

(No Model.)

2 Sheets—Sheet 1.

D. M. STEVENSON.
FOLDING BEDSTEAD.

No. 511,282.

Patented Dec. 19, 1893.

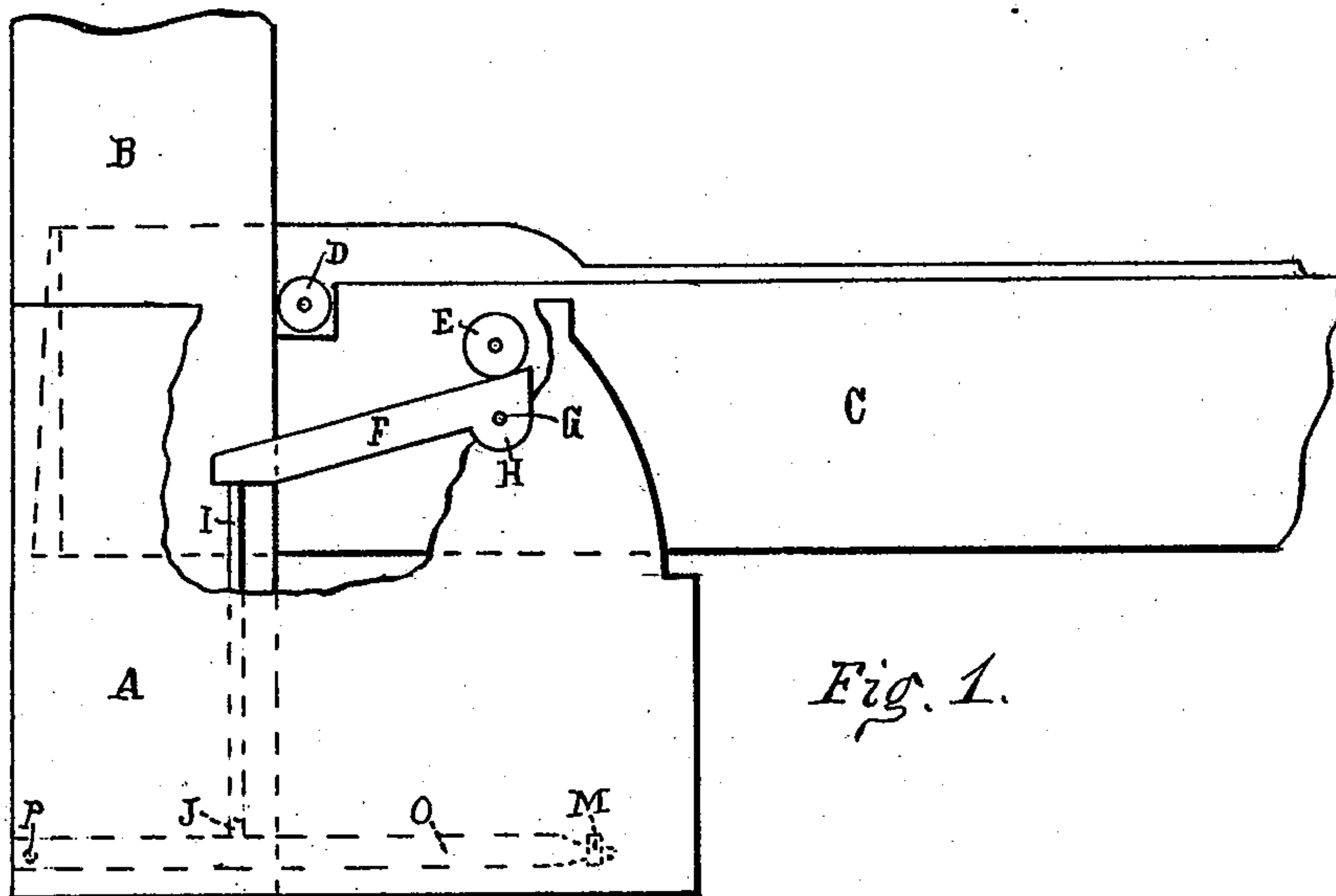


Fig. 1.

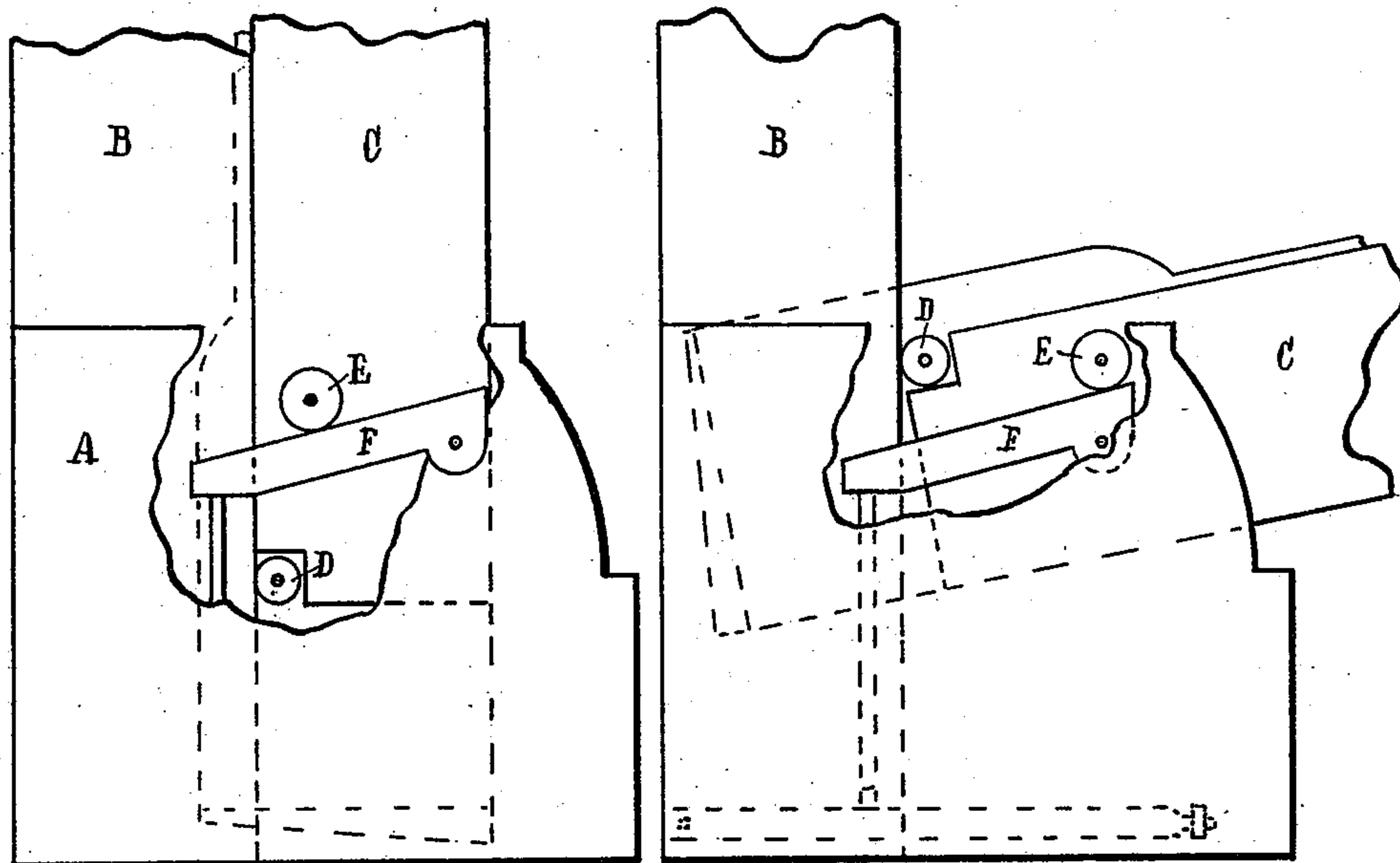


Fig. 2.

Fig. 3.

Witnesses
Charles E. Walter.
Isaac Williams.

Donald M. Stevenson Inventor
By his Attorney Robert S Carr

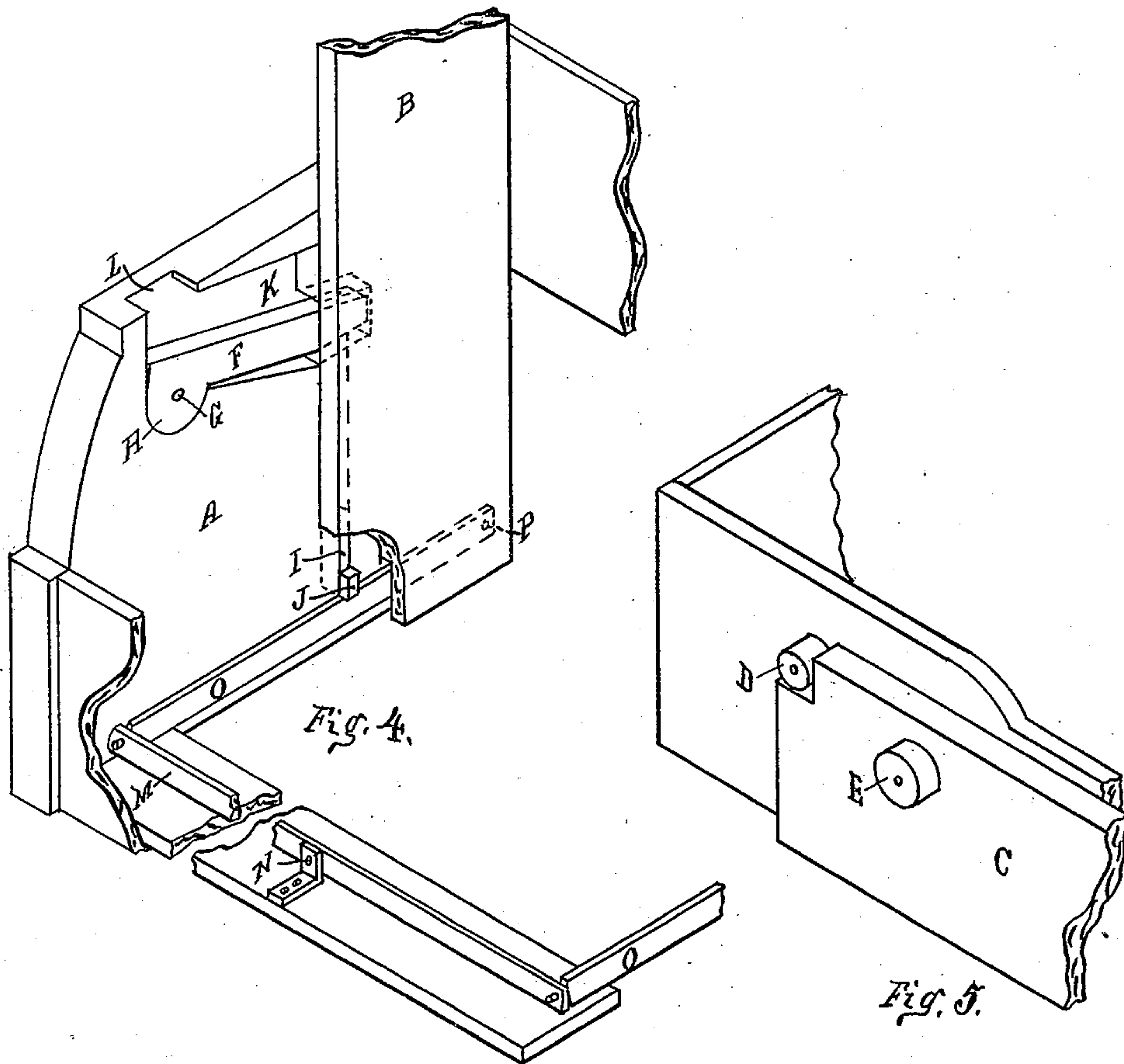
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Witnesses
Charles E. Walter.
Israel Williams

Donald M. Stevenson Inventor
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UNITED STATES PATENT OFFICE.

DONALD M. STEVENSON, OF HAMILTON, OHIO, ASSIGNOR TO THE HAMILTON
FOLDING BED COMPANY, OF SAME PLACE.

FOLDING BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 511,282, dated December 19, 1893.

Application filed November 25, 1892. Serial No. 453,004. (No model.)

To all whom it may concern:

Be it known that I, DONALD M. STEVENSON, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Folding Bedsteads, of which the following is a specification.

My invention relates to that class of folding bedsteads, wherein the mattress receptacle folds vertically against a stationary case, to occupy less floor space; and the objects of my improvement are; to cause the folding part to close easily and snugly to the case; to secure rigidity of the folding part when open; to keep the folding part either open or closed by its own weight without auxiliary fastenings, and to secure the greatest strength and durability together with simplicity of parts and cheapness of construction. I attain these objects in the following described manner, as illustrated in the accompanying drawings, in which—

Figure 1, represents a side elevation of the bedstead open with parts of the base removed; Fig. 2, the same view as Fig. 1, but showing the bedstead closed; Fig. 3, the same view as Figs. 1, and 2, showing travelers D and rollers E in a horizontal plane at right angles to the face of the frame where the case is balanced between being open and closed. Fig. 4, represents a portion of the interior of the base in perspective, and Fig. 5, a perspective view of a portion of the case.

In the drawings A represents the base and B the head of the bedstead, which consists of a frame, open in front and extending above the rear portion of the base, within the ends of which its sides are rigidly fastened. Case C forms a receptacle for the mattress and bedding. The head end is narrow, to easily enter the frame and travelers or guide rollers D are journaled on its respective sides, to abut against, and travel up and down, the front edges of the frame, to limit the extent of its entrance in the frame. The case is trunnioned in, and supported by, rollers E, and balanced thereon, by weights attached to its head portion. The width of the case from travelers D toward its foot end, is equal to the frame and cleats project from within its sides, to cause the case to close snugly against the frame. Tracks F are provided with bosses

H under their front ends through which they are secured in recesses K to the ends of the base by pivots G. The tracks are set at an angle to slant downwardly toward the frame and rollers E travel on their top edges. The rear ends of the tracks extend rearwardly beyond, and under the front edges of the frame, and may oscillate on pivots G to the extent permitted by the recesses. Beam M extends across the front of the base inside and near the bottom. It is supported by fulcrum N under its center whereon it is free to oscillate. Bars O have their rear ends fastened to the base by pivots P and extend forward through grooves between the ends of the base and the sides of the frame, and engage by their front ends with the respective extremities of the beam. Rods I by means of integral toes J rest on the top of the middle portion of the respective bars, and extend vertically within chambers provided therefor, between the ends of the base and the sides of the case, to support the rear ends of the tracks which rest thereon. In this manner the rear ends of the tracks communicate oscillatory motion to each other, through the rods, bars, and beams. If the rear end of either track be depressed the other will be correspondingly raised. Pivots G prevent any vertical motion of the front end of the tracks where rollers E rest when the case is horizontal. In this open position of the bedstead for use, the case rests substantially solid on the tracks, and on the folding legs by which the foot end is supported, and any oscillation of the rear end of the tracks that may occur is not communicated to the case. When the case is horizontal rollers E are retained on the front end of the tracks by means of the travelers abutting against the edges of the frame. The tending of the case however toward the frame is very great owing to its entire weight being on rollers E and their rearward tendency down the slanting tracks. This rearward tendency of the case in all positions keeps the travelers constantly against the frame, and also keeps the case directly in front of the frame where it resists any lateral movement that would cause the head portion thereof to bind in the frame.

The faces of travelers D are on a line with the top edges of the case, while rollers E are some distance below said edges. When the case is horizontal the travelers are in a higher position than the rollers, and their resistance on the frame to the rearward tendency of the case on the tracks, results in keeping the foot of the case toward the floor, and the bedstead open.

In closing the bedstead the case is turned on the trunnions, while the foot describes an arc to the top of the frame. This movement drives the travelers down the frame, and rollers E follow down the tracks until the faces of the case and of the frame come together when their respective sides are kept in the same place by the cleats. When the case is closed to the frame, the rearward pressure of rollers E down the slanting tracks, above the travelers, that now act as fulcrums, keeps the case closed against the frame without any auxiliary fastenings.

During the process of closing the bedstead, and while rollers E are traveling down the slanting tracks, the case may be oscillated laterally thereon for the purpose of adjusting the face of the case easily and snugly to the frame. This oscillation may be increased with the nearer approach of the case to the frame by reason of rollers E advancing toward the rear end of the tracks where the vertical oscillation thereof is the greatest. Where the side pivots or trunnions of the case are fixed rigidly in relation to the frame, there is frequent difficulty in closing the case easily to the frame. Uneven floors sometimes derange the parts so they will bind and not fit together, or should either pivot become slightly displaced or worn, or not secured at the proper place the same difficulty is encountered. The present construction completely overcomes these objections in permitting the case to oscillate laterally to a sufficient extent to adapt itself perfectly to the frame at all times, and yet to rest as solidly when open as though the pivots were rigid, owing to the position reached by rollers E on the front end of the tracks over pivots G.

Openings L permit the passage of rollers E from recesses K and the removal of the case from the base.

The position on the sides of the case of the travelers and of rollers E in relation to each other and to the direction of the case is such, that in closing or in opening the bedstead, the travelers pass a point on the edge of the frame directly opposite rollers E, as shown in Fig. 3. At this point the travelers counter-

act the rearward tendency of the rollers and the case remains stationary, but will tend toward either direction therefrom that it may be turned, either farther open or closed.

I am aware that folding bedsteads have been made and patented wherein the folding part could oscillate laterally, to easily adjust itself to the case. I do not therefore claim such a combination broadly; but

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

1. A folding bedstead having in combination, a base, rearwardly declining tracks within the base and pivotally secured thereto at their front ends, and an oscillatory support for the rear end of the tracks, consisting of a system of levers pivotally secured within the base.

2. A folding bedstead having in combination a base, a vertical frame secured thereto, a removable case adapted to be folded vertically against the frame, tracks secured to and within the base, supporting rollers attached to the case and movable on the tracks, and guide rollers journaled on the case and movable on the frame.

3. In a folding bedstead the combination with a base, a vertical frame, and a folding case, of rearwardly declining tracks pivotally secured at their front ends within the base, an oscillatory support for the rear end of the tracks, supporting rollers on which the case is trunnioned and carried on the tracks, and guide rollers journaled on the case and movable on the front edges of the frame.

4. A folding bedstead having in combination a base, a vertical frame secured thereto, rearwardly declining tracks secured within the base, a case trunnioned in rollers and adapted to fold against the frame, said rollers being movable on the tracks, and guide rollers journaled on the case and movable on the frame.

5. A folding bedstead having a base, a frame secured within, and extending above, the base, and tracks secured within the base at an acute vertical angle to the edges of the frame, in combination with a removable case, supporting rollers attached to the case and movable on the tracks, and travelers journaled on, and adapted to guide, the case on the edges of the frame, whereby the case is kept either open or closed by its own weight, substantially as specified.

DONALD M. STEVENSON.

Witnesses:

ROBERT S. CARR,
CHARLES E. WALTER.