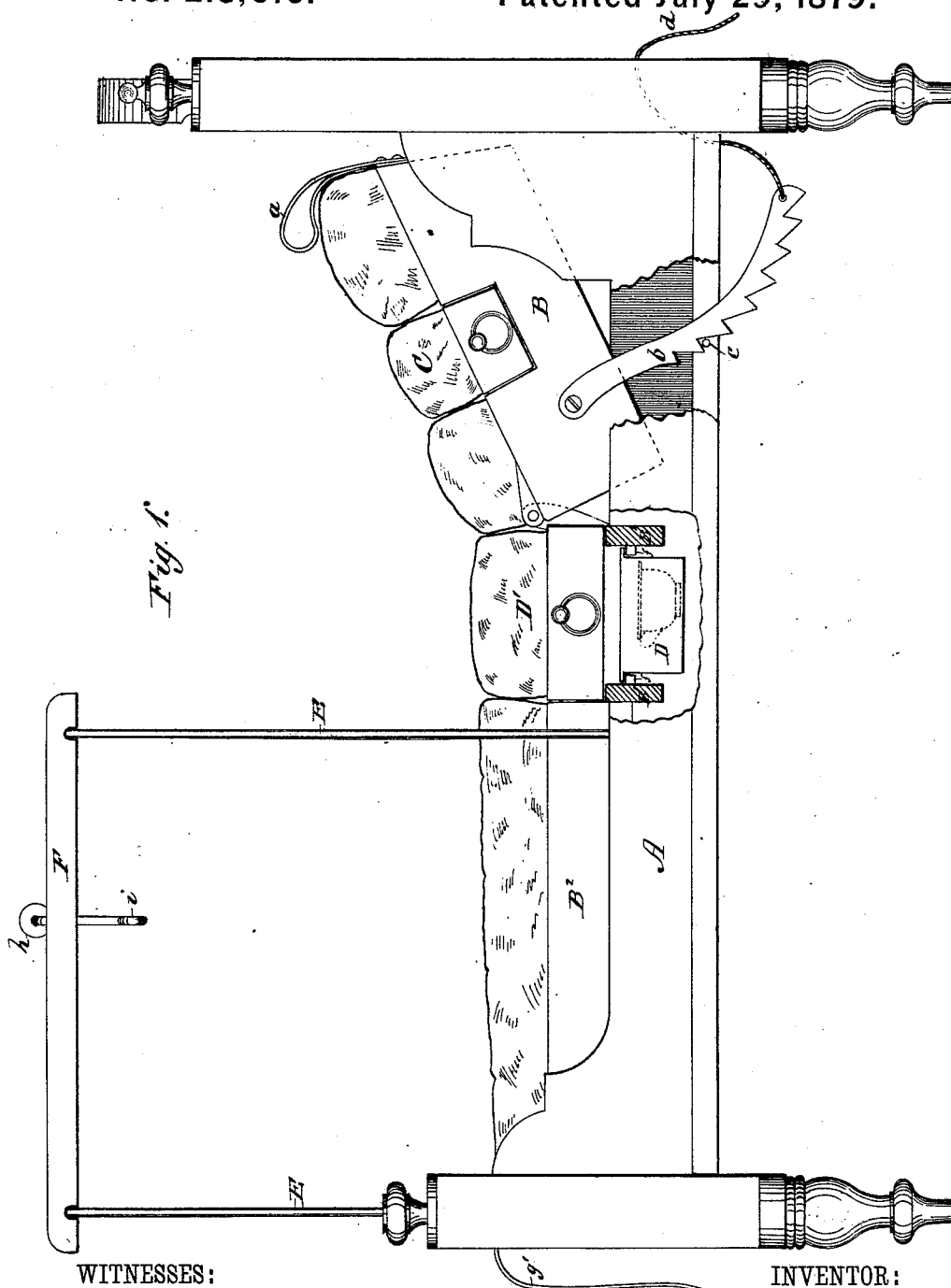


W. S. GROFF.  
Invalid-Bed.

No. 218,016.

Patented July 29, 1879.



WITNESSES:

*W. W. Hollingsworth*  
*Edw. W. Byrnes*

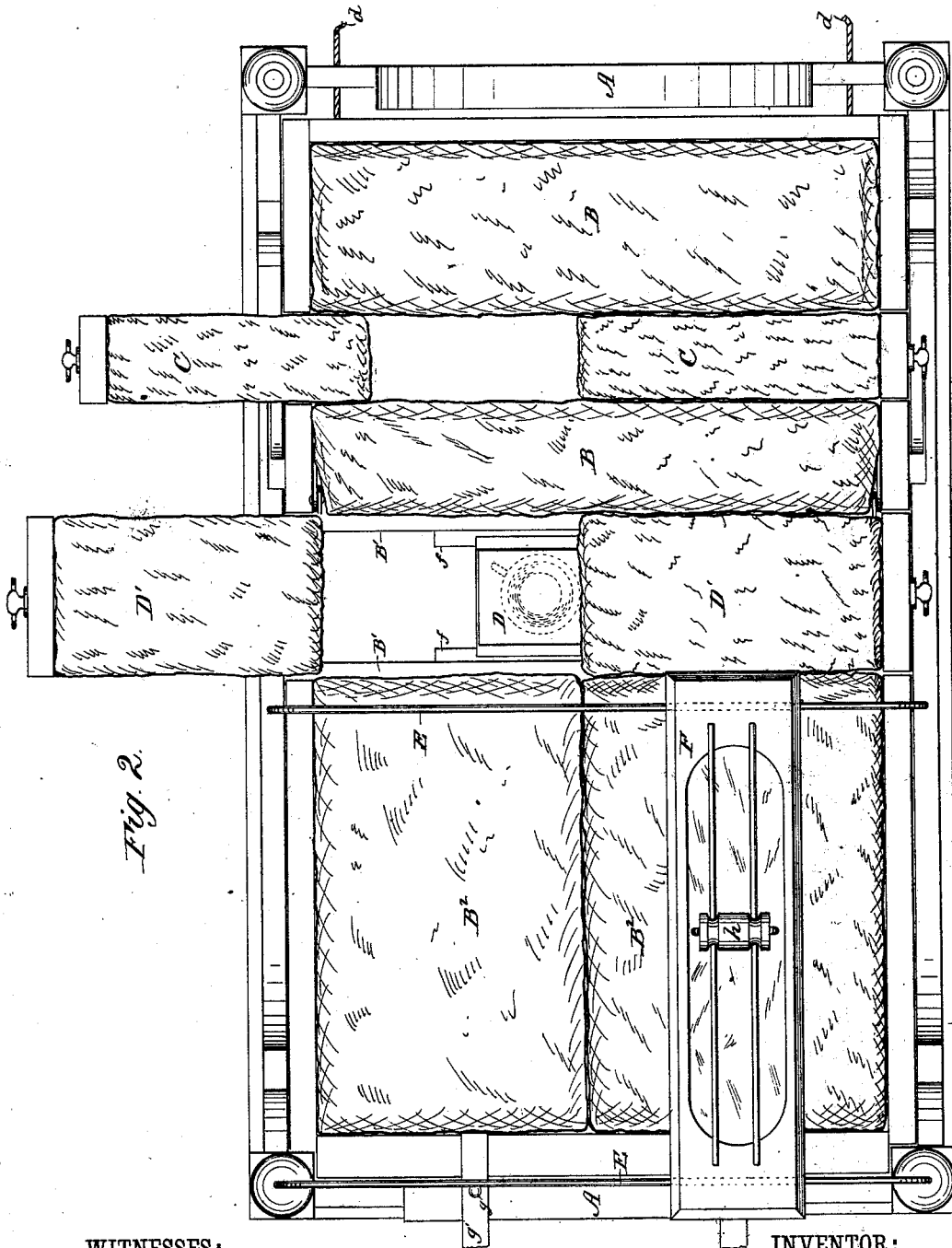
INVENTOR:

*W. S. Groff*  
BY *Wm. T. L.*  
ATTORNEYS.

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# UNITED STATES PATENT OFFICE.

WILLIAM S. GROFF, OF FREDERICK, MARYLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM BOULDIN, JR., OF SAME PLACE.

## IMPROVEMENT IN INVALID-BEDS.

Specification forming part of Letters Patent No. **218,016**, dated July 29, 1879; application filed May 26, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM S. GROFF, of the city and county of Frederick, and State of Maryland, have invented a new and Improved Invalid-Bed; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, with one of the side rails of the bedstead broken away. Fig. 2 is a plan view, looking down on the bed, and showing the removable sections of the mattress partly pulled out.

My invention relates to certain improvements in invalid-beds of that form in which the head and foot sections of the bed are made hinged and movable.

It consists in constructing the hinged head-section of the mattress and bedstead with a removable sliding section, composed of a transverse piece of the mattress permanently connected to a rigid base-frame, which removable section, when in place, gives continuity to the head-section, and when pulled out affords a ventilation to the back of the patient, or gives access to sores on the same.

The invention also consists in combining said head-section with hinged foot-sections and an intermediate stationary part of the bedstead, having a removable mattress-section for the bed-pan, corresponding to the removable section in the head portion of the bed.

The invention also further consists in the peculiar construction of an elevated foot-rest, as hereinafter more fully described.

In the drawings, A represents the bedstead, which may be of any ordinary construction, and in which is arranged the bed-frame B B<sup>1</sup> B<sup>2</sup>. Of these sections of the bed-frame, B is hinged to B<sup>1</sup>, and is made capable of being raised to bring the patient into a sitting position by a strap, *a*, or other equivalent means. When thus raised it is held in this position by a curved ratchet-bar, *b*, on each side, which are pivoted to the sides of the movable head-section, and pass through vertical slots in the side bars of the bedstead and catch upon a transverse bolt, *c*. For releasing these ratchet-bars from engagement with the bolt *c*, a cord,

*d*, is attached to each ratchet-bar, which is to be pulled whenever the head-section is to be lowered. Before said cord is pulled, however, the head-strap should be firmly held, so that the head-section may be lowered gradually and without disturbing the patient.

In constructing the head-section it is formed with a central transverse slot, upon each side of which the mattress is firmly and permanently secured, while this slotted middle section is covered and continuity given to the bed by removable and sliding mattress-sections C, which have a wooden base and pulls, by which they are drawn out endwise like drawers. These sections extend to the middle of the bed, and are pulled out from opposite sides of the same. The object of these sliding mattress-sections is to ventilate the back of a patient, and to prevent or reduce bed-sores by preventing them from being pressed by the bed, as well as to give access to sores for treatment without disturbing the patient.

The middle section, B<sup>1</sup>, of the bed-frame is a fixture, and is constructed with an open bottom having cleats or ways *f f*, upon which is suspended a bed-pan, D, while above the said frame continuity is given to the mattress by sliding section D', of the same general character as those shown in the head-section at C. These sections are to be removed when the patient desires to use the bed-pan.

The foot and leg section B<sup>2</sup> of the mattress is divided longitudinally in the center, so as to form an independent section for each leg. These sections are hinged at their upper ends to the middle section, B<sup>1</sup>, and at their lower ends are provided with straps *g'*, which may be adjustably secured to knobs *g* on the foot-board of the bedstead, so as to give independently to said foot-sections any desired inclination below the horizontal line.

For holding the foot in an elevated position a frame-work, E, is erected at the foot of the bed, consisting of two elevated and bent rods, which are attached, the one to the foot-posts, and the other to the sides of the bed, and which cross the bed transversely. Upon the elevated horizontal portions of these bars is supported a laterally-sliding frame, F, grooved

to fit upon the bars, and adapted to slide from one side to the other of the bed. This frame is slotted longitudinally and provided with guide-rails, upon which there travels a grooved roller, *h*, carrying a suspended stirrup, *i*, to which a sling may be attached to support the patient's foot.

The travel of the roller on the guide-rails of the frame *F* allows the patient's foot to be moved freely in a position longitudinal with the body, while the adjustment of the frame on the elevated bars permits the frame to be used on either side of the bed.

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

1. An invalid-bed consisting of the hinged head-frame *B*, having removable sliding sections *C*, the stationary frame *B*<sup>1</sup>, having slid-

ing sections *D*<sup>1</sup>, and the longitudinally-divided and hinged foot-section *B*<sup>2</sup>, combined and arranged substantially as described.

2. The combination, with an invalid-bed, of a hinged head-piece having permanent divided mattress-sections, an opening between the same, and removable mattress-sections *C*, arranged to close said opening and give continuity to the head-section or be removed, substantially as described.

3. The combination, with an invalid-bed, of an elevated frame, *E*, laterally-sliding track-frame *F*, and the roller *h*, carrying stirrup *i*, substantially as shown and described.

WM. SHELTON GROFF.

Witnesses:

WM. BOULDIN, Jr.,  
J. J. SUMAN.