

BED OR ATTACHMENT THEREFOR

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My invention relates to beds or attach- the base frame in any suitable manner, as ments therefor, the objects being to provide by plates 6 and rivets 7, and form a central an attachment that may be built either as or seat section 5. The ends of said plates ex-

5 as a self-contained apparatus to be placed body and thigh supporting members 8 and 60 upon beds or other suitable supporting struc- 9 respectively are pivotally secured, as by tures, mechanism for adjusting the position rivets 10. To section 11 are rigidly secured of the pivoted members, and such other ob- plates 12, as by rivets 13, and the projecting jects as may hereinafter appear; and con- end of said plates are pivotally secured to 10 sists, preferably, in the construction herein- the thigh supporting member. as by rivets 65 after described.

of a bed embodying the principles of my in- to which the fabric (not shown) that supvention, with lengthwise central portion ports the mattress may be attached thus 15 broken out to reduce the width of the draw-forming a self-contained structure independ-70 ing, and a part of the incasement broken ent of a bedstead, but if built as a part thereaway to better show certain parts of the of, the base frame would be eliminated and operating mechanism; Fig. 2 is a side ele- the central or seat section secured direct to vation of a bed with certain parts broken the bed rails. 20 away to better show certain parts of the op- To prevent the sides of the thigh member 75 erating mechanism; Fig. 3 is a perspective from being drawn toward each other by the view of a pitman; Fig. 4 is a detail view of weight upon the fabric, a spreader 15 is proa portion of the operating mechanism on an vided, which is rigidly secured thereto in enlarged scale; Fig. 5 is a section taken on any suitable manner, as by rivets 16.

a part of a bed, or independent thereof tend past said sections, and to said ends 14, thereby providing a pivotally attached In the drawings Figure 1 is a plan view leg supporting section, and a jointed frame

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- 25 line 5-5 of Fig. 4; Fig. 6 is a longitudinal Hanging brackets 17 and plates 18 (see 80 sectional view of one of the tubular forms, Fig. 8) are rigidly secured to the base frame showing the plugs secured in the ends there- in any suitable manner, as by rivets 19 (all of and elongated openings through the sides, rivets or bolt heads in the bottom of the with the central portion broken out to re- sides of the base frame should be counter-30 duce the length; Fig. 7 is a transverse sec- sunk to avoid interference when placed up- 85 tional view of Fig. 6 on line 7-7; Fig. 8 is a on a supporting structure), said brackets sectional view of one of the drums, longitudi- having holes therein in which shafts 20 are nally through its center; Fig. 9 is a sectional pivotally supported, and mounted upon said view of Fig. 1 on line 9-9, showing means shafts are drums 21, 21' and 21", and secured 35 for securing the attachment to a bed with thereto in any suitable manner, as by pins 90 angle bars as side rails, and Fig. 10 is a sec- 20'. tional view of a modified arrangement serv- To the body and thigh members, brackets ing the same purpose as that shown in 22 are rigidly secured, as by rivets 23, Fig. 9.
- 40

said brackets extend inwardly beyond the In the drawings similar numerals of ref- inner-side of said members, then down-95 erence indicate corresponding parts in the wardly to form a suitable connection with different views and, referring to the same, 1 pitmen 24, which are pivotally secured and 2 denote the head and foot respectively thereto, as by rivets 25. These pitmen are and 3 the side rails of a bed, to which the preferably stampings, U shaped at their cen-45 present invention may be built as a part, or tral portion, with the side next to said 100 as a self-contained independent apparatus brackets straight at their upper end and the in which the frame 4, preferably of angle other side brought over against it (see Fig. 3) to form a suitable connection with said nally extending sides thereof being adapted brackets. Said pitmen are provided with cams 26 which extend in a straight line with 105 the sides of the central portion thereof, the object of these cams will be hereinafter ex-In the present case, sections of angle bars, plained. The object of plates 18 is to prevent the pitmen for working off the end of 110

bars, forms a supporting base, the longitudi-50 substantially to overlie the side rails of a bedstead, or other suitable supporting structure.

with their horizontal angle extending in-55 wardly, are rigidly secured to the sides of the drums.

The lower end of the several pitmen are cure it therein. Said pin passes down somewhat contracted to form a better con- through a corresponding hole in the horizonnection with their respective chains 27, tal part of the bracket, and near the lower which are placed within the pitmen and se- end of this pin is pivotally secured a cam 50, 5 cured thereto, as by rivets or bolts 28. The as by pivot pin 51, and rigid with said cam 70 other ends of the chains are passed upwardly and extending oppositely from its pivot is a and over their respective drums and are se- lever 50'. Said cam and lever is also prefcured thereto, as by bolts 29. To drum 21 is 'erably a stamping, U shaped so that when secured one end of another chain 30, as by bolt in position it will extend upwardly on both 10 31, said chain is passed partly around said sides of the supporting pin. To prevent 75 drum and its other end connected, in any displacement of the bracket and idler gear, suitable manner, with a plug 32 that projects a guide pin 52 is provided, one end of which from a tubular form 33. To drum 21' is is reduced to furnish a shoulder and this end secured a chain 30', as by bolt 31', said chain is passed through a hole 52' in the base 15 being passed partly around said drum and frame and upset to secure it therein, and 80 its other end connected with another plug through the lower end of this pin is a 32 that projects from a similar tubular form. transverse pin 53 to furnish a rest for the Said plugs, and plugs 34 in the opposite end bracket when in its lowermost position. of the tubular forms, may be secured in any To prevent the bedding from contacting 20 suitable manner, preferably by an electric with the gears and threaded rods and catch 85 spot weld. The latter plugs are bored and surplus lubricant from the latter, an incasethreaded to correspond with mating threads ment 54 is provided, which is secured to the on rods 35, which operate in connection base frame, as by bolts 55. The upper part therewith. Said tubular forms (see Figs. 6 of the incasement extends against the verti-25 and 7) are preferably made of two similar cal angle at the end of the base frame, and 90 stampings, each forming one-half of a tube of sufficient height to clear the gears but not adapted to fit around said plugs, and the to interfere with the free movement of the edges 33' of stampings, extending from one leg section when it slides upon the base plug to the other, are turned outwardly to frame, or supporting sections 56, which are 30 form elongated openings 33", with flat sur- secured to each side of the base frame, as by 95 faces at each side thereof, the object of rivets 56', with their horizontal angle exwhich will hereinafter appear. tending inwardly, thereby forming a flat The unthreaded end of rods 35 may be base for the end of the leg section to ride supported in any suitable manner, as by be- upon and prevent displacement of the same. 35 ing passed through holes 36 in the vertical The under portion of the incasement stops 100 angle of the base frame, immediately above short of the idler gear, as indicated by dotthe horizontal angle thereof, and held ted line 57. The other end of the incaseagainst longitudinal movement by rims 37 ment extends beyond the threaded rods, and and gears 40 on said rods (see Figs. 4 and 5). supported in a hole 58 in the side thereof is 40 These rods are operated by crank 38, the hub a rod 59 that passes through an opening 59' 105 of which is tubular and adapted to slide in the opposite side of the incasement, and is upon the projecting end of the threaded tapped into the side of the base frame with rods, and slotted to mate with pins 39, that a lock-nut 60 thereon. This rod passes pass transversely through said rods, there-through elongated openings in the sides of 45 by forming an operating connection there- the tubular forms and prevents the latter 110 with. from being rotated by the action of the Mounted upon the threaded rods are gears threaded rods. 40, which may be firmly secured thereto in It is frequently the case, that the connecany suitable manner, as by pins 41. Said tions between the side rails and the head and 50 gears are operatively connected with each foot of beds are higher than the rails and to 115 other, or disconnected, by an idler gear 42. avoid the same or other interfering parts, This idler is rotatably mounted upon a pin plates 61, 62 and 62' of sufficient thickness 43 and retained thereon by a head 44 on the to compensate for this unevenness are prefend of said pin, the other end being reduced erably secured to the bottom of the base 55 to provide a shoulder 45, said end being frame in any suitable manner, as by rivets 120 placed within a hole in the downwardly ex- 63. The plates 61 (see Fig. 9) extend intending angle of bracket 46 and upset to wardly from the base frame and secured to secure it therein (see Figs. 4 and 5). Said their undersides are spacers 64 of a thickbracket is preferably a stamping, and in ness to conform with the inwardly extend-to its horizontal portion is a depression or well ing angle of the side rails. Beneath these 125 47 in which is placed an expansion spring plates are adjustable plates 65 with elongated 48. This bracket and idler gear is sup- holes 66. As beds vary in width the attachported by a pin 49, one end of which is re- ment is placed upon the bed rails in position duced to form a shoulder, is passed through to equalize their difference and plates 65 are 65 a hole 49' in the base frame and upset to se- adjusted so one end will rest against the 130

inner-side of the vertical angle of the bed the operating mechanisms, and it is not the rails and clamped, as by bolts 67, thus secur- intention to limit the invention to the aring the attachment centrally and firmly upon rangement shown.

the bed rails. Fig. 10 is a modification of Fig. 9, and is are lowered to a flat or normal position, the 70 5 intended to secure the attachment to beds cams carried by the pitmen contact with having tubular side rails. In this modifi- their respective drums and raise the lower cation, plates 61' are similar and secured in or free end of said pitmen to positions the same manner as in Fig. 9, but supports shown in dotted outline in Fig. 2. But it 10 68 rest upon and fit the tubular or other is apparent that other means may be em- 75 forms of rails, and clamps 69 are intended to ployed to raise and support the free end of fit against the lower side thereof, both being said pitmen, or they may be lifted and provided with elongated holes 66' for ad-placed upon the inwardly extending portion justment to conform to the width of the beds, of plates 62 shown in Fig. 1, or other suit-15 and are clamped to said rails, as by bolts 67'. able support. It is understood, of course, that the num- While I have shown and described the ber of said plates, supports and clamps may be increased, their forms changed, and that do not wish to be limited to the details they may be differently placed and secured 20 to meet the variations in spacing, forms and positions of the bed rails, the intention being spirit of my invention. to provide for a standardized frame that What I claim is: may be adapted to the variations in the bed 1. In a structure of the class described, rails by merely changing the supports and the combination of a horizontally extending 25 fastenings. In operation, the crank may be applied to thigh supporting members with one end the projecting end of either of the threaded pivotally secured at the respective ends of rods, and clockwise rotation of said rods will the central section, operating mechanism for cause the tubular form and chain with which said members including rotatable rods, <sup>30</sup> it is connected to be drawn toward it, there- means for rotating said rods independently, <sup>95</sup> by rotating their respective drums and the a gear carried by each of said rods, an idler one on the opposite end of its shaft, and gear, and means for moving said idler gear through the chains connecting them with into mesh with the gears on said rods wheretheir respective pitmen impart an endwise by the latter may be connected so that when <sup>35</sup> movement of the latter, thereby raising the either is rotated, the other will also be ro- <sup>100</sup> pivoted member with which they are con- tated whereby the free ends of the body and nected. And to lower said members the thigh supporting members may be raised operation is reversed, thus adjusting the po- or lowered simultaneously. sition of the body and thigh members inde- 2. In a structure of the class described, 40 pendently of each other. To adjust said members simultaneously frame including a central section, body and the gears 40, which are firmly secured to the thigh supporting members with one end threaded rods, are operatively connected by pivotally secured at the respective ends of raising the idler gear to position shown in the central section, operating mechanism for 45 the drawings, which is done by depressing said members including rotatable rols, 110 lever 50' and through the action of the cam means for rotating said rods independently, raise the bracket and idler gear to upper- a gear carried by each of said rods, a bracket most position, thereby forming an operating movably carried by said frame, an idler connection between the threaded rods, and gear mounted on said bracket, and means 50 through them and their connections, previ- for moving said bracket to bring said idler 115 ously described, simultaneously adjust the gear into mesh with the gears carried by position of the pivoted members. When the said respective rods, whereby said rods may idler gear is raised, if its teeth fail to match be connected so that when either is rotated, with those of the other gears, it may be rem- the other will also be rotated.

When the pivoted supporting members preferred embodiment of my invention I shown as it is obvious that changes may readily be made without departing from the <sup>85</sup>

frame including a central section, body and 90 the combination of a horizontally extending 105 55 edied by shifting their position. 3. In a structure of the class described, 120 To disconnect the operating gears, the cam the combination of a horizontally extending ployed to operatively connect or disconnect on said bracket, and cam means for moving 130

may be released by raising the lever 50', and frame including a central section, body and if the bracket and idler gear fail to drop thigh supporting members with one end down upon the released cam and supporting pivotally secured at the respective ends of <sup>50</sup> pin 53, the spring 48 should readily depress the central section, operating mechanism for <sup>125</sup> them thereby forcing a disconnection, when said members including rotatable rods, the position of the pivoted members may means for rotating said rods independently, again be adjusted independently. It is man- a gear carried by each of said rods, a bracket ifest that various other means may be em- carried by said frame, an idler gear mounted

said bracket relatively to said frame to means operated by said drums for raising bring said idler gear into mesh with the or lowering the free ends of said members. gears carried by said rods whereby said rods 9. In a structure of the class described, may be connected so that when either is the combination of a frame having a cen-5 rotated the other will also be rotated. tral section secured thereto, body and thigh 70

and adapted to be supported by a bed or pivotally secured at the respective ends of similar structure, said frame having a fixed the central section, drums rotatably supcentral section secured thereto, supporting ported by the frame, longitudinally mov-

4. In combination, a frame independent of supporting members with one end of each 10 members with one end of each pivotally se- able elements, flexible means adapted to wind 75 cured at the respective ends of the central upon the drums and connected with said 5. In combination, a frame independent 10. In a structure of the class described, raising or lowering simultaneously the free means adapted to wind upon the respective connected with said tubular elements and 95 6. In combination, a frame independent adapted to impart a reciprocating movement similar structure, said frame having a cen- tively connect or disconnect said threaded 35 bers each having an end pivotally secured may be raised or lowered simultaneously or 100 40 of said members may be raised or lowered bers with one end of each pivotally secured 105 7. In combination, a frame independent operative connections between the drums and 45 or other similar structure, said frame hav- lar elements, means adapted to prevent ro- 110 ing a central section secured thereto, sup- tation of said elements, flexible means porting members with one end of each piv- adapted to wind upon the respective drums central section, drums rotatably supported rotatable threaded rods operatively connect-50 by said frame, rotatable means having flex- ed with said elements and adapted to im- 115 the latter, and means operated by said drums and means adapted to be moved to opera-

section, another section with one end pivot- elements, rotatable threaded rods operatively ally secured to the free end of one of said connected with said elements whereby the members, and means operated from a sin- drums may be rotated, and means opera-15 gle end of the supporting structure for rais- tively connecting the drums with said mem- 80. ing or lowering the free ends of said mem- bers whereby the free ends of the latter may bers simultaneously or each independently. be raised or lowered. of and adapted to be supported by a bed or the combination of a frame having a cen-20 similar structure, said frame having a cen- tral section secured thereto, body and thigh 85 tral section secured thereto, supporting supporting members with one end of each members with one end of each pivotally se- pivotally secured at the respective ends of cured at the respective ends of the central the central section, drums rotatably supportsection, another section with one end pivot- ed by said frame, operative connections be-25 ally secured to the free end of one of said tween the drums and said members, longi- 90 members, means carried by said frame for tudinally movable tubular elements, flexible ends of said members or each independently, drums and connected with the tubular eleand operating means therefor operated by ments, rotatable threaded rods operatively 30 a single mechanism.

of and adapted to be supported by a bed or to the latter, and means adapted to operatral section secured thereto, supporting mem- rods, whereby the free end of said members at the respective end of the central section, each independently. a pitman pivoted at one end to each of said 11. In a structure of the class described, members, means carried by the frame for the combination of a frame including a cenmoving said pitmen whereby the free ends tral section, body and thigh supporting memsimultaneously or each independently, and a at the respective ends of the central section, common operating member therefor. drums rotatably supported by said frame, of and adapted to be supported by a bed said members, longitudinally movable tubuotally secured at the respective end of the and connected with the tubular elements, ible connection with said drums for rotating part a reciprocating movement to the latter, for raising or lowering the free ends of the tively connect or disconnect the threaded

supporting members.

the combination of a frame having a cen- each independently. tral section secured thereto, supporting mem- 12. In a structure of the class described, bers each having an end pivotally secured the combination of a frame having a central at the respective ends of the central section, section secured thereto, body and thigh sup-60 drums rotatably supported by said frame, porting members with one end of each piv- 125 longitudinally movable elements, flexible otally secured at the respective ends of the means adapted to wind upon the drums and central section, drums rotatably supported connected with said elements, means for by said frame, longitudinally movable elemoving said elements backward and forward ments, flexible means adapted to wind up-65 whereby the drums may be rotated, and on the respective drums and connected with 130

rods, whereby the free ends of said members 55 8. In a structure of the class described, may be raised or lowered simultaneously or 120

atively connected with said elements and threaded rods connected to said elements for adapted to impart a reciprocating movement reciprocating the same, means for operating to the latter, means for operating said rods said rods simultaneously or independently, 5 simultaneously or independently, a pitman 'a pitman connected at one end to each of the 70 pivotally connected at one end to each of members, and means connecting the other said members, and means connecting the ends of the pitmen to their respective drums, pitmen and said drums whereby the rota- whereby the rotation of the drums will move tion of the latter will raise or lower the free the pitmen and thereby said members. 10 ends of said members. the combination of a frame having a central similar structure, said frame having a censection secured thereto, body and thigh supporting members with one end of each piv-15 otally secured at the respective ends of the central section, and operating mechanism for said members including parallel rotatable end to said members, means carried by said elements, means for rotating said elements frame for operating said pitmen whereby independently, and means for connecting the free ends of said members may be raised 20 said elements so that the rotation of either or lowered, said pitmen normally lying sub- 85 will rotate the other whereby the free ends stantially in the plane of said frame when of the supporting members may be raised said members are in normal position, and or lowered simultaneously or each independently. 25 14. In a structure of the class described, the combination of a frame having a central section secured thereto, body and thigh supporting members with one end of each pivotally secured at the respective ends of the 30 central section, another section with one end pivotally secured to the free end of one of said members, independent mechanisms sub- means for rotating said drums, a pitman stantially parallel with each other and oper- pivotally connected at one end to each of said able from the end of said frame for operat- members, means connecting the other ends of 35 ing said members independently and means adapted to form an operating connection between said mechanisms whereby the operation of either will operate the other to there-40 members simultaneously. the combination of a frame having a central lowered. section secured thereto, body and thigh sup-

said elements, rotatable threaded rods oper- spective drums and wound thereon, rotatable 17. In combination, a frame independent 75 13. In a structure of the class described, of and adapted to be supported by a bed or tral section secured thereto, body and thigh supporting members with one end of each pivotally connected at the respective ends of 80 the central section, pitmen pivoted at one rigid means for returning said pitmen to their initial position as said members are lowered. 18. In a structure of the class described. the combination of a frame including a central section, body and thigh supporting members with one end of each pivotally secured at the respective ends of the central section, 95 drums rotatably supported by the frame, the pitmen to their respective drums whereby 100 the rotation of the drums will move the pitmen, said pitmen normally lying substantially in the plane of the frame when said by raise or lower the free ends of the pivoted members are in normal position, and cams provided on said pitmen for returning them 105 15. In a structure of the class described, to their initial position as said members are 19. In a structure of the class described, porting members with one end of each pivot- the combination of a frame including a cen-45 ally secured at the respective ends of the tral section, body and thigh supporting mem- 110 central section, drums rotatably supported bers each having one end pivotally secured by said frame, longitudinally movable ele- at the respective ends of the central section, ments, flexible means connecting said ele- a pitman pivotally secured to each of said ments to their respective drums and adapted members, means for operating said pitmen 50 to wind thereon, means for moving said ele- whereby the free ends of said members may 115 ments backward and forward whereby said be raised or lowered, and positive operating drums may be rotated, a pitman pivotally means carried by the pitmen for engaging a connected at one end to each of said mem- part of the structure for supporting the free

bers, and means connecting the other ends ends of said pitmen in an elevated position 12055 of the pitmen to their respective drums when the members are in normal position. 20. In combination, a frame independent whereby the rotation of the drums will move of and adapted to be supported by a bed or the pitmen and thereby said members. 16. In a structure of the class described, similar structure, said frame having a centhe combination of a frame including a cen- tral section secured thereto, supporting 60 tral section, body and thigh supporting mem- members with one end of each pivotally 125 bers with one end of each pivotally secured secured at the respective ends of the central at the respective ends of the central section, section, another section with one end pivotdrums rotatably supported by said frame, ally attached to the free end of one of said longitudinally movable elements, flexible members, reciprocable means connected with means connecting said elements to their re- said members, and rotatable means carried 130 **5**5

by said frame and adapted to impart a which the free end of the attached section reciprocating movement to the reciprocable may ride as its attached end is raised or means whereby the free end of one of said lowered. members may be raised or lowered inde- 25. In combination, a substantially rec-5 pendently or both members simultaneously. tangular frame independent of and adapted 60 21. In combination, a frame independent to be supported by a bedstead or similar of and adapted to be supported by a bed or structure, said frame being substantially the similar structure, said frame having a cen- length of the bed rails and having a seat tral section secured thereto, supporting mem- section secured thereto, a supporting member 10 bers with one end of each pivotally secured with one end pivotally secured to the seat 05 at the respective ends of the central section, section, means carried by the independent another section with one end pivotally at- frame comprising a tubular member with tached to the free end of one of said mem- a member extending therein with threaded bers, members secured to said frame at its connection therewith, said means extending <sup>15</sup> respective sides and adapted to form a rela- and being operable from the end of said 70 tively wide base on which the free end of frame and operatively connected with the the attached section may ride as its attached supporting member whereby the free end end is raised or lowered, and means carried of the latter may be raised or lowered to by said frame for raising or lowering the different positions, the said means being 20 free ends of said members. wholly independent of and disconnected 75 22. In combination, a frame independent of from the bedstead, said combination being and adapted to be supported by a bedstead thereby so arranged as to avoid interference or similar structure, said frame having a with a bedstead when placed thereon. central section secured thereto, supporting 26. In combination, a substantially rec-<sup>25</sup> members with one end of each pivotally tangular frame independent of and adapted 80 secured at the respective ends of the central to be supported by a bedstead or similar section, and means carried by said frame structure, said frame being substantially and operable from the end thereof and the length of the bed rails and having a adapted to raise or lower the free end of seat section secured thereto, a supporting <sup>30</sup> said members either simultaneously or each member with one end pivotally secured to 85. independently. the seat section, means carried by the inde-23. In combination, a frame independent pendent frame comprising a tubular member of and adapted to be supported by a bed- with a member extending therein with stead or similar structure, said frame having threaded connection therewith, said means 35 a central section secured thereto, supporting being operable through the end of said 90 members with one end of each pivotally frame and wholly independent of the bedsecured at the respective ends of the central stead and extends longitudinally therewith section, means carried by said frame com- and is operatively connected with the supprising tubular members with rods extending porting member whereby the free end of 40 therein with threaded engagement there- the latter may be raised or lowered to 95 with, and means adapted to drive said means different positions. whereby the free ends of said supporting 27. In combination, an angle iron frame members may be raised or lowered simul- independent of and adapted to be supported taneously or each independently. by a bedstead or similar structure, said 45 24. In combination, a frame independent frame having a central section secured there- 100 of and adapted to be supported by a bed- to, a supporting member with one end pivotstead or similar structure, said frame having ally secured to said central section, another a central section secured thereto, supporting section with one end pivotally attached to members with one end of each pivotally the free end of the pivotally supported 50 secured to the respective ends of the central member, the respective sides of said frame 105 section, another section with one end pivot- having at their tops relatively wide bases ally attached to the free end of one of formed thereon on which the free end of

said supporting members, members secured the attached section may ride as its attached to said frame at its respective sides and end is raised or lowered. 55 adapted to form a relatively wide base on MOSES C. NIXON.