

(No Model.)

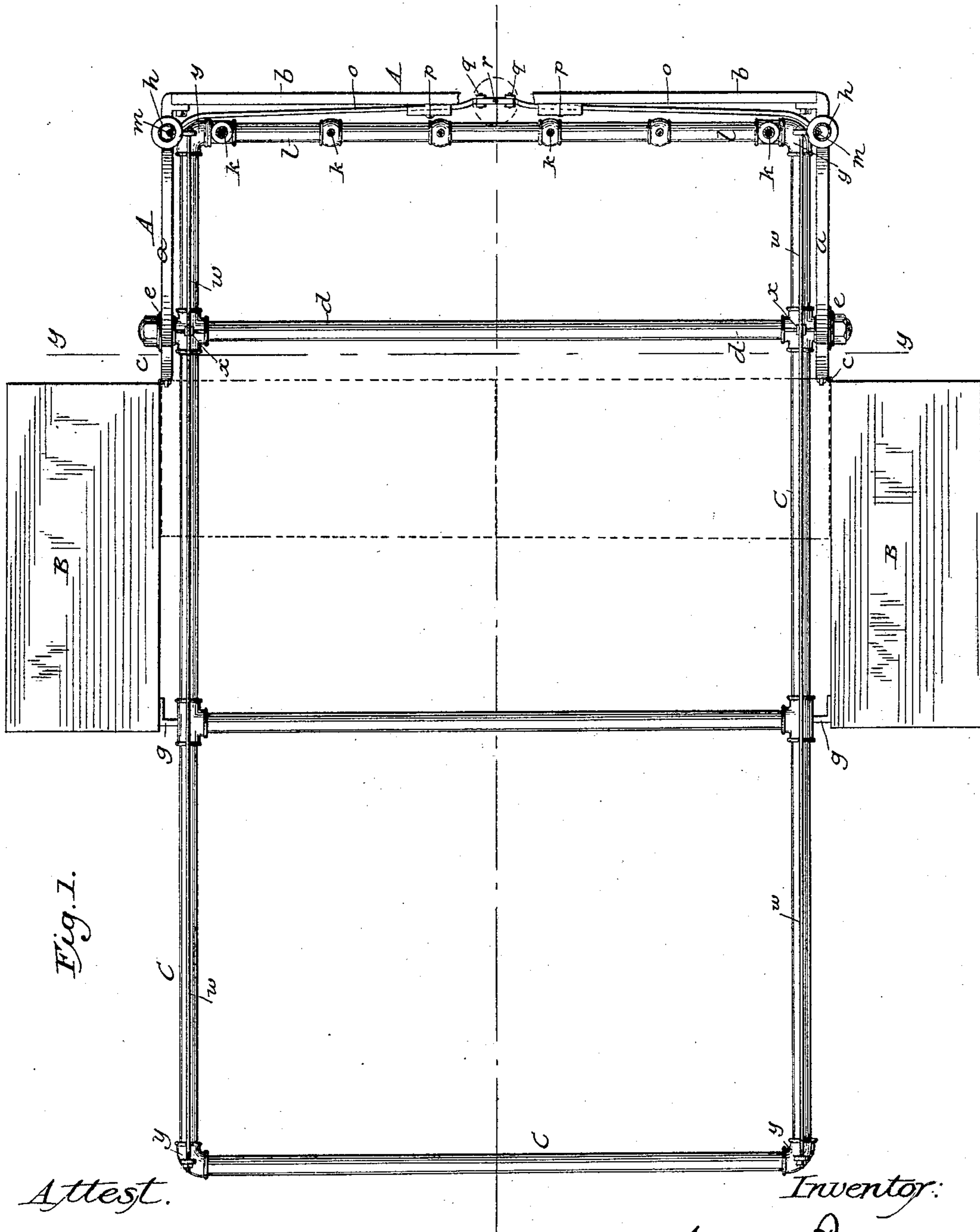
3 Sheets—Sheet 1.

J. PENNEY.

FOLDING BEDSTEAD.

No. 397,307.

Patented Feb. 5, 1889.



Attest.

Sidney P. Hogginsworth
F. L. Chapman

Inventor:

Joseph Penney
By his atty
Phil. T. Dodge.

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3 Sheets—Sheet 2.

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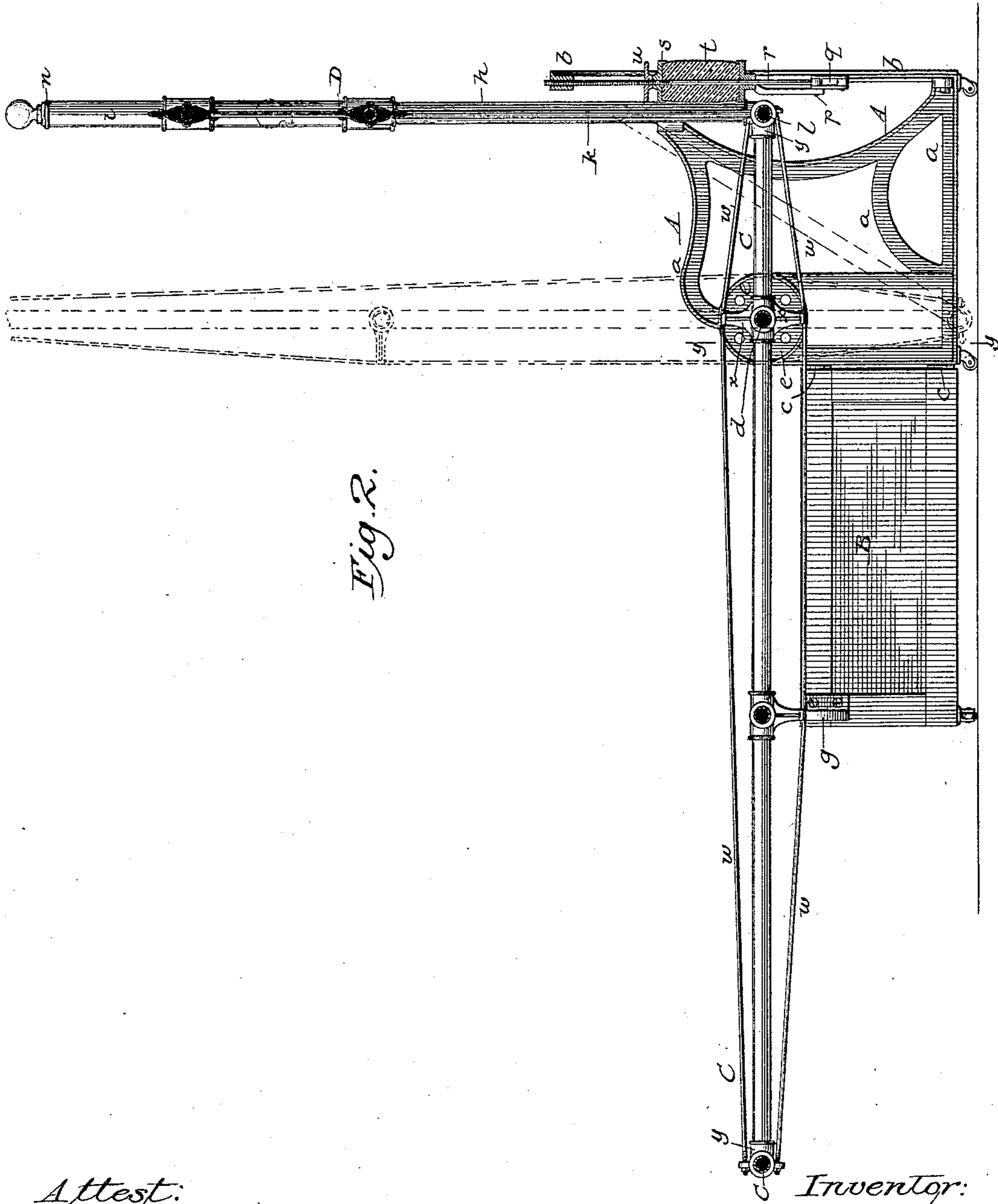


Fig. 2.

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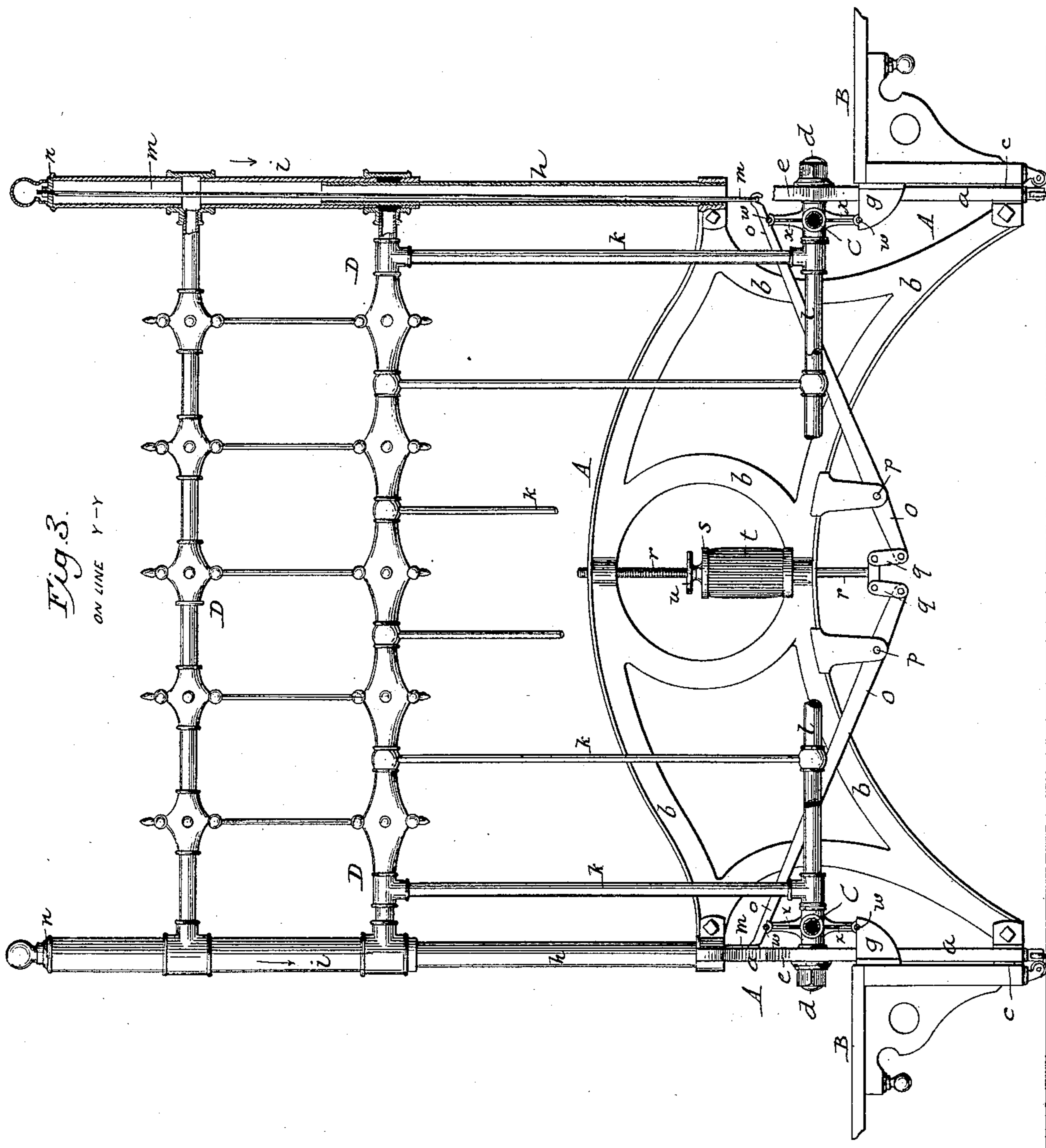
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UNITED STATES PATENT OFFICE.

JOSEPH PENNEY, OF GRAND RAPIDS, MICHIGAN.

FOLDING BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 397,307, dated February 5, 1889.

Application filed June 11, 1887. Serial No. 241,057. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PENNEY, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain Improvements in Folding Bedsteads, of which the following is a specification.

The aim of my invention is to provide a folding bed which may be cheaply constructed and easily operated, and in which the strain shall be so applied and distributed that it will not be rendered inoperative by use.

It consists in a peculiar manner of applying counterbalancing-springs to the bed-frame, in order to admit of its being turned upward and downward with ease and of maintaining it in its elevated position.

It further consists in various minor details of construction, which will be hereinafter described.

In the accompanying drawings, Figure 1 represents a top plan view of my bed as it appears when extended for use. Fig. 2 is a longitudinal vertical section through the middle of the same. Fig. 3 is a cross-section on the line *y y* of the preceding figures, looking toward the head of the bed.

Referring to the drawings, A represents the main or base frame, which may be constructed of wood or metal, and which consists, as shown, of two side frames or standards, *a*, connected by a cross-frame, *b*, bolted rigidly thereto at the corners. The form of this frame and the manner in which its parts are united are susceptible of modification at will, provided only it is adapted to sustain the various parts hereinafter described.

B B represent two supplemental frames or seat-sections, hinged at *c* to the forward corners of the main frame A, and arranged to swing horizontally, their construction being such that when turned outward parallel with each other, as shown in Fig. 1, they form continuations of the side frames, and that when turned inward, as shown by dotted lines in said figure, they meet at the inner ends and form a continuous seat across the front of the folded bed from one side to the other. These folding seats are commonly made of ornamental form, with flat tops supported by brackets and provided with casters, whereby

they are supported on the floor and enabled to move with ease.

C represents the bed-frame proper, which may be made of wood or metal in rectangular form, with a transverse shaft or journal, *d*, sustained at its ends in boxes or bearings *e* on the upper forward corners of the frame A, this arrangement permitting the bed-frame to be turned downward to a horizontal operative position, as shown in full lines in the several figures, or of its being turned at will to a perpendicular position, as indicated by the dotted lines in Fig. 2.

In order to give the bed-frame, when extended, suitable support, and to prevent the bed as a whole from tipping forward while being extended, I arrange the seat-frames B to bear when extended beneath the bed-frame. They may be formed in any appropriate manner to this end; but I prefer, as shown, to provide each seat-frame with a rigid bracket or arm, *g*, to engage directly beneath the edge of the bed-frame, as shown in the several figures.

In order to counterbalance the weight of the bed-frame, I combine therewith a system of spring-actuated levers, preferably in the particular form and arrangement shown in the drawings.

h h represent two tubular posts erected rigidly on the rear corners of the main frame A, and D represents the head-frame of the bed, consisting of cross-bars united at their ends to tubular sleeves or posts *i*, arranged to slide or telescope upon the stationary posts *h*, so that the head-frame as a whole may rise and fall on the posts *h* as guides. From the lower cross-bar, *j*, of the head-frame I extend a series of connecting rods or pitmen, *k*, downward to the rear cross-bar, *l*, of the bed-frame. In this way the weight of the head-frame is applied to the bed-frame in rear of its pivot, so that it to an extent counterbalances the outer end of the bed-frame.

Within each end of the rising and falling head-frame I place a vertical rod or cord, *m*, fixed at its upper end to a cap, *n*, or otherwise fixed thereto, and extending downward through the guide-posts *h*. At their lower ends these rods are attached, respectively, to levers *o*, which are extended inward, pivoted at

5 *p* to the main frame, and connected at their inner ends by links *q*, or equivalent connections, to a central vertical rod, *r*, which is extended upward through guides on the main frame and provided with an adjustable collar or washer, *s*, bearing on top of a lifting-spring, *t*, which is in turn seated in a suitable stationary support. This spring, acting through the intermediate connections, tends to pull the head-frame downward, and through its pitmen to tip the bed-frame upward. By a proper adjustment of the spring the parts may be so balanced that the bed will turn easily upward or downward and remain in the position in which it may be placed. A rubber spring, a spiral spring, or any other spring of approved form may be employed, and devices of any suitable character may be used to effect the adjustment of its tension. I prefer to employ, however, as shown, a nut, *u*, threaded on the rod *r*, to compress the spring *t*.

25 The various figures represent the parts in operative position. To fold the bed, it is only necessary to turn the frame C upward at the outer end until it assumes a perpendicular position, and then turn the seat-frames inward to the position indicated by dotted lines.

30 I have described above only those parts which are essential to the structure. It will of course be understood that they may be covered or inclosed by wood-work or otherwise treated to render them attractive or ornamental in appearance, if desired.

35 I prefer to construct the frame C entirely

of metal in tubular form, as shown, the devices which form the sides and ends being united at the corners by lips, and the frame as a whole being stiffened by truss-rods *w*, extending lengthwise over and under its side bars. These rods bear at the middle on the spreading-plates *x*, and are secured at their extremities, by nuts or otherwise, to corner pieces or couplings *y*.

45 While I prefer to employ the tubular posts as guides for the head-frame and as a means of concealing the vertical rods, it will of course be understood by the skilled mechanic that equivalent solid guides may be employed and that the rods or connections may be arranged outside instead of inside of the guide.

Having thus described my invention, what I claim is—

In a folding bedstead, the base-frame having the tubular posts *h h*, and the head-frame having sleeves to slide over the base-frame posts, in combination with the bed-bottom frame pivoted on journals of the base-frame, pitmen to connect the bed-frame with the head-frame, the rods *m*, concealed within the posts and connected to the head-frame, the spring *l*, mounted in the base-frame, and levers *O*, connecting the spring to the rods, substantially as shown and described, and for the purpose set forth.

JOSEPH PENNEY.

Witnesses:

C. W. WATKINS,

J. G. ALEXANDER.