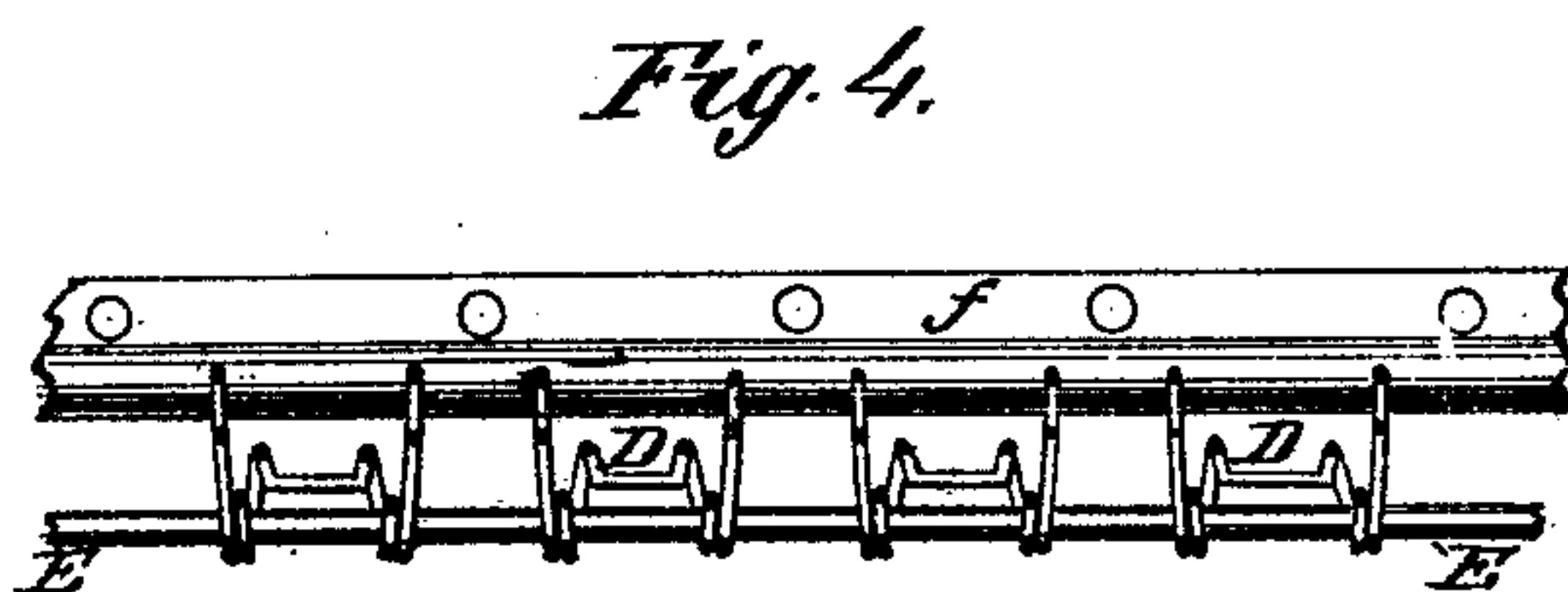
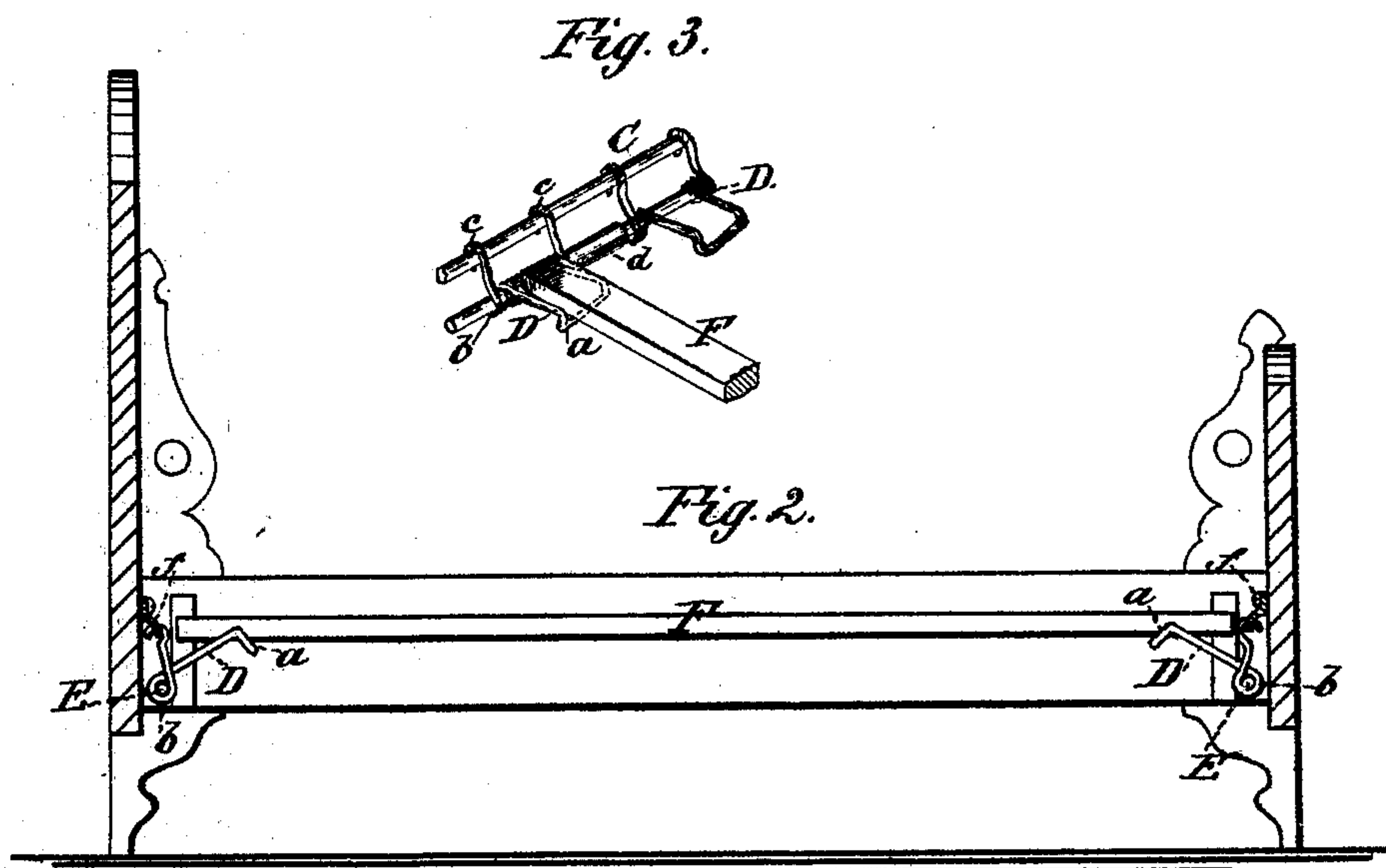
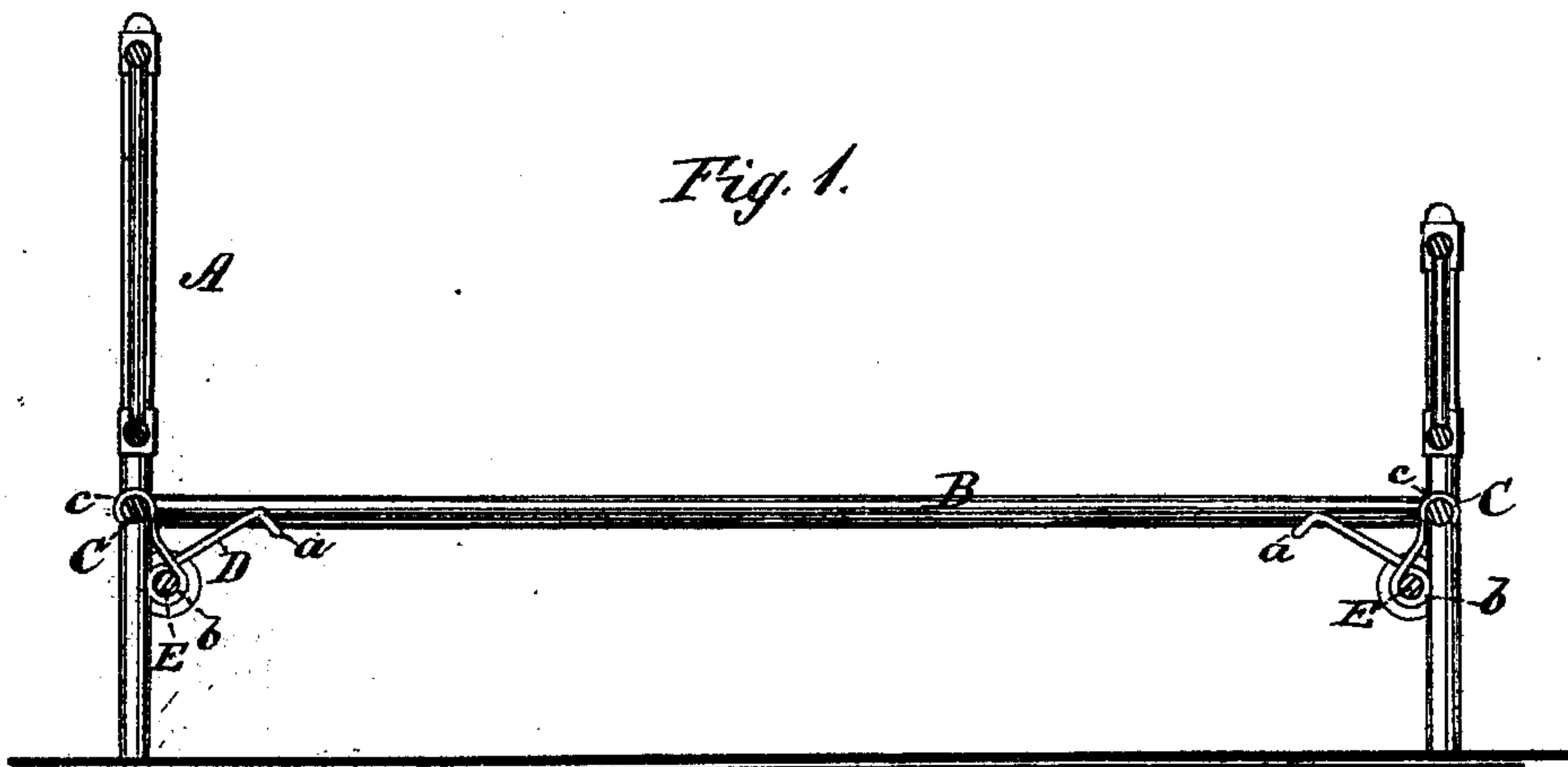


J. W. WRIGHT.

BED-SPRINGS.

No. 182,982.

Patented Oct. 3, 1876.



WITNESSES:

A. B. Robertson.
John A. Kemmon

INVENTOR:

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BY *[Signature]*

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UNITED STATES PATENT OFFICE.

JAMES W. WRIGHT, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN BED-SPRINGS.

Specification forming part of Letters Patent No. **182,982**, dated October 3, 1876; application filed March 6, 1876.

To all whom it may concern:

Be it known that I, JAMES W. WRIGHT, of Washington city, District of Columbia, have invented a new and Improved Suspension Bed-Spring; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of an iron bedstead, to which my invention is applied; Fig. 2, the same view of a wooden-frame bedstead; Fig. 3, a detail perspective view, showing arrangement of springs, alternating tubes, rods, and slats; Fig. 4, a detail view, showing the springs hung upon a strip, to adapt the devices to wooden-frame bedsteads.

My invention consists in an improved construction of suspension bed-spring; and it relates to that class of springs in which a loop-shaped seat for the slat has its ends bent into coils, which are fastened directly to the bed-frame.

My improvement consists in extending the ends of the coils upwardly in the form of arms, which are provided with hooks at their extremities, by means of which hooks the springs are suspended upon the end frames of the bed. This arrangement makes the springs quickly detachable, prevents overstraining of the springs by making it more uniformly elastic, and distributing the motion upon the said arms, and also enables the slats to be suspended below the bed-rails, which rails, with this arrangement, prevent the occupant from rolling out of bed. Through the coils of the spring passes a pivot-rod, which is held in place by end washers, to prevent sliding out. This rod has also sections of tubes alternating with the springs to hold them in proper relative position, the said coils and rod running through them having no attachment to the bed-frame except through the hooks, and bearing loosely against the side of the end frames of the bed.

In the drawing, A represents an iron bedstead of the ordinary construction, having side bars B and end bars C. D are the independent detachable springs, which are formed into laterally-projecting loop-shaped seats *a*

coiled near the middle into springs *b*, whose ends are extended upwardly in the form of arms, terminating in hooks *c*. These hooks are placed near the end bars C of a bedstead, with a continuous detachable rod, E, passing through coils *b*, so as to operate as a pivot for the springs, the said rods E running parallel with the end bars C. In the seats *a* of the springs are supported the ends of the slats F, which slats, when depressed by the superincumbent weight of the occupant, cause the loops to describe a circular springing movement about the rod E as a center, which rod bears loosely against the end frames, and is provided with end washers to hold them in position.

The devices, as thus described, are capable of attachment to an iron bedstead without alteration or adaptation in the latter, as shown in Fig. 1, the springs with their slats being held apart in proper relative position by sectional tubes *d* placed upon rod E and alternating with the springs. These tubes are made to fit tightly to the rod, so as to leave no harbor for bed-bugs, and, while holding the springs in proper relative position, serve also, by reason of their tight fit, to brace and strengthen the rod. When the springs are employed upon a wooden bedstead, as shown in Fig. 2, the end frame of a bedstead is provided with a continuous strip or bar, *f*, screwed or otherwise attached to the end frame, and made with a projecting lower edge curved so as to form an attachment to receive the hooks. When this strip is used the hooks of the springs pass through perforations in the said strip, and, being rigidly held in position, the use of the alternating tubes to hold the springs apart is rendered unnecessary.

I am aware of the fact that coiled wire springs with looped seats have been used heretofore, but these have not the advantage of the arms or hooks, but are fastened directly to the end frames, and are not detachable therefrom. With this old construction, moreover, the strain of the slats comes solely upon the projecting arms forming the loop, which results in the overstraining of the spring, whereas, with my upwardly-projecting arms, the strain is partly distributed upon the latter and this difficulty avoided. The absence of

the arms in the case referred to, moreover, prevents the springs from being suspended, and the springs being upon a level with the upper edge of the bed-rails, the occupant is not protected from rolling out by the side bars, as he is with my construction. I therefore disclaim the old construction, and confine my invention to the improvements described, the advantages of which are as follows: first, no separate frame or bed-bottom required; second, no place for bed-bugs; third, the extension of the ends to form hooks prevents overstraining of the opposite loop of the spring; fourth, the springs can be suspended so low that the occupant is protected from falling out of bed; fifth, adaptability to either iron or wooden bedsteads or ship-berths; sixth, simplicity, durability, and cheapness.

Having thus described my invention, what I claim as new is—

1. The independent detachable springs D, having projecting loop-shaped seats *a*, spring coils *b*, and upward-extending arms terminating in hooks *c*, substantially as described, and for the purpose set forth.

2. The detachable springs D, having seats *a*, coils *b*, and hooked arms *c*, in combination with the continuous pivot-rod E passing through said coils, as and for the purpose described.

3. The combination of the detachable springs D, rod E, and alternating tubes *d*, as and for the purpose described.

JAMES W. WRIGHT.

Witnesses:

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SOLON C. KEMON.