

(No Model.)

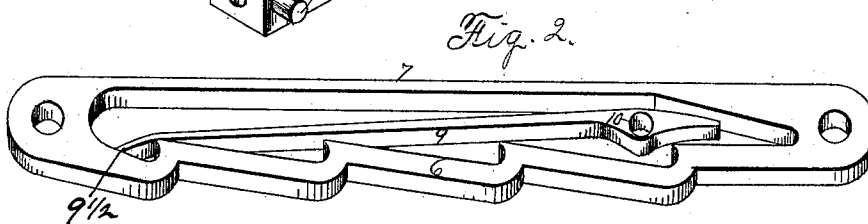
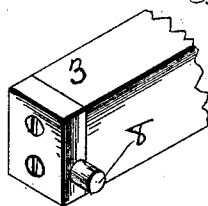
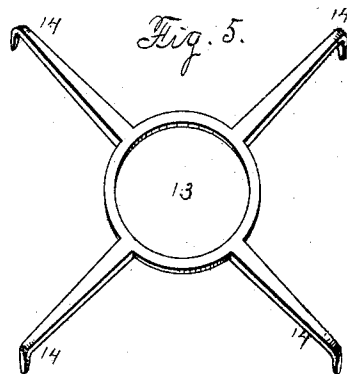
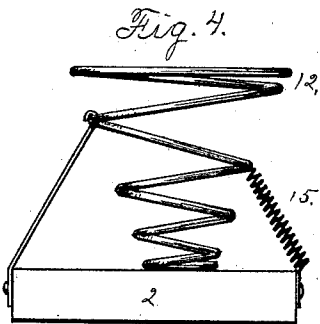
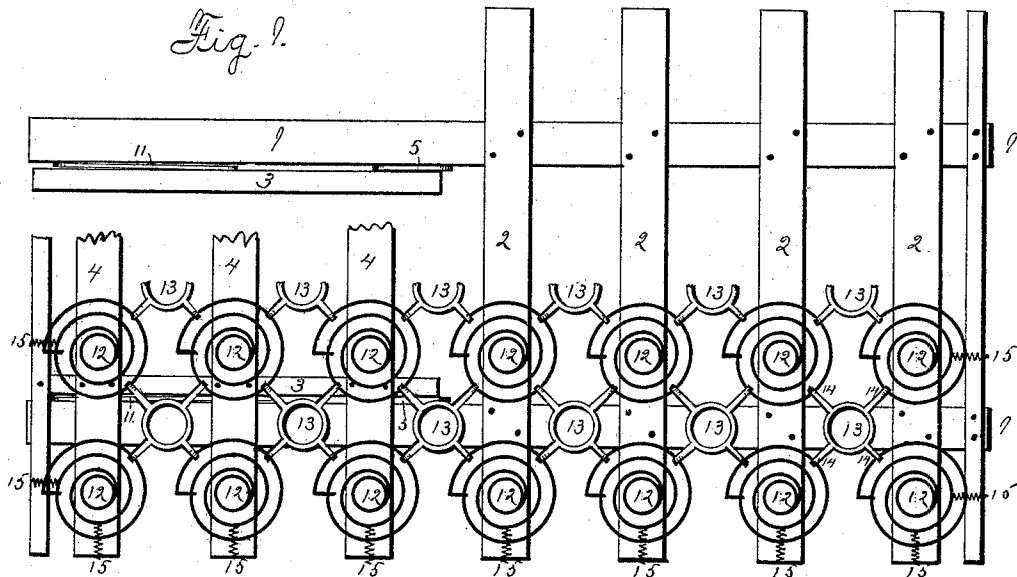
2 Sheets—Sheet 1.

E. A. CLEAVELAND.

BED BOTTOM.

No. 392,009.

Patented Oct. 30, 1888.



Witnesses:
A. O. Behel.
E. Behel.

Inventor:
Elias A. Cleaveland
Benjamin Behel
Atty.

(No Model.)

2 Sheets—Sheet 2.

E. A. CLEVELAND.
BED BOTTOM.

No. 392,009,

Patented Oct. 30, 1888.

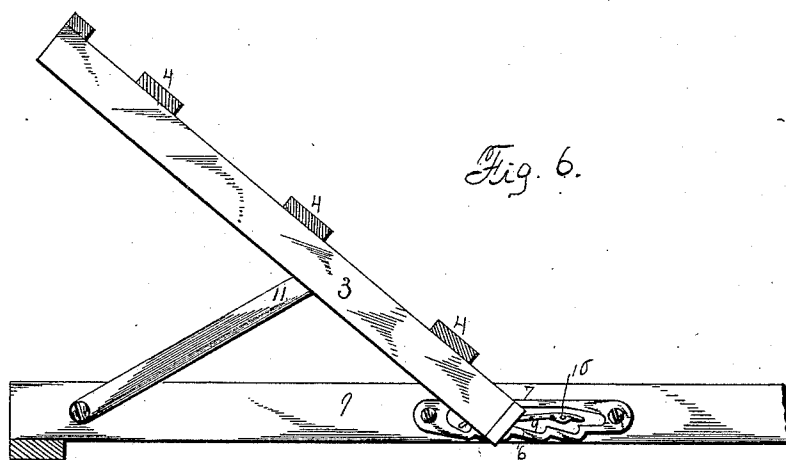


Fig. 6.

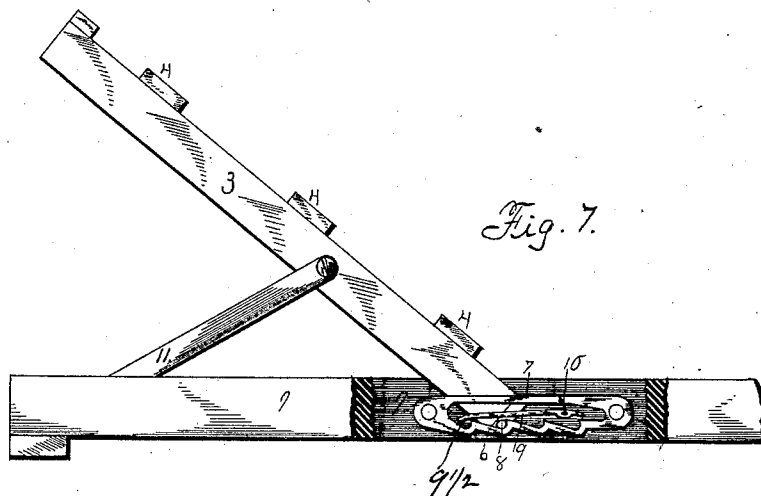


Fig. 7.

Witnesses:
A. O. Bohel.
E. Behel.

Inventor:
Chas. A. Cleveland
Per Jacob Behel
Atty.

UNITED STATES PATENT OFFICE.

ELIAS A. CLEVELAND, OF BELVIDERE, ILLINOIS.

BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 392,009, dated October 30, 1888.

Application filed January 12, 1888. Serial No. 260,493. (No model.)

To all whom it may concern:

Be it known that I, ELIAS A. CLEVELAND, a citizen of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Bed-Bottoms, of which the following is a specification.

This invention relates to a class of bed-bottoms known as the "invalid-bed." Its object is to improve this class of bed-bottoms to render them more efficient and capable of handling with greater ease. To this end I have designed and constructed the bed represented in the accompanying drawings, in which--

Figure 1 is a plan view of a bed-bottom embodying my invention, in which I have omitted a portion of the springs. Fig. 2 is an isometrical face representation of the ratchet. Fig. 3 is an isometrical representation of the detent in place on the foot end portion of the side beams of the adjustable head portion of the bed. Fig. 4 is an elevation of one of the springs in the outer row. Fig. 5 is an isometrical representation of the spider employed to connect the springs. Fig. 6 is a vertical sectional view taken through the center of the bed-bottom, showing the head-rest elevated; and Fig. 7 is a side view, partly in section, showing the head-rest in the same position as shown in Fig. 6.

The base-frame of my improved bed-bottom consists of lengthwise beams 1, of the full length of the bed and of suitable dimensions in cross-section, and transverse bars 2, fixed at suitable intervals to the upper face of the lengthwise beams at the foot end portion thereof. The adjustable head portion consists of lengthwise beams 3 and transverse bars 4, fixed at suitable intervals to their upper face. The lengthwise beams of the adjustable head portion are separated a proper distance to freely enter within the lengthwise beams 1 of the base-frame.

Ratchets 5, consisting of the toothed under bar, 6, and an upper guide-bar, 7, are fixed to the inner face of the lengthwise beams 1 of the base-frame at the foot end of the adjustable head portion.

A detent, 8, is fixed to the foot end of the lengthwise beams of the adjustable head por-

tion in such a manner that the detent 8 will engage the toothed under bar, 6, of the guide-bar 7.

A fly, 9, having a bent end, 9^b, is pivoted at 10 to the lengthwise beams of the base-frame within the opening formed in the ratchet, in such a manner that when the head end of the adjustable head portion is raised to carry the detent to the head end of the ratchet the bent head end of the fly will rise to permit the passage of the detent under its bent head end, after which it will drop to the position shown in solid lines to permit the detent to rise and slide on its upper surface to permit the adjustable head portion to be lowered, and in the passage of the detent beyond the pivotal point of the fly it will depress its rear end and permit the detent to pass to the foot end of the ratchet in position to pass under the foot end of the fly when the adjustable head portion of the bed is raised in position to engage the ratchet-teeth when elevated.

The adjustable head portion of the bed-bottom is connected to the lengthwise beams 1 of the base-frame by means of braces 11, which are pivotally connected at their foot ends to the outer face of the lengthwise beams 3 of the adjustable head portion about the center of their length, and the head end portion of these braces is pivotally connected to the inner face of the side beams of the base-frame, which forms a swinging fulcrum on which to raise and lower the head end of the adjustable head portion.

From the foregoing it will readily be seen that if the head end of the adjustable head portion is raised its brace-connection with the base-frame will cause the detent 8 to move toward the head end of the ratchet, in which movement it may engage any of the teeth within the ratchet to vary its angle of elevation, and when it is desired to depress or lower the head end of the adjustable head portion I prefer to raise its head end to carry the detent under the head end of the fly 9 and permit it to slide toward the foot of the bed on the upper surface of the fly to engage the ratchet at its foot end, as hereinbefore stated. The springs, 12, employed in this instance are of the usual conic spiral form, and are fixed at their foot

ends to the transverse bars 2 and 4 of the base-frame and adjustable head portion at suitable intervals thereon. These several springs are connected to each other by means of a metallic spider, 13, having the ends 14 of its respective arms produced in hook form to embrace the upper coil of the several springs. The spiders employed to connect the springs are preferably produced in solid form from malleable castings, or from plate material cut and pressed to the required form.

The outer row of the coil-springs of my improved bed-bottom are supported in their vertical position by means of a spirally-formed brace-spring, 15, connecting their upper portions with their supporting-frame.

Instead of the brace-spring, a wire link may be employed, as shown in Fig. 4 of the drawings.

I claim as my invention—

1. The combination of the base-frame, an adjustable head portion, detents rigidly fixed thereto and projecting laterally therefrom, ratchets fixed to the side of said base-frame, and a fly pivoted above said ratchet and adapted to disengage the detent from the ratchet-teeth, substantially as set forth.

2. The combination of the base-frame, an adjustable head portion, braces connecting the

head portion with the base-frame, a ratchet fixed to the base-frame, a detent fixed to the head portion, and a fly pivoted within the ratchet and having a bent end to disengage the detent from the ratchet-teeth to permit the return of the detent, substantially as set forth.

3. The combination of the base-frame, an adjustable head portion, braces connecting the head portion with the base-frame, a ratchet fixed to the said base-frame and consisting of the upper guide-bar and the lower bar formed with teeth, and a fly pivoted to the base-frame above the ratchet and provided with a bent end to disengage the detent from the ratchet-teeth to permit the return of the detent, substantially as set forth.

4. The combination of the base-frame, an adjustable head portion, braces connecting the head portion with the base-frame, a ratchet fixed to the said base-frame, said ratchet provided with a guide-bar, and a fly provided with a bent end and pivoted to the base-frame above the ratchet to disengage the detent from the ratchet and to permit its return thereto, substantially as set forth.

ELIAS A. CLEVELAND.

Witnesses:

A. O. BEHEL,
JACOB BEHEL.