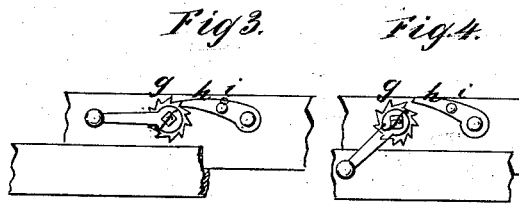
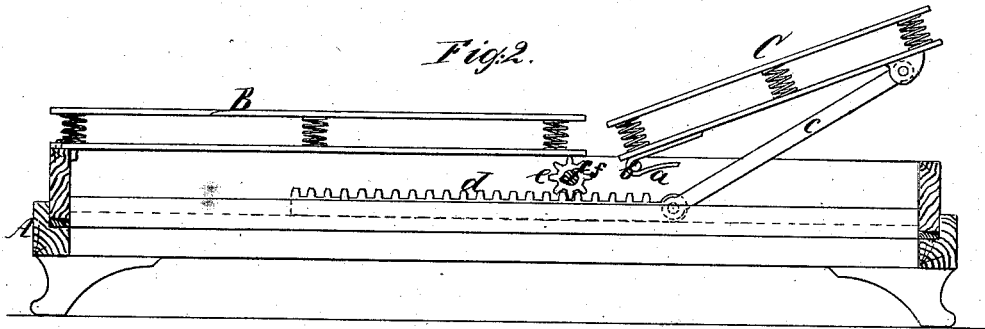
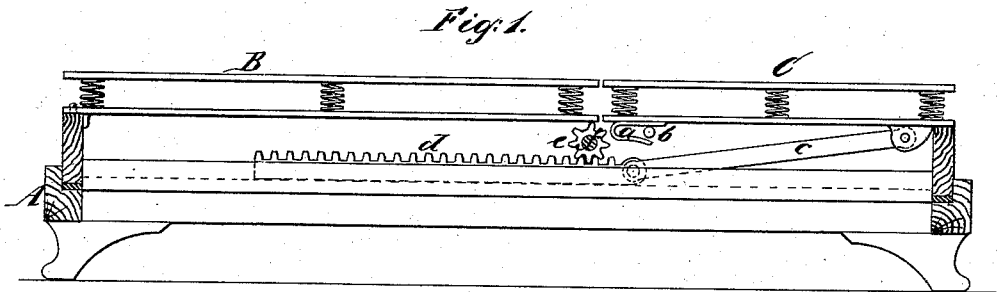


J. MICHEL.
Invalid Bedstead.

No. 160,694

Patented March 9, 1875.



Witnesses:
Henry Gentner
Ernst Bilhuber

Inventor:
Jacob Michel
for
Van Santvoord & Hauff
Attys

UNITED STATES PATENT OFFICE.

JACOB MICHEL, OF NEW YORK, N. Y.

IMPROVEMENT IN INVALID-BEDSTEADS.

Specification forming part of Letters Patent No. **160,694**, dated March 9, 1875; application filed December 24, 1874.

To all whom it may concern:

Be it known that I, JACOB MICHEL, of the city, county, and State of New York, have invented certain new and useful Improvements in Invalid-Beds, of which the following is a specification:

This invention is illustrated in the accompanying drawing, in which Figure 1 represents a longitudinal vertical section of my bed when the head-piece is in a horizontal position. Fig. 2 is a similar section when the head-piece is in an inclined position. Figs. 3 and 4 are side views of the stop mechanism in different positions.

Similar letters indicate corresponding parts.

This invention consists in combining with the head-piece of a bed two racks, which connect with the head-piece by hinged braces, and to which a sliding motion can be imparted by a crank-shaft and pinions, said head-piece being provided with hooks or slotted straps, which catch over studs secured in the frame supporting the bed in such a manner that when the crank-shaft is turned in the proper direction the head-piece is first moved back and then gradually raised to an inclined position.

In the drawing, the letter A designates a frame, which supports my bed or mattress. The lower portion B of this mattress is firmly connected to said frame, while the head-piece C rests loosely thereon, being retained in position as will be presently explained. From the under surface of the head-piece, near to its junction with the lower portion B of the mattress, project two hooks or straps, *a*, close to the side rails of the frame A, and these hooks catch over studs *b*, which project from the inner surfaces of said side rails. The upper or outer end of the head-piece C connects, by two hinged braces, *c*, with two rack-bars, *d*, which slide in guide-grooves provided on the inner surfaces of the side rails of the frame, and which engage with pinions *e*, mounted on a shaft, *f*, which extends transversely through the frame A, having its bearings in the side rails of said frame.

When the shaft *f* is turned in the proper direction, the head-piece C first slides back until the bights of the hooks *a* strike the studs *b*, and then the outer or upper end of said head-piece is gradually raised to an inclined position, as shown in Fig. 2. In order to accomplish this purpose the sliding motion of the head-piece is indispensable; otherwise said head-piece could not be raised to an inclined position, or a gap would have to be left between the head-piece and the lower portion of the mattress.

On the shaft *f* are mounted ratchet-wheels *g*, close to the outer surfaces of the side rails of the frame A, and stop-pawls *h*, which are hinged to said side rails, can be thrown in gear with said ratchet-wheels, so as to retain the head-piece at the desired inclination. Each of the pawls *h* is provided with a stop, *i*, by means of which it can be retained in a raised position out of gear with the ratchet-wheel.

After the head-piece has been brought to the desired inclination the pawls *h* are thrown in gear with the ratchet-wheels; but when it is desired to lower the head-piece, or to bring it back to its horizontal position, the stop-pawls must be raised so that the shaft *f* can be turned backward.

By this arrangement the head-piece C can be raised or lowered without disturbing the person occupying the bed.

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

The combination of hooks or straps *a*, studs *b*, hinged braces *c*, and sliding rack-bars *d*, with the head-piece C of a bed or mattress, and with the frame A supporting said mattress, all constructed and operating substantially in the manner shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 18th day of December, 1874.

JACOB MICHEL. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.