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Edward E. Herrinton
BY
Luther V. Moulton
ATTORNEY.

UNITED STATES PATENT OFFICE.

EDWARD E. HERRINTON, OF GRAND RAPIDS, MICHIGAN.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 495,970, dated April 25, 1893.

Application filed December 27, 1892. Serial No. 456,363. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. HERRINTON, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Folding Beds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in folding beds, and its object is to provide the same with certain new and useful features, hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1 is a vertical section on the line 1—1 of Fig. 3, showing the position of the parts when the bed is open; Fig. 2 the same showing the position of the same when the bed is closed; Fig. 3 a plan view of the device when open; and, Fig. 4 a detail in vertical section on the line 4—4 of Fig. 1.

Like letters refer to like parts in all of the figures.

A A are the sides of the stationary case, which are connected at the front only by a box or case A', and braced to the same at the rear by the metal strips A''. To the rear of said box A' near each end is attached the arms C, which curve rearward and upward to pass behind and above the front of the folding section B, which section is pivoted by studs J, which engage upwardly open bearings J' on the inner surfaces of the sides A. The foot of the folding section is supported by legs F at each side, which pass through openings in the front, and are pivoted to angle plates F attached to the same; said legs are prolonged upward beyond their pivots, and near the top are provided with inwardly projecting pins C'', which when the bed is open are in the same horizontal plane as the corresponding pins C' in the upper ends of the arms C. All of said pins being near the upper part of the folding section B, and supporting the frame D upon which frame is stretched the woven wire bottom D'. Connecting rods E are attached by eyes E'' to the pins C' at one end, and by hooks and eyes E'

at the other end, to the leg F, whereby said leg is automatically turned on the pivot F, and at all times held in a vertical position, an angle plate D'' is attached to the frame D opposite the pin C', which plate engages the under side of said pin and is traversed thereby.

At the head of the frame D is a head board G provided at its upper edge with rolls G', which engage and traverse the inner surface of the end of the folding section B, and the lower edge of the pillow board H, which is hinged to the upper edge of the same. Said pillow board is held in a vertical position by bars I pivoted at their upper ends to said board, and detachably connected to the frame D at their lower ends by laterally projecting pins I' engaging holes in said frame. As the folding section B turns on the pivots J, the frame D turns on the pins C', which pins being nearly above said pivots are approached by the bottom of said folding section as the bed closes. The leg F also being turned on its pivot by the rod E, the pin C'' also approaching the bottom of the said folding section. The bedding is thus brought within the folding section with the bottom D'; close to the front when the bed is closed, and when opened out the frame D together with the bedding is elevated relative to said folding section thus affording space below the bottom D' for it to sag without touching the front of the folding section, and also being so elevated that the side rails are below the bedding and are thus out of the way. So also as the bed is supported on the arms C and the legs F independent of the folding section, the latter is not subjected to heavy strains and can be made lighter and less strong, thus being cheaper. As the bed opens and closes the frame D is free to move longitudinally on the pins C' C'', and can thus move parallel to the sides and ends of the folding section B, the rolls G' securing the weight of the frame D, bottom D' and bedding, and being located at or above the center of gravity of the same, tends to throw the upper part of the bed into the folding section. They also move freely over the surface of the inner end of said section, and a part of the head board. As the bed closes the frame D is also held inward by the pins C' engaging the angle plates D'', and

the bottom of the frame is pressed outward by engaging the lower part of the front of the folding section B, or any other projection on the stationary case. The device can also
 5 be readily taken apart and without the use of tools of any kind. By lifting the foot of the frame D the same will pass over the foot of the folding section and disengage the angle plate D'', from the pin C', when said
 10 frame may be lifted out and the bars I be sprung outward, and the pins I' disengaged from the holes in said frame. The rods E may now be removed by disengaging the eyes E'' from the pins C' and detaching the hooks
 15 E' from the eyes in the legs F. The folding section can now be lifted out of the open pivot bearings J', and thus detached from the stationary case.

What I claim is—

20 1. In a folding bed, a stationary case, a folding section pivoted thereto, a bed bottom movable within said section, arms attached to said stationary case, and legs pivoted to said folding section, said arms and legs extending
 25 within said folding section and supporting said bed bottom independent of the same, substantially as described.

30 2. In a folding bed, a stationary case, a folding section pivoted thereto, a bed bottom movable in said section, arms attached to the stationary case, legs pivoted to said folding section, said arms and legs extending within the folding section and connected to and supporting the bed bottom, and rods pivoted to and
 35 connecting the said arms and legs, substantially as described.

40 3. In a folding bed in combination with a stationary case, and a folding section pivoted thereto, a bed bottom separate from and movable in said folding section, curved arms attached to said case, and legs pivoted to said folding section, said arms and legs extending upward within said folding section, laterally projecting pins on said arms and legs supporting said bed bottom and longitudinally
 45 movable on the same, and angle plates on said bed bottom engaging the pins on said arms, and rolls on said bed bottom engaging the

end of the folding section, substantially as described. 50

4. In a folding bed in combination with a stationary case, and a folding section pivoted thereto, a detached bed bottom, mechanism to move the same toward and from the front of said section, and a pillow board hinged to
 55 the folding section and connected to the bed bottom by pivoted bars, substantially as described.

5. In a folding bed, a stationary case, consisting of sides connected to the front, a folding section pivoted to said case having a front, having openings near the head and foot, curved arms on the case extending through said head opening, and pivoted legs
 60 extending through the foot openings, pins on said arms and legs, a bed bottom supported upon said pins, having angle plates engaging the pins on the arms, rods detachably pivoted at their respective ends to said arms and legs,
 70 rolls on said bed bottom engaging the end of the folding section, and a pillow board hinged to the folding section, and connected to the bed bottom by pivoted bars, substantially as described.

6. In a folding bed, in combination with a stationary case, a folding section, arms on said case, and legs pivoted to said section, a movable bed bottom in said section, and a pillow board hinged to the end of said section, pins in said arms and legs engaging and
 80 movable on the under side of said bed bottom, angle plate engaging said pins, connecting rods having eyes engaging the pins on the arms, and hooks engaging eyes on the legs, and bars pivoted to the head board, and having pins detachably engaging holes in said
 85 bed bottom, and studs on said folding section engaging upward open bearings on the stationary case, whereby the said parts are readily separated, substantially as described. 90

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD E. HERRINTON.

Witnesses:

LUTHER V. MOULTON,
 LOIS MOULTON.