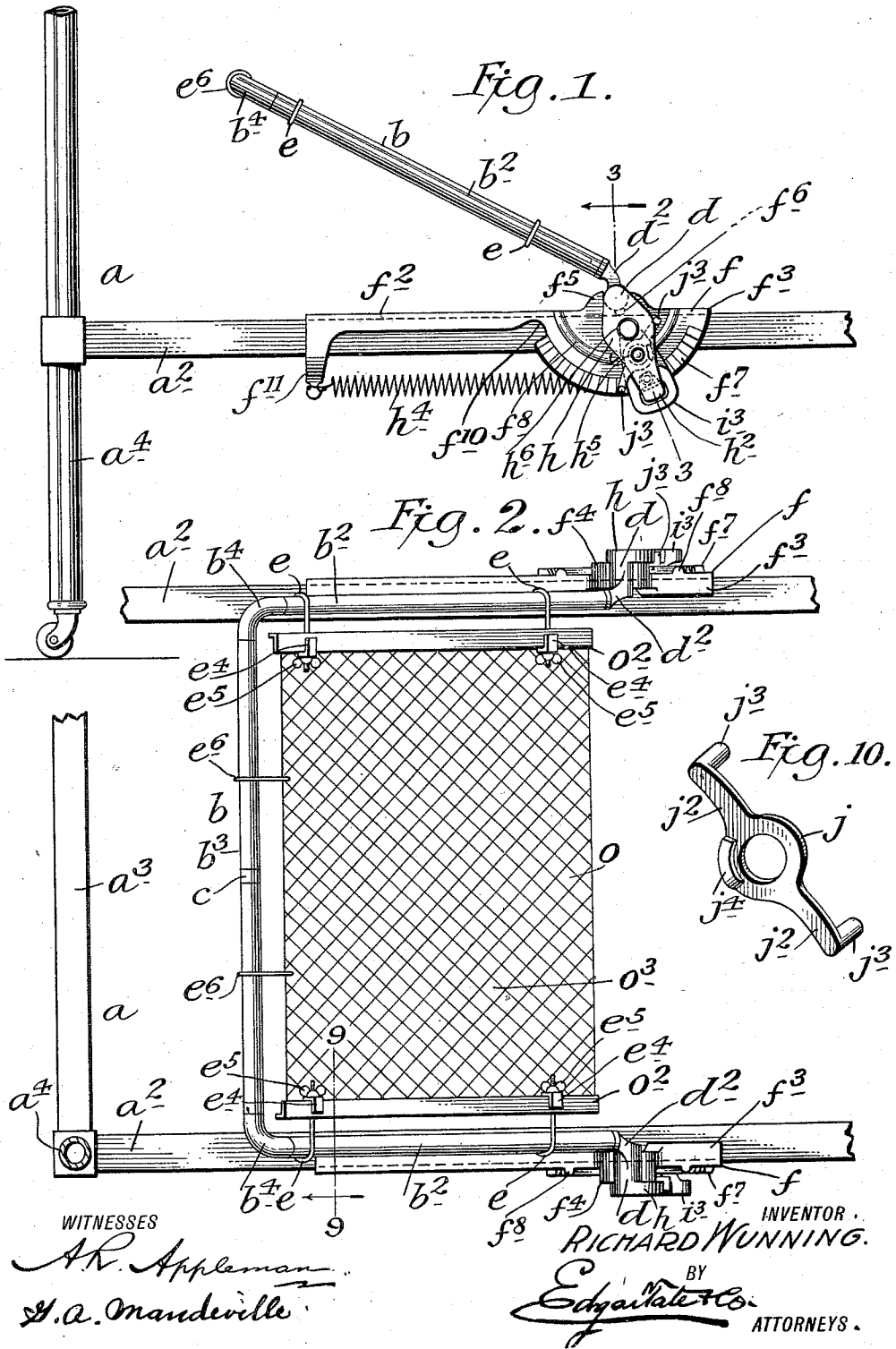


1,005,916.

Patented Oct. 17, 1911.

2 SHEETS-SHEET 1.

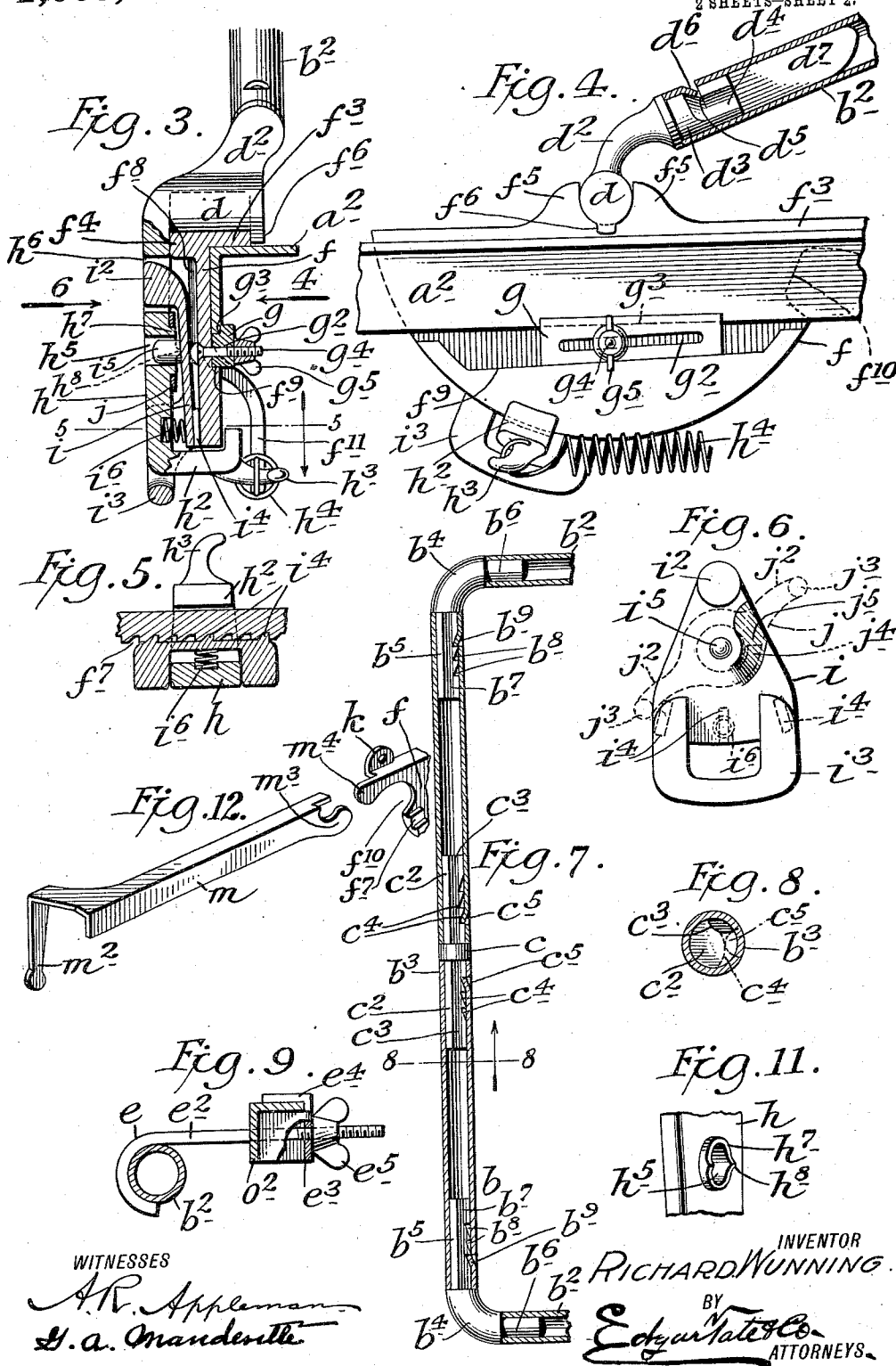


R. WUNNING.
HEAD REST FOR BEDS.
APPLICATION FILED APR. 20, 1911.

Patented Oct. 17, 1911.

1,005,916.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

RICHARD WUNNING, OF NEW YORK, N. Y.

HEAD-REST FOR BEDS.

1,005,916.

Specification of Letters Patent. Patented Oct. 17, 1911.

Application filed April 20, 1911. Serial No 622,219.

To all whom it may concern:

Be it known that I, RICHARD WUNNING, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Head-Rests for Beds, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to head rests for beds, lounges and like articles; and the object thereof is to provide an improved device of this class which is adjustable into different positions and which is adapted to support both the head and shoulders of an occupant of the bed, lounge or like article at any desired angle, and which may be conveniently and easily manipulated by the said occupant while resting on said bed, lounge or other article, and which will also automatically lock itself in any desired position; a further object being to provide a device or apparatus of the class specified which is composed of separate detachably connected parts, which parts may be assembled or connected and disassembled or disconnected by hand whenever desired without the use of a tool or instrument of any kind or class and which may be also connected with and detached from a bedstead, or frame, by hand whenever desired without the use of any tool or instrument, and with this and other objects in view the invention consists in a device or apparatus of the class specified, constructed and operated as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a side view of one end portion of a bedstead or frame provided with my improvement; Fig. 2 a plan view thereof; Fig. 3 a section on the line 3—3 of Fig. 1 and on an enlarged scale; Fig. 4 a side view of one side portion of the bedstead or frame looking in the direction of the arrow 4 of Fig. 3; Fig. 5 a partial section on the line 5—5 of Fig. 3; Fig. 6 an outer side view of details of construction which I employ and showing the locking member in dotted lines and looking in the direction of the arrow 6 of Fig. 3; Fig. 7 a sectional plan

view of the cross head portion of a yoke-shaped frame forming a part of the head rest; Fig. 8 a section on the line 8—8 of Fig. 7; Fig. 9 a section on the line 9—9 of Fig. 2 and enlarged; Fig. 10 a perspective view of the locking member detached; Fig. 11 a perspective inside view of a part of an arm plate which forms a part of the construction employed and which is clearly shown in section in Fig. 3 and a side view of which is given in Fig. 1, and Fig. 12 a perspective view showing a modified form of the construction shown in Fig. 1.

In the drawings forming a part of this specification I have shown at a one end portion of a bedstead comprising side rails a^2 , a cross end rail a^3 and corner posts a^4 and the side rails a^2 are composed of angle irons as shown, and the end rail a^3 may be similarly formed while the posts a^4 are preferably composed of metal tubes, but may be made in any desired form. I also provide a main yoke-shaped frame b the separate parts of which are tubular in form and consist of side arms b^2 and a cross head portion b^3 , and within the main yoke-shaped frame b is placed a supplemental frame c composed of side bars c^2 and a body c^3 of wire mesh or other suitable material, and these parts form the head rest frame proper.

The side arms b^2 and cross head b^3 of the main yoke-shaped frame are connected by elbow members b^4 which are cylindrical in cross section and provided with cylindrical end portions b^5 by which the cross head portion b^3 of said frame is connected therewith and with other cylindrical members b^6 by means of which the side arms b^2 of said frame are connected therewith. The parts b^5 of the elbows b^4 are provided in one side thereof with longitudinal grooves b^7 which communicate with circumferential recesses b^8 , three of which are shown, and the end portions of the cross head b^3 of said frame are provided with inwardly directed lugs or projections b^9 , and in connecting the cross head portion b^3 with the elbows b^4 , the parts b^5 of said elbows are inserted into said cross head portion or the ends thereof, the lugs or projections b^9 passing through the grooves b^7 , after which the cross head portion b^3 is given a partial turn so that the lugs or projections b^9 will enter the circumferential recesses b^8 or one of them, and in this way the cross head b^3 and elbows b^4 are locked together. The cross head portion b^3 of said

frame is also composed of two parts connected by a central cylindrical member c having end extensions c^2 adapted to enter the tubular parts of said cross head portion and the end extensions c^2 of the part c are provided in one side thereof with a longitudinal groove c^3 and circumferential recesses c^4 , three of which are shown, and the inner end portions of the separate parts of the cross head b^3 are provided with inwardly directed lugs or projections c^5 , and in connecting the separate parts of the said cross head member b^3 the end extensions of the part c are inserted therein and said part is partially rotated, and in this operation the lugs or projections c^5 pass through the recesses c^3 and into one of the circumferential recesses c^4 . It will be therefore seen that the method of connecting the separate parts of the cross head b^3 is the same as the method of connecting the separate parts of the cross head with the elbows b^4 , and by reason of a plurality of the circumferential recesses b^3 and c^4 the transverse width of the yoke-shaped frame b may be adjusted so that said frame may be applied to bedsteads of different widths.

The side arms or members b^2 are rigidly connected with the elbows b^4 , and the opposite ends thereof are connected with cylindrical heads d which range transversely thereof and are provided with backwardly curved neck portions d^2 having cylindrical extensions d^3 which enter the tubular side arms b^2 of the frame b , and said cylindrical extensions d^3 are provided in one side thereof with longitudinal grooves d^4 which communicate with transverse or circumferential recesses d^5 formed therein, and the corresponding ends of the tubular side arms b^2 are provided with inwardly directed lugs or projections d^6 adapted to pass through the grooves d^4 and enter the recesses d^5 when the parts d are rotated. The said cylindrical extensions d^3 of the necks d^2 are also provided, in the form of construction shown, with extensions d^7 which are preferably blade shaped in form and which serve to render the connection between the parts b^2 and d^3 more rigid and permanent; and from this description it will be seen that the main yoke-shaped frame b including the parts, or transverse cylindrical heads, d is composed of separate detachably connected parts and these parts may be connected or disconnected by hand whenever desired.

The central part o of the head rest proper including the body o^2 of wire mesh or similar material and the side bars o^2 is connected with the yoke-shaped member b in the following manner. The wire mesh body o^3 may be secured to the side bars o^2 in any desired way, but the side bars o^2 are composed of angle iron and connected with the side arms b^2 of the main yoke-shaped frame b

by hook shaped clips e , the shanks e^2 of which are passed through the flanges of the side bars o^2 , as clearly shown in Fig. 9, and other yoke-shaped clips e^3 having flat top hooks e^4 which overlap the bars o^2 , and said shanks are also provided with thumb nuts e^5 whereby the clips e^3 are securely clamped to the bars o^2 and the hooks e caused to securely engage the side arms b^2 of the yoke-shaped frame b . Other hook or clip devices e^6 are also employed to connect the body portion o^3 of the central part of the head rest with the cross head b^3 of the yoke-shaped frame b , but this connection may be made in any desired way, and with this construction it will also be seen that the separate parts of the head rest or the main framework thereof may be connected or disconnected by hand whenever desired.

In connecting the head rest proper or the main yoke-shaped frame thereof with the side rails a^2 of the bedstead I provide segmental plates f having arms f^2 which project in the direction of the head of the bedstead and which are provided with inwardly directed top flanges f^3 which partially overlap said rails, and outwardly directed bearings f^4 , and the transverse cylindrical heads d at the ends of the side arms of the main yoke-shaped frame b rest in raised bearings of which the parts f^3 and f^4 form a part as clearly shown at f^5 in Fig. 4, and the transverse heads d^2 are provided at their inner ends with downwardly directed tongues or projections f^6 which bear on the inner faces of the flanges f^3 and prevent the outward movement of said heads when the parts are assembled. The lower edges of the plates f are arc-shaped in form and provided with arc-shaped racks f^7 the teeth of which range in the direction of the head of the bedstead, and above these racks are segmental ribs f^8 , said racks and said ribs being on the outer side of said plates, and said plates are provided on their inner sides with longitudinal shoulders f^9 between which and the downwardly directed flanges of the rails a^2 of the bedstead or frame are placed wedge plates g having longitudinal slots g^2 and provided in the top edges thereof with rabbet grooves g^3 , and passing centrally and inwardly through the plates f are screws g^4 which also pass through the slots g^2 in the plates g and are provided with thumb nuts g^5 , and by means of this construction the plates f may be rigidly secured to the side rails of the bedstead by hand and may be detached therefrom in a similar manner whenever desired.

It will be seen that the longitudinal shoulders f^9 on the inner side of the plates f are at an angle to the bottom edges of the rails a^2 and, by means of this construction, a wedging action on the under or bottom faces or surfaces of the rails a^2 is secured

or provided for and my improved head rest device or apparatus may be applied to bed rails of different vertical depth.

At the inner ends of the arms f^2 are recesses f^{10} formed in the plates f and said arms are provided at their free ends with downwardly directed and inwardly curved fingers f^{11} . Rigidly or integrally connected with the outer ends of the cylindrical heads d of the yoke-shaped head rest frame are arm plates h provided at their lower ends with inwardly directed hook shaped fingers h^2 which range transversely of the bottom edges of the plates f and which hold said arm plates in operative position, and the fingers h are provided with supplemental hooks h^3 , and the hooks h^3 are connected with the fingers f^{11} by spiral springs h^4 . The arm plates h are provided centrally with circular openings h^5 above which are larger openings h^6 and at the rear of the central openings h^5 are collars or flanges h^7 having opposite projections h^8 , as clearly shown in Fig. 11 and as shown in section and dotted lines in Fig. 3.

Mounted between the arm plates h and the plates f are locking dogs i shown in section in Fig. 3 and a front view of which is given in Fig. 6, and said locking dogs are provided at their upper ends with outwardly directed heads i^2 which pass outwardly through the openings h^6 in the arm plates h , and the body portions of said locking dogs are wider at their lower ends than at their upper ends and the lower ends thereof are provided with integral yokes i^3 , and the hook shaped fingers h^2 of the arm plates h pass backwardly through the yokes i^3 , and said yokes are provided on the back sides thereof with teeth i^4 which engage the racks f^7 and which are shown in section in Fig. 5 and in dotted lines in Fig. 6, and side views of which are given in Fig. 3. The dogs i are also provided centrally of the body portion thereof with outwardly directed pins i^5 which pass outwardly through the openings h^5 in the arm plates h , and between the lower ends of the body portions of said dogs and the arm plates h are placed spiral springs i^6 which serve to keep the teeth i^4 in engagement with the racks f^7 , and rotatably mounted on the collar h^7 around the central openings h^5 of the arm plates h are locking dogs j having oppositely directed and oppositely curved arms j^2 , and one of which is shown in perspective in Fig. 10 and in dotted lines in Fig. 6 and in transverse section in Fig. 3, and the arms j^2 are provided at the ends thereof with outwardly directed fingers j^3 which lie on opposite sides of the arm plates h , as clearly shown in Fig. 1, and the central body portions of the locking members j are provided at one side with cam lugs j^4 which fit in and operate in seg-

mental cam slots j^5 in the outer faces of the central body portions of the dogs i .

In Fig. 6 of the accompanying drawing, one of the locking members j is indicated in dotted lines only in order to show the way in which the cam lugs j^4 operate in the cam slots or recesses j^5 , but this feature of the construction will be understood when Fig. 6 is taken in connection with Fig. 3.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof, and the position of the parts shown in Fig. 1 may be considered as the normal position for the purpose of this statement. In this position of the parts the teeth i^4 are in engagement with the racks f^7 , and the direction of the teeth of the racks f^7 and the direction of the teeth i^4 of the dogs i are such as to cause said teeth to engage and to remain in engagement by reason of the weight of the head and shoulders of the occupant of the bed on the yoke-shaped frame b . If the occupant desires to lower his head, he presses inwardly on the heads i^2 of the locking dogs i and said dogs rock on the ribs f^8 , and the teeth i^4 are disengaged from the teeth of the racks f^7 against the action of the springs i^6 , and the head or head and shoulders of the occupant of the bed may be gradually lowered, this movement being controlled by the springs h^4 and by the weight of the occupant of the bed. When the head and shoulders have been sufficiently lowered, the pressure on the heads i^2 of the locking dogs i is removed and the springs i^6 operating on the lower end portions of the locking dogs i forces the teeth i^4 into engagement with the teeth of the racks f^7 . In order to raise the frame b of the head rest or the head rest proper, the head and shoulders of the occupant of the bed must first be raised, and at this time the springs h^4 automatically operate to raise the frame b and its connected parts into the desired position, and in this operation the teeth i^4 of the locking dogs i pass freely over the teeth of the rack f^7 . If at any time it is desired to lock the head rest frame in any position, said frame is moved into the required position, after which the locking members j are manipulated so as to throw them into the reverse of the position shown in Figs. 1 and 6, in which the arms thereof will range downwardly and backwardly instead of upwardly and backwardly as shown in said figures, and this operation causes the cam lugs or projections j^4 of the locking members j to ride backwardly and outwardly out of the cam recesses j^5 in the body of the locking dogs i and up onto the outer faces thereof, and this operation forces the lower end portions of the locking dogs i inwardly and causes

the teeth i^4 thereof to engage the teeth of the racks f^7 and to be locked in engagement therewith.

From the foregoing description and statement of operation, it will be apparent that the springs h^4 are not absolutely essential, as the head rest frame may be raised or lowered by hand into any desired position and may be held in such position by the operation of the parts connected with said frame and with the plates f , as clearly shown and described. In this case the arms f^2 will also be dispensed with and the plates f may be secured directly, as shown and described, to the rails of the bedstead frame or to corresponding parts of other articles, and in this connection I may employ detachable arms m to take the place of the arms f^2 , and which are provided with downwardly directed fingers m^2 with which the springs h^4 will be connected, and the fingers m^2 will be on the inner sides of the rails a^2 or corresponding parts instead of on the other sides thereof and the arms m and plates f will be provided, respectively, with interlocking members m^3 and m^4 , and in some instances it may be desirable to attach the plates f to wooden bedsteads or similar structures, and for this purpose the said plates will be provided with ears k .

From the foregoing description, it will be seen that all the parts of my improved head rest which are connected with the bedstead or frame including the parts f , the arm plates h , the locking dogs i and locking members j are all detachably connected and may be detached or disconnected and may be assembled and connected with the bedstead or frame by hand without the use of any tool or instrument, and in pivoting the head rest frame and arm plates h on the plates f , the said parts are placed in such position that the hook-shaped fingers h^2 or the ends thereof will pass backwardly through the recesses f^{10} in said plates f , after which said parts may be swung into the desired position and the device connected with the bedstead frame.

In the accompanying drawing and in the foregoing description, I have shown and described the preferred form of my improved head rest, but it will be understood that my invention is not limited to the exact shape and construction of the various parts thereof herein shown and described, and changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. In a head rest for beds, a main head rest frame having side members provided

with transverse cylindrical heads, rack plates adapted to be secured to the side rails of the bedstead and provided with bearings for said heads, said heads being also provided at their outer ends with downwardly directed arm plates, and said rack plates being provided with segmental racks, locking dogs mounted between said plates and said arm plates and the upper ends of which are provided with heads which pass outwardly through said arm plates, springs mounted between the lower end portions of said locking dogs and said arm plates, and rotary locking members pivoted between said locking dogs and said arm plates.

2. In a head rest for beds, a frame having parallel side members provided at their ends with transverse cylindrical heads, rack plates adapted to be secured to the side rails of the bedstead and provided with bearings for said heads, said heads being also provided at their outer ends with downwardly directed arm plates having hooks at their ends adapted to engage the bottom portions of said rack plates, locking dogs mounted between said rack plates and said arm plates and having teeth adapted to engage the teeth of the rack on said rack plates, tensional devices for forcing said teeth into engagement and locking members rotatably mounted between said locking dogs and said arm plates.

3. A head rest construction for beds comprising plates by which the head rest is secured to the side rails of the bedstead, said plates being provided with flanges which rest on said rails and below which are shoulders arranged at an angle to said flanges, and wedge plates mounted between said shoulders and the bottom flanges of said rails, said wedge plates being provided with longitudinal slots and screws passed through said plates and through said slots and provided with nuts.

4. A head rest support comprising a head rest frame provided at its opposite sides with laterally directed cylindrical heads, rack plates adapted to be connected with the side rails of the bedstead and provided with bearings for said heads, said heads being also provided at their upper ends with downwardly directed arm plates provided at their lower ends with hook devices adapted to engage said rack plates, locking dogs mounted between said rack plates and said arm plates and provided with teeth adapted to engage rack teeth on said rack plates, springs operating in connection with said arm plates and said locking dogs for holding said teeth in engagement, and locking members rotatably mounted between said locking dogs and said arm plates, said rack plates being also provided with arms extending along said rails and having downwardly directed members, and springs connecting

said members with the lower end portions of said arm plates.

5 In a head rest for beds, a head rest frame provided with transverse cylindrical heads, rack plates adapted to be secured to the rails of the bedstead provided with bearings for said heads, said heads being also provided at their outer ends with downwardly directed arm plates having central apertures above which are larger apertures, locking dogs mounted between said rack plates and said arm plates and provided with heads which pass out through said larger apertures and with teeth adapted to engage the teeth on the rack plates, spring devices for forcing the teeth of the locking

dogs into engagement with the teeth on the rack plates, said locking dogs being also provided with yoke-shaped members and said arm plates with backwardly directed hook members which are passed there-through and rotary locking members mounted between said locking dogs and said arm plates.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 18th day of April 1911.

RICHARD WUNNING.

Witnesses:

C. E. MULREANY,
G. A. MANDEVILLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."