

(No Model.)

E. G. MILLER.
FOLDING BED.

No. 489,489.

Patented Jan. 10, 1893.

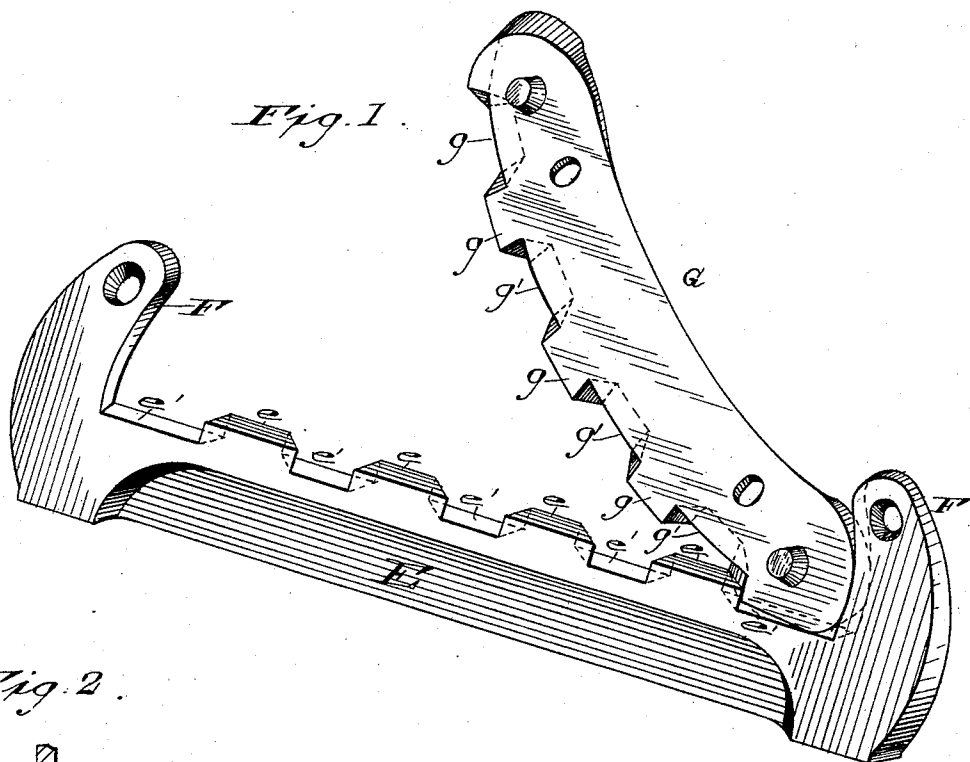


Fig. 2.

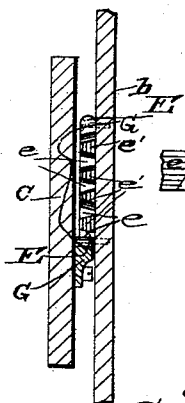


Fig. 3.

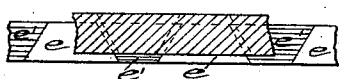


Fig. 4.

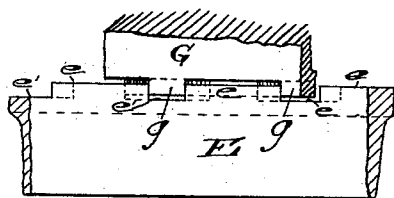
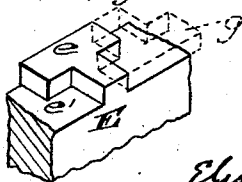


Fig. 5.



Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

ELISHA G. MILLER, OF CHICAGO, ILLINOIS.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 489,489, dated January 10, 1893.

Application filed November 4, 1890. Serial No. 370,349. (No model.)

To all whom it may concern:

Be it known that I, ELISHA G. MILLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to improvements in folding beds, and consists in improvements in the connection between the bed and its frame which will be hereinafter fully described and pointed out in the claims.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe my improvement, referring to the accompanying drawings, in which:—

Figure 1, is a perspective view of my ratchet hinge lock. Fig. 2, is an end sectional view showing the ratchet hinge attached to the side rail of the main frame and casing. Fig. 3, is sectional plan view of a portion of the ratchet hinge lock showing beveled teeth. Fig. 4, is a side view of the same. Figs. 5, and 6 are views of another form of the ratchet hinge lock.

Similar letters refer to similar parts throughout the several views.

It has been found by experience in the use of folding beds, that the side rails which are hinged or pivoted to the casing are liable to spread and get out of proper position, so that the bed will not fold freely, and the parts become displaced, and not be in good working order; there being no provision for holding the side rails in a positive relative position and to prevent them from spreading. I overcome this objection by providing a hinge or pivot which act not only as a hinge or pivot for folding, but will also serve as a lock to hold the side rails in a positive position and prevent the side rails from spreading.

I will now proceed to describe my locking racks: On the inner wall of the casing, on a line with the bed frame when down I secure a plate or rack E rigidly secured to the casing by bolts or otherwise. This plate I preferably make of the form shown in Fig. 1 of the drawings, which consists of a bar of metal or other suitable material, having formed upon its upper surface or cut out teeth *e e* which are

wedged shape, having tapering sides and having corresponding wedge shaped openings *e'* between; the wider ends of the openings being adjacent to the casing. The outer ends of the plate E are formed with raised projecting lips or ears F for the purpose presently explained. On the side board of the main body of the bed, adjacent to where the plate E is secured, I rigidly secure a curved plate or rack bar G, which bar or plate is formed or cut out with teeth *g* similar to the teeth *e* in the plate E, the teeth in this plate being wedge shaped, similar to those in the plate E. The teeth of the plate G, when the bed is folded up or down will mesh in the teeth of the plate E, as clearly seen in Fig. 1 of the drawings. It will be seen that the wide ends of the teeth on the plate on the casing, on either side of the bed will face toward the center of the bed, while the wide ends of the teeth on the plate on the side rail of the bed will face outward, so that, the teeth meshing together will at any time prevent the parts from spreading, and the racks from becoming disengaged by any lateral movement, and at the same time the freedom of the folding or movement of the hinge or pivot is not interfered with. I prefer to have the lips F, for if they were not there the parts would be liable to become separated and out of gear, but with said lip or extensions, the ends of the plate G being preferably rounded would be confined or checked or bear against the inner surface of said lip, and be prevented from slipping out of place and getting out of gear, and there will be no danger of the two plates becoming separated, but will be at all times in proper gear and in proper relative position. It is evident however, that the ears may be dispensed with in some cases, and the locking results attained.

It is evident that I need not confine myself to the construction of wedge shape teeth as shown, as I may change the form of the plates as may be desired, as my invention consists broadly in hinge which not only acts as a hinge or pivot, but also as a lock.

In Figs. 5 and 6 I have shown one form of modification, in which the plates are formed with T shaped lugs or projections which mesh and interlock with each other, forming both a hinge and a lock.

It is evident that the plates may be constructed in other forms and the same principle without departing from my invention.

The manner of the operation is selfevident
5 and readily understood from the foregoing description and the drawings and needs no further description in detail.

Having described my invention, what I
10 claim as new and secure by Letters Patent, is:—

1. In a folding bed the intermeshing racks attached respectively to the casing and the bed frame, the teeth of the racks on the casing being narrower on the inside next the cas-

ing than on the outside, and the teeth of the 15 racks on the bed frame being constructed to fit the spaces between the teeth of the casing racks, substantially as described.

2. In a folding bed the intermeshing racks attached respectively to the casing and the 20 bed frame the former racks having teeth tapered laterally toward the casing and the latter having teeth tapered laterally toward the bed frame, substantially as described.

ELISHA G. MILLER.

Witnesses:

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