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C. A. JONES.
DAVENPORT BED.

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Fig. I

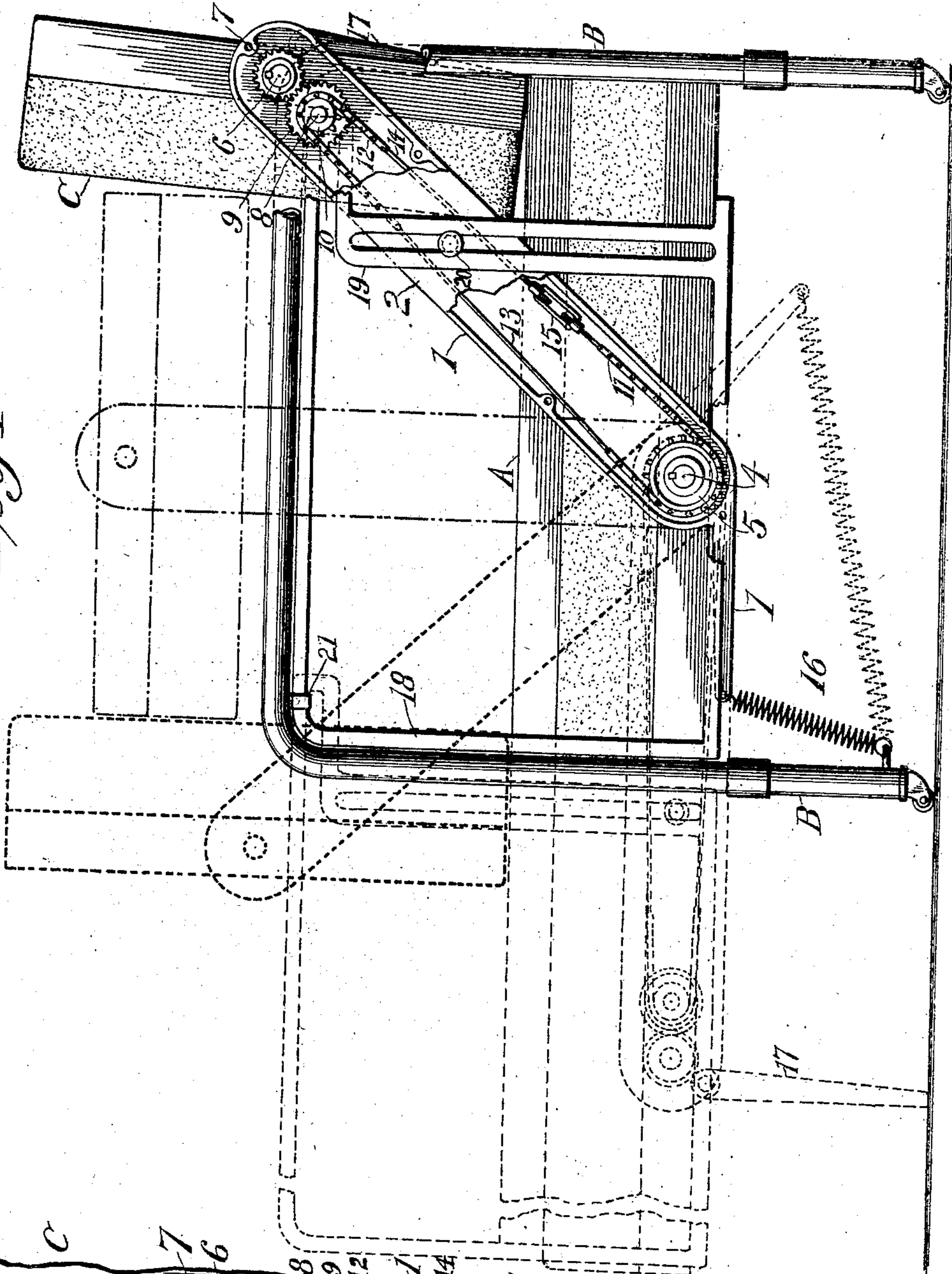
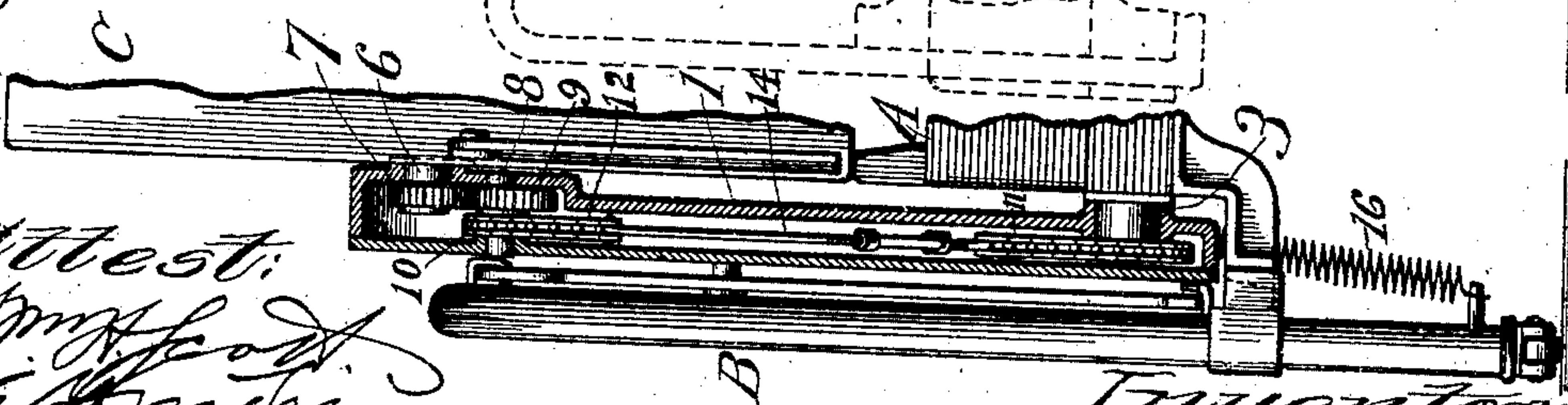


Fig. II



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DAVENPORT-BED.

No. 840,852.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES A. JONES, a citizen of the United States of America, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Davenport - Beds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in that class of folding beds commonly termed "davenport-beds" and which are convertible into a condition for use as a bed or as a seat.

The present invention has for its object to provide means whereby the movable section of the bed is automatically rotated upon an axis in transferring said movable section from the position it occupies when the piece of furniture is being used as a seat to the position it occupies when the piece of furniture is being used as a bed, and vice versa.

Figure I is an end elevation of my davenport-bed with portions broken away for the purpose of affording a view of the parts back of them. Fig. II is a view of one end of the bed partly in rear elevation and partly in section.

In the drawings I have illustrated only one end of the bed, and it is to be understood that the construction of the parts illustrated at this end and to be described are duplicated at the opposite end of the bed.

A designates the stationary section of my bed, which is supported at each end by leg members B, preferably of inverted-U shape.

C is the movable section of the bed, which is adapted to rest in an upright position upon the stationary section to provide a back when the piece of furniture is to be used as a seat and is also adapted to be moved into a position in horizontal alinement with and in front of the stationary section when the piece of furniture is to be used as a bed.

1 designates a link which serves to connect the movable section C to the stationary section A, the said link being preferably of flanged form and having applied thereto a face-plate 2, whereby the link is rendered of box-like construction, in order that it will accommodate certain mechanical parts to be hereinafter described.

3 (see Fig. II) is a stud attached to the sta-

tionary section A at its end and to which the lower end of the link 1 is loosely fitted in order that said link may turn thereon. The stud 3 terminates in a stem 4, to which is rigidly secured a sprocket-wheel 5.

6 is a stud projecting from the end of the movable section C and to which the link 1 is loosely fitted for the purpose of providing movement of said stud in said link, as will hereinafter more fully appear. The stud 6 has fixed to it a spur-wheel 7, that occupies a position at the outer side of the link 1.

8 designates a shaft that is journaled in the link 1 and its face-plate 2. This shaft serves as a support for a spur-wheel 9, that meshes with the spur-wheel 7 and has rigidly associated with it a sprocket-wheel 10.

11 designates a chain that operates upon the sprocket-wheel 5, and 12 is a chain that operates upon the sprocket-wheel 10. These chains are connected by rods 13 and 14, one of which—for instance, that 14—has introduced therinto a turnbuckle 15, whereby the sections of chain may be drawn more tightly to the sprocket-wheels on which they operate or whereby the chains may be loosened, as may be required. The chains 11 and 12 and the rods connecting them constitute in reality a belt that operates upon the sprocket-wheels 5 and 10, and while I have described the chains as consisting of sections united by rods I wish it understood that I do not desire to be limited to the particular form of belt herein set forth. The connecting-link 1 terminates at its lower end in an arm 1', that is united by a spring 16 to the forward leg of the leg member B.

In the practical use of my davenport-bed the operation is as follows: Assuming the parts to be in the position illustrated in full lines in the drawings, in which the piece of furniture is illustrated in condition for use as a seat, the operator to move the movable section C into horizontal alinement with the stationary section A, so that the piece of furniture may be used for a bed, grasps the movable section and swings it forwardly. As the movable section is moved it carries the link 1 to an upright position. During this movement of the parts the chain 11, fitted to the sprocket-wheel 5, is operated in a manner to impart movement to the chain 12, fitted to the sprocket-wheel 10, and as a result the spur-wheel 9 is rotated and motion is trans-

mitted from said spur-wheel to the spur-wheel 7, that is fixed to the movable bed-section C. As a consequence, said movable section C is swung in the arc of a circle, so that when the link 1 reaches the upright position (indicated by dot-and-dash lines, Fig. I) the movable section C will occupy the horizontal inverted position. (Also indicated by dot-and-dash lines.) The forward movement of the parts is continued, and the link 1 and the movable section C move into the positions indicated by heavy dotted lines, Fig. I, the movable section being at this time again in a vertical position, but located at the forward side of the stationary section A and being reversed from its former position. The movement of the parts is continued until the movable bed-section is placed in horizontal alinement with the stationary bed-section, right side up, it being understood that throughout the entire period a continuous rotation of the movable bed-section is carried on through the medium of the mechanism described.

17 designates a leg that is located at the inner side of and carried by the movable bed-section and is adapted to support said section when it is in horizontal alinement with the stationary bed-section. It is to be understood that when the piece of furniture is to be again converted into a seat the parts move reversely from the movement that has been described to turn them to their former positions. When the piece of furniture is being converted to a bed from a seat, the movable section C is readily transferred to a position in alinement with the stationary section A, and while it is being transferred the spring 16 is expanded. When the movable section is being again transferred to convert the piece of furniture into a seat, said spring acts upon the link 1 to assist in elevating the movable section and returning it to a raised position above the stationary bed-section.

18 designates a shiftable head or foot section that is adapted to be moved forwardly to the end of the movable bed-section when said section is in alinement with the stationary section and the piece of furniture is to be used as a bed. This head or foot member is provided with a slotted upright 19, that receives a stud 20, carried by the link 1 or its face-plate 2, preferably the latter. The member 18 is positioned in guides 21, carried by the leg member B, and is adapted to slide within said guides. As the movable bed-section is transferred to convert the piece of furniture into a bed the head or foot member is slid forwardly, due to the operation of the pin 20 in the slotted upright 19 of said member, and when the movable bed-section is again returned to its position above the stationary bed-section the head or foot member is retracted into the position illustrated in full lines, Fig. I.

I claim—

1. In a davenport-bed, the combination of a stationary section, a movable section, a link pivotally connecting said movable section to said stationary section, and gearing whereby said movable section is rotated from an upright position, to an inverted position to reversed position, and to a horizontal position right-side up or vice versa when said link is moved, substantially as set forth.

2. In a davenport-bed, the combination of a stationary section, a movable section, a link pivotally supported by said stationary section and having pivotal connection with said movable section, and gearing associated with said link consisting of a gear member fixed to said stationary section, a gear member fixed to said movable section, and operating means connecting the gear members and adapted to rotate said movable section from an upright position, to an inverted position, to a reversed position, and to a horizontal position right-side up or vice versa when said link is moved, substantially as set forth.

3. In a davenport-bed, the combination of a stationary section, a movable section, a link pivotally supported by said stationary section and having pivotal connection with said movable section, a gear member fixed to said stationary section, a gear member fixed to said movable section, a gear member carried by said link and arranged in mesh with the gear member of said movable section, and operating means connecting the link-carried gear member to the stationary-section gear member, substantially as set forth.

4. In a davenport-bed, the combination of a stationary section, a movable section, a link pivotally supported by said stationary section and having pivotal connection with said movable section, a gear member fixed to said stationary section, a gear member fixed to said movable section, a gear member carried by said link and arranged in mesh with the gear member of said movable section, and a belt connecting said stationary-section gear member and said link-carried gear member, substantially as set forth.

5. In a davenport-bed, the combination of a stationary section, a stud supported by said section, a link pivoted to said stud, a sprocket-wheel fixed to said stud, a movable section, a stud fixed to said movable section, and to which said link is pivotally fitted, a spur-wheel carried by said last-named stud, a spur-wheel loosely fitted to said link and meshing with said first-named spur-wheel, and a belt operatable upon said sprocket-wheel and having connection with said link-carried spur-wheel, substantially as set forth.

6. In a davenport-bed, the combination of a stationary section, a movable section, a

link pivotally supported by said stationary section and having pivotal connection with said movable section, gearing associated with said link and adapted to rotate said movable section when said link is moved, and a slidable head or foot member having connection with said link, substantially as set forth.

7. In a davenport-bed, the combination of a stationary section, a movable section, a link pivotally supported by said stationary section and having pivotal connection with said movable section, gearing associated with

said link and adapted to rotate said movable section when said link is moved, and a slidable head or foot member having connection with said link; said head or foot member being provided with a slotted portion and said link being provided with a stud adapted to operate in said slotted portion, substantially as set forth.

CHARLES A. JONES.

In presence of—

E. S. KNIGHT,

NELLIE V. ALEXANDER.