

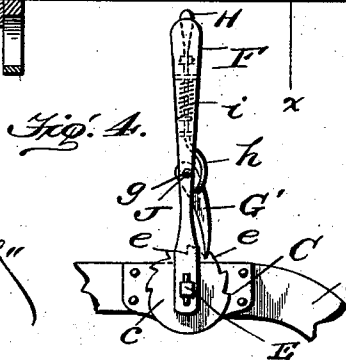
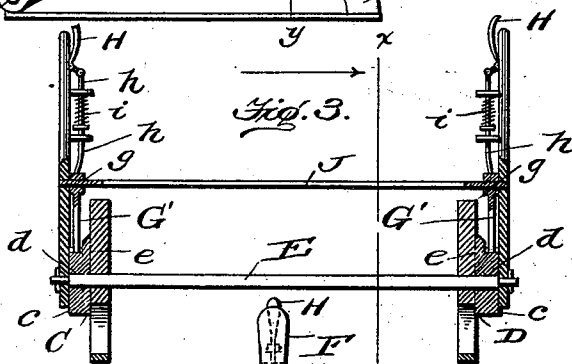
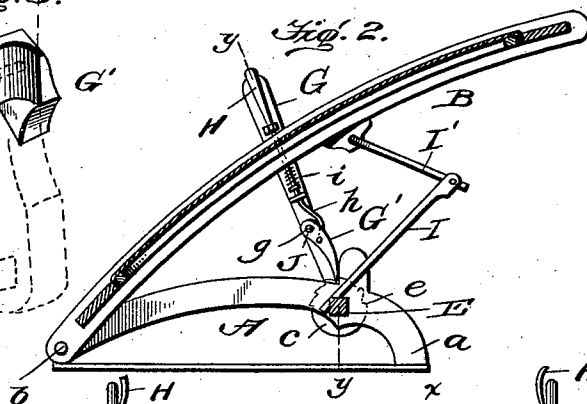
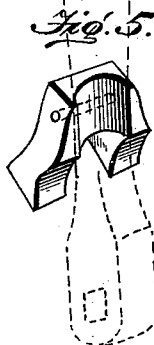
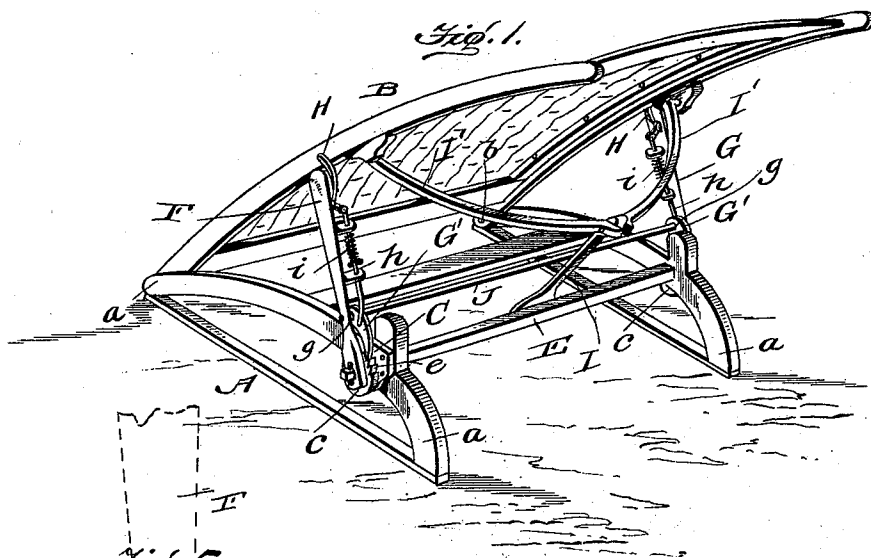
(No Model.)

P. A. SAUM.

ADJUSTABLE HEAD AND BACK REST FOR BEDS.

No. 499,147.

Patented June 6, 1893.



WITNESSES:

WITNESSES:
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UNITED STATES PATENT OFFICE.

PERRY A. SAUM, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF
ONE-HALF TO HENRY S. HAIGHT, OF SAME PLACE.

ADJUSTABLE HEAD AND BACK REST FOR BEDS.

SPECIFICATION forming part of Letters Patent No. 499,147, dated June 6, 1893.

Application filed December 30, 1892. Serial No. 456,785. (No model.)

To all whom it may concern:

Be it known that I, PERRY A. SAUM, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Adjustable Head and Back Rests for Beds; and I do hereby 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.

My invention relates to improvements in head and back rests designed to be used on beds to prop up invalids or convalescents, and the object in view is to provide a simple and strong rest which can be used on any bed or cot to raise the occupant of the bed to a reclining or sitting posture.

A further object of the invention is to provide the rest with means whereby the attendant can raise the movable part of the rest while at the side of the bed and with a minimum exertion, or in case the occupant of the bed is strong enough, he can raise or lower the movable part of the rest, as the lever for operating the rest is within convenient reach.

A further object of the invention is to provide means for locking or holding the movable part of the rest at the proper adjusted positions, and which locking mechanism is adapted to be automatically thrown out of gear with the rock shaft when it is desired to lower the movable part of the rest.

With these and other ends in view, my invention consists in the combination with a base and a movable section pivoted or hinged to the base, of brackets securely attached to the base on opposite sides thereof, arranged in line with each other, and each provided with a concentric hub or disk formed with a series of ratchet teeth extending partially around the periphery of said hub or disk, a rock shaft extending transversely across the base, in rear of the pivoted section, and journaled in bearings in the aligned brackets, an arm rigid and movable with the rock shaft, links pivotally connected to the free end of said arm and the movable head section, and a lever or levers rigid with one or both ends of the rock shaft, so as to be within convenient reach, and each provided with a pivoted pawl

arranged to engage with the ratchet teeth on the fixed hubs or disks, the pawl being controlled by a pivoted hand piece on the lever and provided with a spring which normally throws the pawl into engagement with said ratchet teeth. In some instances I prefer to employ two levers secured to opposite ends of the rock shaft, and to provide two pawls, one on each lever, which pawls are connected by a common rod or shaft so that when one hand piece on one lever is operated both of the pawls will be lifted and thrown out of engagement with the ratchets, whereby the occupant of the bed can readily lower the movable section in case the nurse or attendant is not within call. The use of two levers is further advantageous as it enables the nurse or attendant to operate the movable section of the rest from either side of the bed, and it also provides convenient means whereby the occupant of the bed, in some cases, can use his full strength in raising the movable section.

My invention further consists in the peculiar construction and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the claims.

I have illustrated my invention in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my improved rest showing the movable section partially raised. Fig. 2 is a vertical sectional view on the plane indicated by the dotted line $x x$ of Fig. 3. Fig. 3 is another vertical sectional view on a plane at right angles to Fig. 2 and on the dotted line $y y$ of said Fig. 2. Fig. 4 is an enlarged detail view of a part of the base, the rigid hanger and ratchet-disk, the rock shaft, the lever and the hand piece for controlling the pawl on said lever. Fig. 5 is a detached perspective view of the double pawl showing the same applied to a lever, the latter being indicated by dotted lines.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the base and B the movable section of my rest designed for propping sick people up in a bed or cot. This base A, consists of the side pieces curved or shaped so as

to provide the feet *a* and connected together by transverse tie bars, the whole forming a substantial structure of light skeleton outline. If desired, strips or boards may be secured to the feet *a* to prevent the latter from sinking into the mattress or bed, and to give a broad firm bearing to the base.

The movable section B of the rest consists of a skeleton frame comprising end and side bars suitably secured together, and this frame may be upholstered or cushioned in any suitable or preferable manner, or it can be finished in any preferable style, suitable to the season of the year and designed to render the patient easy and comfortable. The lower forward end of this movable section B is pivotally connected to the forward end of the base A, by the pivots *b, b*, and the movable section is free to turn on these pivots so that it can be raised or lowered.

To the side pieces of the base A are rigidly secured the two brackets C, D, adapted for the right and left hand sides of the base. Each bracket is provided with a rigid hub or disk *c* and with a bearing *d*; and said brackets are so arranged and secured to the base that the bearings *d* therein are in alignment with each other transversely across the base. The hubs or disks *c* of the brackets are preferably cast integral with the plates or bodies of said brackets, and said disks or hubs are concentric with the bearings *c d* therein. Each disk or hub is provided on its periphery with a series of ratchet shaped teeth *e*, which however do not extend entirely around the periphery of said hub or disk as the rock shaft only has a limited rocking movement in the bearings.

E is the rock shaft which extends transversely across the base, and it is journaled in the aligned bearings in the fixed brackets on said base, the ends of the shaft being extended beyond the bearings so that they protrude beyond the sides of the base for the convenient attachment to the rock shaft of one or both of the levers F, G, by which the shaft can be turned or rocked from either side of the rest. The ends of the rock shaft are preferably made square or polygonal, and the levers are likewise provided with square or polygonal openings to receive the ends of the shaft, and the levers are held in place by transverse pins or keys, although the levers may be fastened on the rock shaft in any desired or equivalent manner. The levers are so arranged on the rock shaft that they lie in a horizontal position in front of the rock shaft when the movable section B is raised to its highest point, and when said movable section B is lowered the levers assume a vertical position. This arrangement of the levers is adopted for the purpose of enabling the occupant of the bed to lower the movable section B of the rest when an attendant is not within call, and in some cases, the occupant can raise the movable section by grasping and pulling down on both of the levers. Each lever carries a pawl G' which is pivoted

at its heel, as at *g*, to the lever in such manner that the nose or free end of the pawl is adapted to engage with the teeth on the proper ratchet hub or disk; and to this pawl is connected one end of a rod *h* having its other end connected to a pivoted hand piece H on the lever. This hand piece H is arranged so that it can be grasped at the same time that the hand grasps the lever to enable the pawl to be lifted out of engagement with the ratchet when it is desired to turn the lever and shaft to lower the movable section B. Said rod *h* has a coiled spring *i* which serves to normally depress the rod and pawl to cause the nose of the pawl to normally engage with the ratchet, and when the hand piece H is turned by the pressure of the hand thereon this spring is compressed to withdraw the pawl from engagement with the ratchet and permit the shaft to turn freely when it is desired to lower the movable section.

It will be understood that I do not limit my invention to the use of two levers and their corresponding ratchets, pawls and hand pieces H therefor, as I may use a single lever and the necessary complements forming the locking mechanism; but as before stated I prefer to use the two levers and the duplicate locking mechanisms. In such a case, I connect the two pawls on the respective levers for simultaneous operation so that it is only necessary to operate one of the hand pieces H to throw the pawls out of engagement with the ratchets. This connection is effected by means of a pivot rod or bolt J which extends transversely across the rest and above the base A thereof, the ends of said pivot rod being journaled in the levers and the pawls being rigidly fastened to the rod so as to turn or move therewith.

To the middle of the rock shaft E is rigidly attached the arm I and to the free end of this arm are pivoted the lower or inner ends of the links I', I', said links diverging from the arm I and being pivoted at their outer ends to the sides of the movable section B, at intermediate points of the length thereof.

The mode of using my improved head rest is simple and will be readily understood from the foregoing description. The rest is placed on the bed beneath the occupant, and when the movable section B is lowered the occupant is given an easy reclining position. To raise the movable section either partially or wholly, it is only necessary to depress one or both of the levers which will operate to turn the rock shaft and move the arm and links to raise the section B, the pawls slipping freely over the teeth on the ratchet hubs or disks. These pawls serve to lock the movable section B to its adjusted position, and to lower the movable section B the hand pieces (one or both) are grasped by the hand to throw the pawls out of engagement with ratchet disks, whereby the section B can be lowered to any desired position.

Importance is attached to the brackets or

plates having the ratchet disks or hubs integral therewith, as said brackets thus serve the two fold purpose of affording a bearing for the rock shaft and as the means for locking the pawls, lever and shaft. A further advantage in my improved rest consists in the rock shaft having a lever at each end thereof, and on each side of the rest, as by this means the attendant is enabled to move the section B from either side of the rest, and with the levers arranged as described, the occupant of the bed can lower the section B without the aid of the attendant; also, in some cases raise the section B.

It is evident that slight changes in the form and proportion of parts and details of construction can be made without departing from the spirit or sacrificing the advantages of my invention.

In some cases where I use only a single lever on one end of the rock shaft and the two brackets each with a ratchet disk or hub, I may make the pawl in a manner to permit of its detachment with the lever, and transfer the lever and pawl from one end of the rock shaft to the other; that is to say the pawl may have two prongs as represented in Fig. 5 which will enable the same to engage with the ratchet on the right or left hand side of the rest.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A portable head and back rest for beds, substantially such as herein shown and described, comprising a base A, the section B pivoted at one end thereto, the aligned brackets C, D, rigidly fastened to opposite sides of the base in rear of the pivots between the section B and said base, and each bearing provided with the integral ratchet hub which is concentric with the axis of said bearing, the rock-shaft journaled in said bearing and carrying an arm, links between the free end of said arm and the pivoted section, the lever rigid with an end of said rock-shaft, the pawl pivoted to the lever to engage with one ratchet hub, and the hand grasp H pivoted to the lever and linked to the pawl, substantially as and for the purpose described.

2. A portable head and back rest for beds, substantially such as herein shown and described, comprising the base A, the section B pivoted thereto, the brackets C, D, fastened to opposite sides of the base and provided with ratchet hubs, the rock-shaft journaled in the bearings and carrying an arm that is linked to the pivoted section, B, the transverse pivot-rod J pivoted in said levers and carrying two pawls arranged to engage with the ratchet hubs, and a hand grasp H pivoted to one or both of said levers and connected by a rod h to one or both of the pawls to turn the rod J and lift both pawls from engagement with the ratchet hubs, substantially as and for the purpose described.

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

PERRY A. SAUM.

Witnesses:

JOS. FORREST,
H. I. BERNHARD.