(No Model.)

A. J. McDONALD.

INVALID LOUNGE.

No. 263,345. Patented Aug. 29, 1882.

Fig. 1.

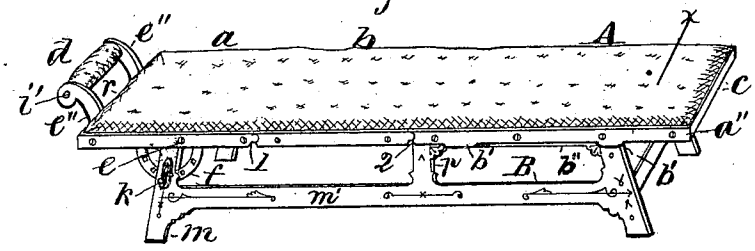


Fig. 4.

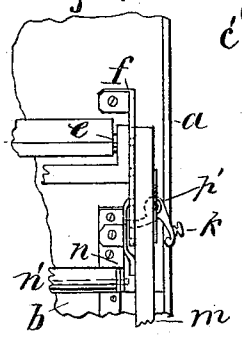


Fig. 2.

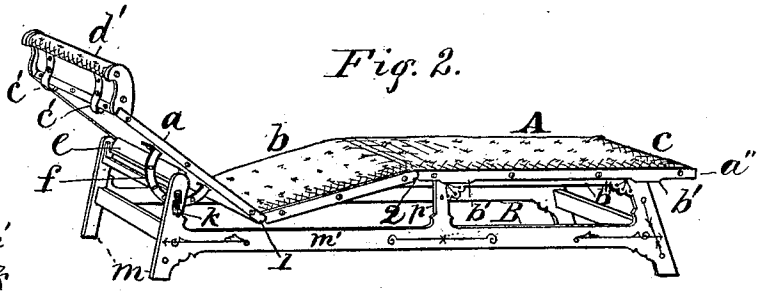


Fig. 3

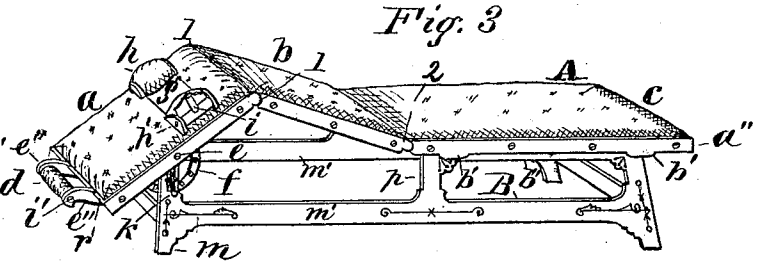


Fig. 5.

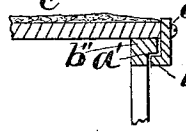
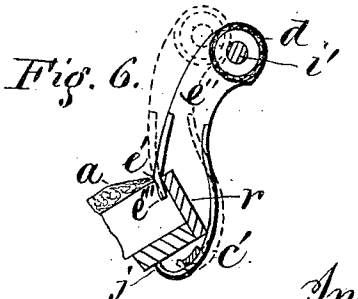


Fig. 6.



Attest.
Ed. Converse
G. M. Gridley

Inventor.
Archibald J. McDonald,
B. C. Converse, Atty.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ARCHIBALD J. McDONALD, OF SPRINGFIELD, OHIO.

INVALID-LOUNGE.

SPECIFICATION forming part of Letters Patent No. 263,345, dated August 29, 1882.

Application filed June 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD J. McDONALD, a citizen of Canada, residing at Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Invalid-Lounges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to certain improvements in invalid-lounges, whereby they may be better adapted for curing certain specific diseases.

The objects of my invention are to produce a lounge for invalids which may be operated to change the position of the patient to any required extent in facilitating the means of cure in diseases for which it may be used; also, to have such mechanism adapted specially to be operated by the patient himself without the aid of an attendant; also, to construct a lounge which can easily be manipulated by the patient, even in advanced stages of the disease, and which admits of a variety of changes in form to suit the wants of the patient in changing his position.

Figure 1 is a perspective view of my improved lounge when extended. Fig. 2 is a perspective view of the same changed to allow of a half-recumbent position. Fig. 3 is a view of the same in the position used by consumptive patients in discharging pus collections from the lungs. Fig. 4 is an enlarged view (from the under side of the top) of the adjusting device and its connections in the pivoted section. Fig. 5 is a cross-section through a part of the top side rail and guide-rail on one side of the foot or sliding section of the lounge. Fig. 6 is an enlarged view, in cross-section, of the revoluble head-rest and attachments, showing also a cross-section of that part of the end of the lounge-top to which it is attached.

A is the lounge, which is constructed with an under frame-work not unlike that of ordinary lounges, except that near the middle an intermediate standard on either side supports the inner ends of the short top rails, *b''*, (see Figs. 1, 2, 3, and 5,) and an open space is left between the standards *p* and the front legs, *m*, above the connecting-rails *m'*, for the operation of the connected front sections. The top of the lounge is made of boards, and may be covered with any desired material used by upholsterers and stuffed with hair or other suitable substance to answer for the purposes and uses to which it is applied. The top, in the figures shown, is finished with an outside rail, *a''*, to protect the edges and to serve in part for making the connections at the joined ends of the sections. The top of the lounge, which embodies the main features of my improvement, is made in three sections, *a*, *b*, and *c*. These are connected at their ends (under the covering) by leaf-hinges *n*, as shown in the detail, Fig. 4, which represents the under side of a broken section, *a*, and a part of section *b* hinged thereto. Section *a* is pivoted in the top of the leg-standards *m* of the frame B upon a cross-piece, *e*, fastened across the under side of the section transversely thereto. The pivots at the ends of the cross-piece have their bearings at the top of the standards *m* on the inside, and permit this section to be tilted in either direction, when desired, by the patient throwing the weight of the body upon either side of the pivot-line. Section *a* is hinged to the end of the middle section, *b*, and the end where it connects with it is rounded to make a snug joint with the connected end of *b*, which is grooved out to fit the bead on the end of *a*, making a joint that will not catch the clothing or get out of order. Joint 2 is made in the same manner, the hinge in each being placed at a little distance within the edge of the top board in order to allow the cloth used in upholstering to be tacked along the edges. Section *a* is wholly supported upon its pivotal bearings. Section *b* is unsupported, except at its hinged connections with *a* and *c*, which receive the weight of the body or any portion of the patient resting upon this section. Section *c* is supported entirely upon two short side rails, *b''*, at the top of frame B, which extend on either side from the middle standard, *p*, to the back end of the frame. These side rails have an undercut shoulder or rabbeted notch throughout their length, (see Fig. 5,) and the side rails of the top *a''*, at the points *b'*, are also rabbeted to form a groove, with a tongue, *b'*, extending under the one formed on the side rails, *b''*. This allows section *c* to slide on

the top of rails b'', and the grooved rails prevent any lateral displacement of this section. When hinge 1 is bent either upward or downward the section c slides either backward or forward, as the angle formed by the joint approaches or recedes from a horizontal line. In the manner of supporting the several sections of my improved lounge it differs entirely from that used in lounges of the same class. In those heretofore used the sections are supported upon inside rails of the frame and have their connections bearing upon the rails when tilted. In lounges of this kind a lever is used of considerable length, and the angle made by the connected sections is produced (in degree) by a pivoted cam operated under the connected parts requiring elevation. This mode of operating requires the services of an attendant, which in my improvement can be dispensed with. The section a, when tilted to any desired degree of inclination, is fastened by a self-operating latch, engaging with holes or with teeth in a segment, f, (seen in the figures,) extending around the pivot on one side of the lounge at the top of standard m. This latch k is of angular shape, (see Fig. 4,) and is pivoted at the angle by a pivot, p'. The weight of the lever end k, which is provided with a knob-handle, causes it to operate by gravity in engaging with the holes in the rack. (Seen in the several figures.) Other equivalent devices may be used; and I do not confine myself to the specific construction herein shown for locking the tilting section a in position, as the main object of this part of my improvement is to have it made so as to be easily operated in disengaging the locking parts by the patient himself without assistance, and to manipulate the lounge in the manner described. In the enlarged view, Fig. 4, as well as in the other figures, it will be noticed that the latch is placed within easy reach of the patient using the lounge.

In operating my improved lounge for the cure of patients suffering from pulmonary disease it is provided with a detachable head-rest, d. (Shown attached in Figs. 1, 3, and 6.) In the latter figure it is shown in cross-section. This rest consists of a pair of arms, e'', supporting a hollow upholstered roller, pivoted upon a rod, i', extending from one to the other at their top ends, making it adjustable to allow it to turn slightly as the patient's head is lowered with the head end of section a, the object of the adjustability being to have the roller adapt itself to the partial shift of the head forward as the forehead presses upon it. Metal lugs e''' extend from arms e'' through slot e' inside the end rail, r, on the upper side, and curved braces c' have an end bearing underneath upon the bottom board diagonally opposite. Lugs e''' are first inserted and the rest pushed outward. This fastening device is simple and allows the rest to be easily and quickly detached by throwing the top end of the rest forward, as seen in the dotted lines, Fig. 6, thus releasing the hook j from below and allowing the rest to be lifted out. The object of the head-rest d is to have a suitable rest for the head when the patient is lying upon the lounge as changed to the form seen in Fig. 3, with the head end tilted down. In this form, which is necessary for discharging the pus accumulations, the patient lies face downward, with the forehead resting upon the roller, which is stuffed to make it easy and comfortable, the hands grasp the two side rails of a, the trunk lying on the latter, with the thighs resting upon b, the angle 1 fitting into the bend of the hips, and the knees fitting down into the inner angle, 2. In this position the tendency of the purulent discharge from the lungs, being downward, is easily thrown off in a few minutes by the coughing that ensues from the irritation caused by the pus seeking its way out by gravitation. The space between the roller and the head-rail r allows the patient to discharge, in a suitable vessel placed beneath, the pus thrown off or spit up.

Another longer head-rest, d', (seen in the view Fig. 2,) is used for a patient sitting in a half-recumbent posture. It is in form like a section of a chair-back or end of a sofa, and is upholstered to match the lounge. It is provided with lugs and hook-braces similar to those on the head-rest d, and is attached and detached in the same manner. The position of the patient when the lounge is in the form shown in this figure gives him rest from both lying and sitting, as the knees and legs are raised, while the hips are lowered. This position is particularly adapted to the treatment of diseases of the urinary organs and for operations upon the same.

I do not confine myself to this invention as solely for invalid uses, as it can be as well adapted to the use of families and of professional men whose sedentary habits confine them in their duties and prevent them from taking out-of-door exercise, as by its use a rest and change of position can be had, which is sometimes highly beneficial.

I claim as my invention—

1. In an invalid-lounge, a top consisting of three sections hinged together, and having its head-section supported upon pivoted journals, whereby its connected sections are made to assume the positions required by tilting of said head-section, substantially as set forth.

2. A lounge for the use of invalids and for other purposes, having its top sections flexibly connected, one of said sections being pivoted in such manner as to adapt it to be operated, in connection with the other sections attached thereto, by the weight of the body, and provided with an automatic locking device for securing said sections in adjustment, substantially as set forth.

3. A lounge for the use of invalids and for other purposes, the top of which is constructed in three sections flexibly connected together, the head-section thereof being pivoted to the top of the frame-standards in such manner as to allow it to be tilted to any required degree

of inclination toward either side of its bearings, and having the foot-section supported upon horizontal guide-rails, the intermediate section, between the head and foot sections, being unsupported except at its connected ends, the whole of said sections adapted to be operated by the weight of the body thereon in conforming them to the positions shown and specified through the movements of the pivoted section, as set forth.

4. In a lounge constructed with separate sections flexibly connected together, and having the head or operative section pivoted in the manner described, the combination, with said section, of an adjustable head-rest applied thereto and made detachable therefrom, as set forth.

5. In an invalid-lounge adapted to be operated as described, a detachable head-rest having a pivoted self-adjustable roller, as set forth.

6. In a lounge having its sections flexibly connected together, and adapted to be operated in the manner and for the purpose set forth, a detachable head-rest for attaching to the head-section of the lounge, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ARCHIBALD J. McDONALD.

Witnesses:
B. C. CONVERSE,
F. H. PENFIELD.