A. FOY.

BED ATTACHMENT.

APPLICATION FILED MAY 26, 1915.

1,197,472.

Patented Sept. 5, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

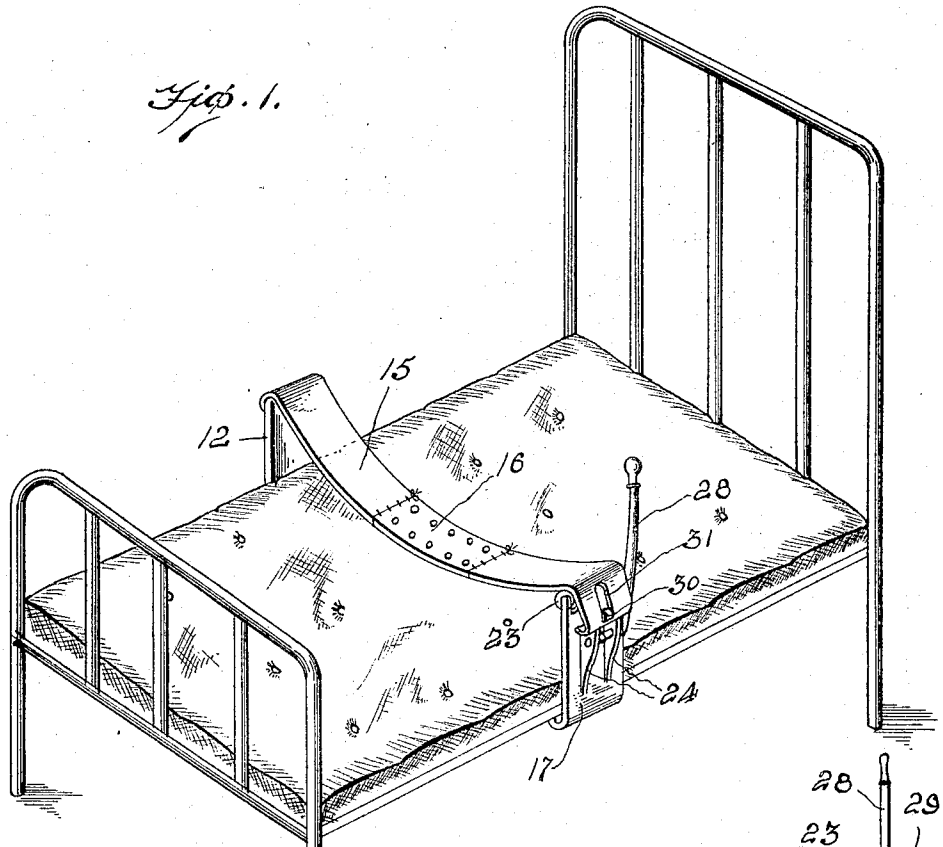
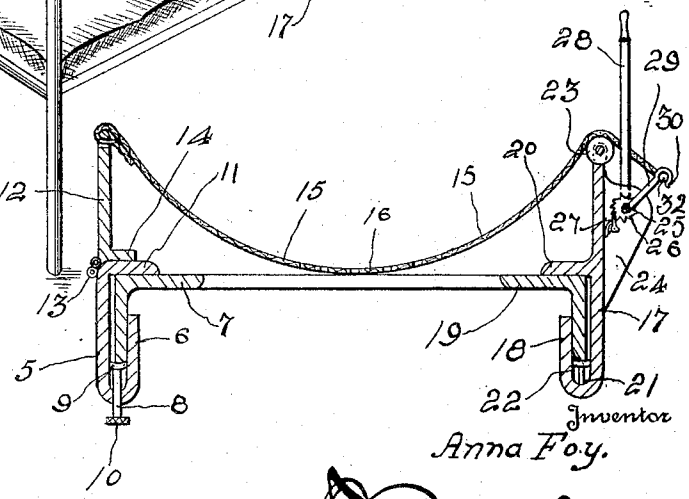


Fig. 2.



Witnesses

F. F. Palmer Jr.

H. Kay Martin

Inventor

Anna Foy.

By A. L. Saunders & Co.

Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

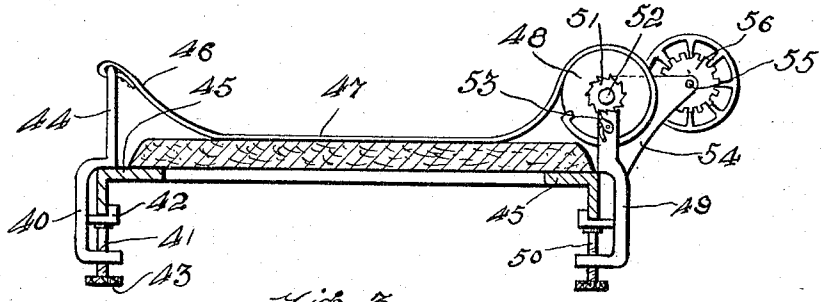


Fig. 3.

Fig. 5.

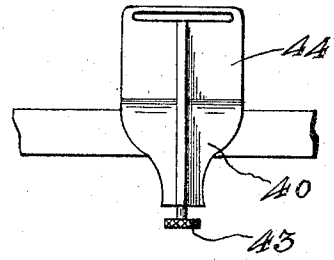
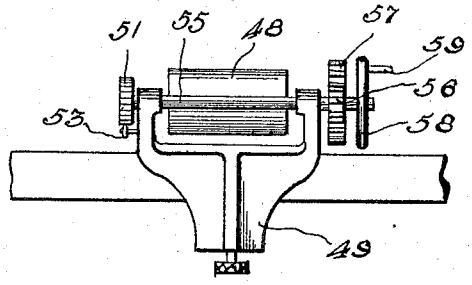


Fig. 4.



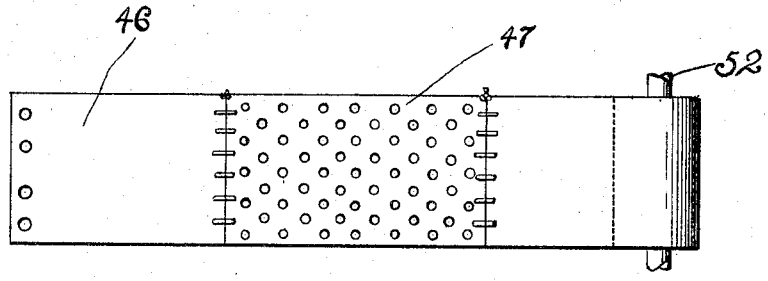


Fig. 6.

Witnesses
P. F. Reinmeyer.

Inventor
Anna Foy.

By A. Kaufmann Jr.
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANNA FOY, OF SAN FRANCISCO, CALIFORNIA.

BED ATTACHMENT.

1,197,472. Specification of Letters Patent. Patented Sept. 5, 1916.

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To all whom it may concern:

Be it known that I, ANNA FOY, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Bed Attachments; 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.

This invention relates to bed attachments and more particularly to a device especially designed for attachment to an invalid's bed to facilitate raising of various portions of the body of the invalid.

The invention has for its object to provide a device of this character of simple and efficient construction embodying a pair of attaching members, a flexible member, and means for drawing the flexible member tight to elevate the body of the patient.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 represents a perspective view of the attachment applied to use. Fig. 2 represents a longitudinal sectional view, partly broken away, through the attachment in operative position. Fig. 3 represents a longitudinal sectional view through a slightly modified form of the invention. Fig. 4 represents a side elevation of one of the attaching members illustrated in the form of the invention in Fig. 3. Fig. 5 represents a side elevation of the other attaching member illustrated in Fig. 3. Fig. 6 represents a top plan view of the flexible member.

Referring to the drawing in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 5 indicates a clamping or attaching member having one end 6 curved for engagement with the inner face of one of the longitudinal rails 7 of a bed frame. The bight portion of the attaching member or clamp 5 is formed with a transverse screwthreaded aperture receiving a clamping screw 8 having a head 9 swiveled on the inner end thereof and adapted to engage the lower edge of the rail 7 and having a handle 10 at its lower or outer end. The upper extremity of the clamping member 5 is directed angularly, as indicated at 11, and adapted to engage the top surface of the side rail 7. An arm 12 is pivotally secured at 13 to the upper portion of the clamp 5 and is formed with an angular extension 14 adapted to engage the angular extension 11 of the clamp to stop the inward movement of the arm 12 when the latter is moved in a vertical position, as illustrated in Fig. 2. A strap or flexible member 15 is adjustably secured at one end in a slot formed in the upper extremity of the pivoted arm 12 and is provided centrally with a rubber or other elastic pad or covering underneath which the strap 15 is perforated. A clamping member 17 is provided with a hook or curved end 18 adapted to engage over the other rail 19 of the bed and is provided with an angular extension 20 adapted to engage the top surface of said side rail. An adjustable clamping screw 21 is fitted in a screw-threaded aperture formed in the bight portion of the clamp 17 and a head 22 is swiveled on the inner end thereof for engagement with the lower edge of the side rail 19. The length of the clamp 17 is approximately the same as the combined length of the clamp 5 and the arm 12 and a bearing roller 23 is rotatably mounted in the upper bifurcated end thereof over which is engaged the strap or flexible member 15. A pair of spaced parallel ears 24 are formed integral with the outer surface of the body of the clamp 17, and a shaft 25 is rotatably mounted therein. A pinion 26 is keyed on one end of the shaft 25 and a pivoted pawl 27 is adapted to coöperate therewith to lock the shaft 25 against rotation in one direction, and an operating hand lever 28 is keyed on the opposite end of said shaft exteriorly of the pair of ears 24. A relatively short arm 29 is keyed upon the shaft 25 intermediate the ears 24 and is formed with a hooked end 30 adapted to engage through a longitudinal slot 31 formed in the adjacent end of the strap 15. A bar 32 is secured in the end of the strap 15 and is engaged within the hooked end 30 of the arm 29. As clearly illustrated in Fig. 2, the short arm 29 is disposed at an angle with relation to the hand lever 28.

In use, when it is desired to raise the patient off of the bed, the hand lever 28 is swung downwardly, thus rotating the shaft 25 and swinging the relatively short arm 29 downwardly drawing the strap 15 tight and elevating the patient. The shaft 25 is locked

in adjusted position by the pivoted pawl 27 and ratchet wheel 26 and when it is desired to slacken the strap 15 the pawl 27 is disengaged from the ratchet wheel 26 and thus the shaft 25 is permitted to rotate. When not in use, the clamp 17 may be removed from the bed by loosening the clamping screw 21 and the arm 12 may be swung downwardly upon its pivotal axis 13. If desired the clamping screws 8 may be fitted in internally screwthreaded apertures formed in the vertical portions of the clamps 5 and 17 so as to engage the outer vertical faces of the side rails 7 and 19 of the bed to secure the clamp in position.

Referring to the modification of the invention illustrated in Figs. 3 to 6 inclusive, the numeral 40 indicates one of the pair of clamping members of substantially U-shape having one end apertured and screwthreaded to receive the clamping screw 41 having an angular head 42 at one end and a handle 43 at the opposite end. The clamping frame 40 is provided with an integral or pivoted arm 44 projecting upwardly above the side rail 45 of the bed and having its upper end slotted to adjustably receive the adjacent end of the flexible strap 46 having an elastic insert 47. The opposite end of the strap 46 is secured to a winding drum 48 rotatably supported in the upper extremity of the other clamp 49 of the pair having one of its short arms provided with an internally screw-threaded aperture receiving the clamping screw 50. A ratchet wheel 51 is secured to one end of the shaft 52 on which the drum 48 is keyed and is adapted to coöperate with a pivoted pawl 53 to lock the shaft 52 and drum 48 against rotation in one direction. The body or frame of the clamp 49 is provided with a pair of spaced parallel extensions 54 extending laterally of the side rail 45 of the bed and rotatably receiving a shaft 55 on one end of which is keyed a relatively small gear wheel 56 meshing with a larger gear wheel 57 keyed on the corresponding end of the winding drum shaft 52, whereby rotary motion is imparted to the shaft 52 from the shaft 55. A wheel 58 is keyed upon the shaft 55 adjacent the small gear wheel 56 and a hand crank 59 is secured thereto whereby the shaft may be manually rotated.

The type of attachment illustrated in Figs. 3 to 6, inclusive, is operated to raise any portion of the body of the patient by arranging the clamps 40 and 49 at the desired point upon the longitudinal rails 45 of the bed and positioning the strap 47 at the desired point beneath the body of the patient. The shaft 55 is subsequently rotated by either the handle 59 imparting rotary motion to the shaft 52 through the gear wheels 56 and 57, thus rotating the winding drum 48 and winding the strap 46 thereon. The pivoted pawl 53 engages the teeth of the ratchet wheel 51 and locks the shaft 52 against rotation and when it is desired to lower the body of the patient the pawl 53 is disengaged from the ratchet wheel 51.

What I claim is:

1. A bed attachment comprising a pair of bed engaging clamps, a strap secured at one end to one of said clamps, an elastic body supporting pad carried by said strap, and means carried by the other clamp adjustably securing the opposite end of said strap.

2. A bed attachment comprising a pair of adjustable clamps attachable to the side rails of a bed, an arm pivotally secured to one of said clamps, a flexible body supporting strap adjustably secured at one end to the free extremity of said pivoted arm, and means carried by the other clamp for adjusting said strap to elevate or lower a body supported thereon.

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

ANNA FOY.

Witnesses:
ANNA BURGERS,
JESSIE S. MOIR.

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