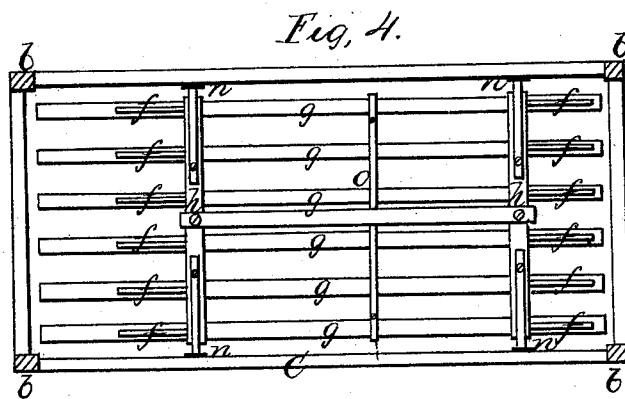
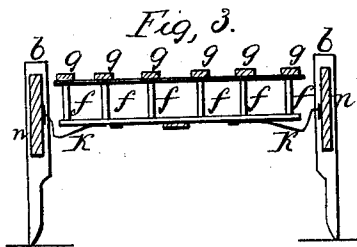
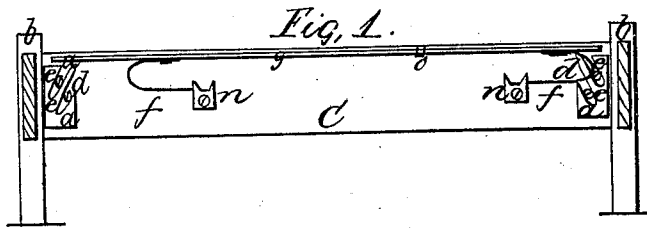


H. Ingraham.

Bed Bottom.

No 109,413

Patented Nov. 22, 1870.



Witnesses,
James Corl
M. B. Gleton

Inventor,
H. Ingraham

United States Patent Office.

HANFORD INGRAHAM, OF NAPLES, NEW YORK.

Letters Patent No. 109,413, dated November 22, 1870.

IMPROVEMENT IN SPRING BED-BOTTOMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HANFORD INGRAHAM, of Naples, in the county of Ontario and State of New York, have invented a new and useful improvement in Bedsteads; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 3 is a transverse section.

Figure 4 is a bottom view.

Like letters in the different figures indicate like parts.

My invention consists—

First, in the arrangement of flat steel springs bolted to the under side of the slats, in connection with cross-bars having extra corner springs attached underneath their ends, said springs having hooks formed on their outer ends, which are placed in catches which are screwed to the side rails, on which the bottom is suspended.

Second, in attaching a cross-slat on the under side of the bottom to the outer slats, to equalize the pressure on the slats.

F F are flat steel springs resembling the letter J, the short ends of which are bolted to the under side of the slats *g g*.

The long ends are screwed to the cross-bars *h h*,

the bows being turned outward in an opposite direction, so that the whole spring yields to the pressure on the slat.

The bend of the spring being equalized, the slat may be pressed down to the cross-bar without the liability of breaking the spring, and may be placed at any desired distance from the ends of the slats, to equalize the pressure on the springs. The backward inclination of the springs, when pressed down, serves to strain the slat, and prevents it from breaking or bending too much in the middle.

k k are extra corner springs, attached to the under side of the cross-bars lengthwise, their outer ends being in the form of a hook, which are placed in the catches *n n*, which are screwed to the rails on which the bottom is suspended.

o is a cross-slat, placed on the under side of the slats, each end being attached to the outer slats to equalize the pressure.

What I claim, and desire to secure by Letters Patent, is—

The flat steel springs *f f*, as arranged and connected with the slats *g g*, cross-bars *h h*, corner springs *k k*, and catches *n n*, when suspended on the rails as set forth.

HANFORD INGRAHAM.

Witnesses:

V. O. HART,

R. C. SANFORD.