, and they have holes in them in which the ends of the shaft enter, and are secured by pins M put through the seats and shaft.

A sleeve, 3 *h i*, is placed on the shaft E so that it may be rotated, and tapped into the part *i* is a set-screw, *j*, which is to be turned to make the sleeve rigid to the shaft. In the part 3 is formed a groove, 4, in which the inner coiled portion of a spring, G, catches. A collar, *h*, serves as a guide for one edge of the coiled part of the spring, and the inside of the rail J K serves as a guide for the outer edge, the spring lying between the collar *h* and said rail. I prefer the use of two springs, as shown; but one spring will serve the purpose, if stiff enough. The lower ends of the springs are made to bear against studs or pins H', which are made fast to the rails J K; and they will better serve the purpose if on them are placed anti-friction rollers for the lower ends of the springs to bear against. This construction is such that the sleeves 3 *h i*, being rotated to put the springs in proper tension, the springs will afford an increasing resistance as the bed-frame is being brought down to the floor.

I have described my particular form of spring-balance to enable my style of folding bed to be made; but no claim is made to such balance.

That portion of my invention which relates to increasing the supporting-area of the bottom B B of the bed-case in proportion to the increased overhanging position of the bed-



frame being swung out, consists, at each end A of the case, of a sliding support, C D. The part C is tongued at both edges, at *o o*, transversely into the inner surface of said side A, so as to be held in position to slide horizontally back and forth, and the slide C is made rigid to a standard, D, which runs on the floor, and forms a neat-appearing portion of the bed-case when it is closed, as shown at Figs. II and III.

The means for operating the slide consists, at each outside of the bed-frame, of a double forked lever, I, which is pivoted to the side A of the case at *g*, Figs. I, III, and IV. The upper forks are shown at *b b*, and the pin *e*, with which they operate lever I to move the slide C out, lies between the forks and is made rigid to the slide C. The lower forks are shown at *c d*, and the pin *f*, which operates them to draw the slide C in, lies between them and is made rigid to the side rail, J K, of the bed-frame. This construction is such that when the bed-frame is being brought out of its case the sliding support C D is being brought out from the sides A A' of the case.

All the figures show the bed-frame vertical in its case, except Fig. IV, which shows it partly brought out from the case and the sliding support C D extended to its fullest extent, the pin *f* just leaving the fork *c* for the lever I to remain stationary till the bed-frame is elevated, so that the pin *f* will engage the lower fork, *d*, and move the slide C in, as shown at Fig. III. The side rails, J K, are hung freely to turn on the shaft E by inclined notches, which are faced with metal *a 2*, better to with-

stand wear, as shown at Figs. III, IV. The side rails, J K, are broken away at 5 and the ends of the case 6, Fig. I, better to show the construction.

It has been the custom to employ springs to counterbalance the folding portions of wardrobe-bedsteads which are provided with cases to receive the folding parts; but the folding parts have not been hung to the supporting-shaft by inclined open bearing, faced as at *a*, to prevent wear, whereby the folding part can be lifted out for shipment or otherwise from the case. With reference, therefore, to the folding of bed-frames, I confine myself to the construction shown; but it has not been the custom to construct wardrobe-beds with a sliding part like C D, which automatically gives an increased support to the case, as required, as the folding part is being brought out to be used as a bed.

I claim and desire to secure by Letters Patent of the United States—

An improvement in folding beds, consisting of the case A A' and bed-frame J K W L M, in combination with the levers I I, provided with forks *b b* at their upper ends and forks *c d* at their lower ends, the pins *e*, affixed to the parts C, and the pins *f*, affixed to the lower ends of the side rails, J K, and supporting-shaft E, to slide the parts C D out at the front of the case as the bed is being brought to the floor, as specified.

FRANCIS R. WOLFINGER.

Witnesses:

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