

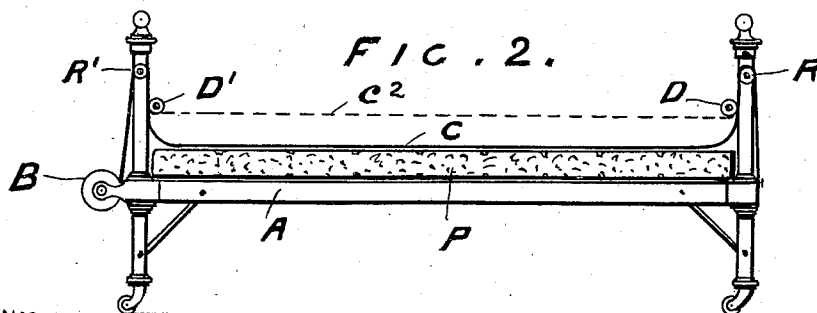
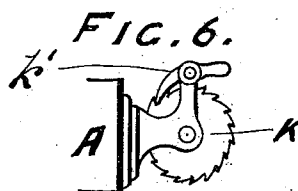
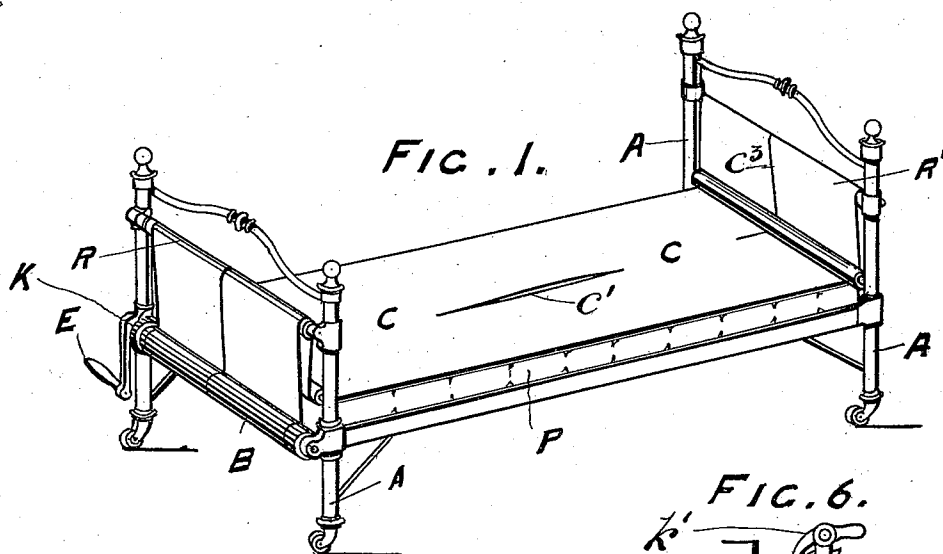
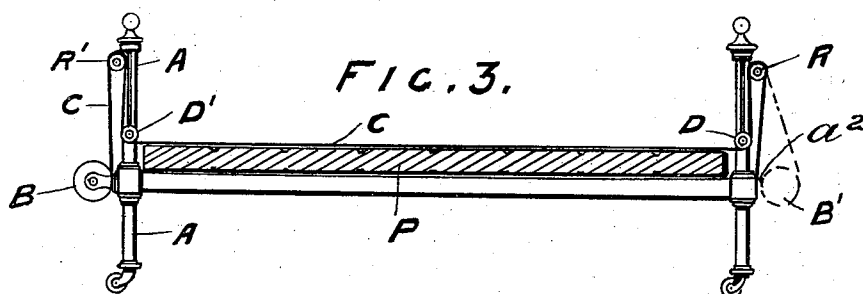
(No Model.)

2 Sheets—Sheet 1.

A. M. DOUGLAS.
INVALID BEDSTEAD.

No. 548,778.

Patented Oct. 29, 1895.



Witnesses
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E. A. Scott.

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by *Richard A. [Signature]*
Attorneys

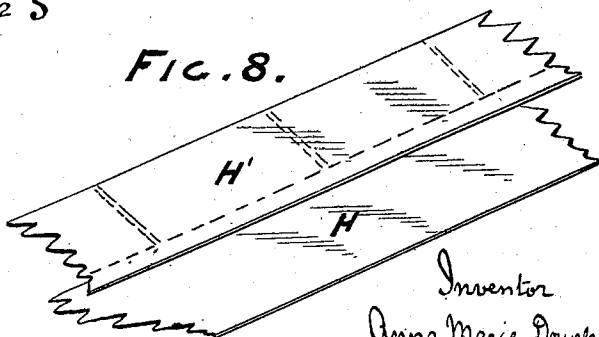
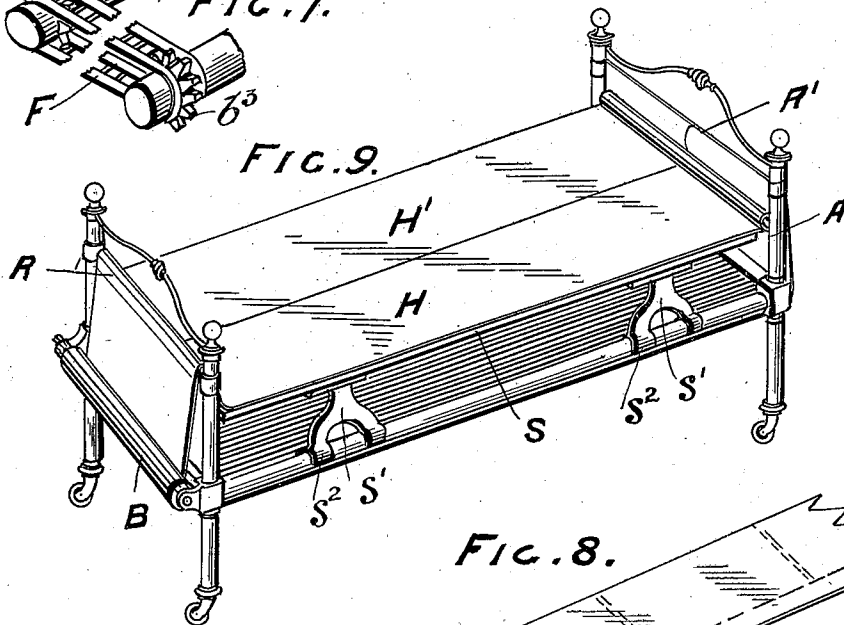
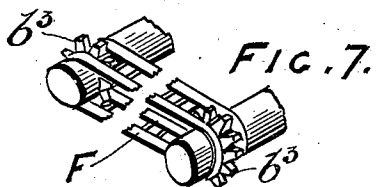
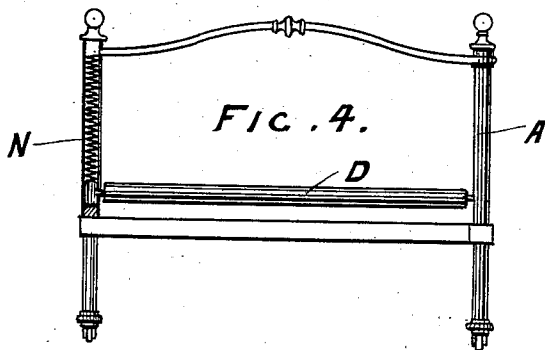
(No Model.)

2 Sheets—Sheet 2.

A. M. DOUGLAS.
INVALID BEDSTEAD.

No. 548,778.

Patented Oct. 29, 1895.



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UNITED STATES PATENT OFFICE.

ANNA MARIE DOUGLAS, OF LEAMINGTON, ENGLAND.

INVALID-BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 548,778, dated October 29, 1895.

Application filed January 29, 1895. Serial No. 536,546. (No model.) Patented in England December 3, 1894, No. 23,418.

To all whom it may concern:

Be it known that I, ANNA MARIE DOUGLAS, a subject of the Queen of Great Britain, residing at Dalkeith House, Leamington, in the county of Warwick, England, have invented certain new and useful Improvements in Bedsteads for Invalids and Appliances Connected Therewith, of which the following is a specification.

The invention has been patented in Great Britain, No. 23,418, dated December 3, 1894.

My invention has for its object improvements in bedsteads for invalids and appliances connected therewith, by which great convenience is afforded to nurses in moving patients and in making and changing their beds and other parts.

By my improvements the bed may be readily converted into an operating-table, thus rendering removal of the patient from bed to operating-table and back again unnecessary.

In order that my invention may be clearly understood and more easily carried into practice, I have appended hereunto two sheets of drawings, upon which I have fully illustrated the nature of my said invention, together with the mode of carrying the same into effect.

Figure 1 is a general view of one form of my bedstead. Fig. 2 is a longitudinal section through Fig. 1. Fig. 3 is a similar section to Fig. 2, but showing a modified arrangement. Fig. 4 is an elevation of the foot of the bedstead with the drum and top roll or bar not shown. Fig. 5 is a sectional plan of Fig. 4. Fig. 6 is a view of the ratchet-wheel and pawl for the drum. Fig. 7 is a view illustrating the connection between the back and front drum in cases where two drums are used. Fig. 8 is a view of a sheet for covering the webbing. Fig. 9 is a view showing the application of my invention for use as an operating-table.

In carrying my invention into effect the bedstead A is provided with the rollers or bars R and R', which are mounted at each end at any convenient or suitable length above the mattress P. At one end of the bed the winding-drum B is provided and has a suitable ratchet K and pawl k' arrangement, the spindle of the drum having a square end to receive the handle E. The webbing C is attached to the bedstead at a^2 and passes over

the friction-roller or bar R at the one end and is carried along the mattress around the rollers D and over the friction-roller R' down to the winding-drum B, to which it is secured, by which means the patient may be gradually raised by the winding of the webbing onto the drum sufficiently for the sheeting, mattress, or bed P to be changed or turned as may be required and without disturbing the position of the occupant of the bed.

The attachment of the webbing C to the drum B and bedstead A is so arranged by studs and eyelets or other suitable means as to be easily capable of being detached and attached, so that when not being used for the purpose of making the bed or other uses the ends can be released and tucked under the mattress, thus allowing the bedclothes or sheet to hang down or be tucked under at the foot and head in the usual way, and when required for elevating purposes the ends can be readily withdrawn and attached to the drum and bed, respectively. The friction-rollers D and D' may be fixed at a certain height above the mattress, as shown at Fig. 3, by which an excessive bellying of the webbing is prevented, or they may be placed at the bottom, as shown at Fig. 2, in which case they are mounted to slide up against the resistance of a spring or springs during the time the webbing is being wound around the drum, thus retaining the webbing in a taut and straight condition, as shown by dotted lines c^2 . These rollers D and D' are mounted on sliding bearings in grooves formed in the pillars and are forced normally downward by the coiled springs N within the pillar.

Drums may be mounted at each end of the bedstead, as shown by dotted lines B', Fig. 2, and in such cases may be connected together by the web-band F, Fig. 7, which engages with projections b^3 , formed upon the drums, so that both drums would wind simultaneously and thus retain the webbing centrally on the bed.

The webbing is slit at c' for the purpose when raised of convenient application of a bed-pan or any medical appliance to the patient which may be required. The webbing is also slit at c^3 at each end, so that it may be doubled under when loose and more readily removed without interfering with the occupant. I may make the covering-sheet H and

H' in two parts with straps h^2 to retain them in position, by which means the two halves may be drawn away from each side, the invalid remaining in the center. The straps or
5 tapes h^2 would not be necessary in cases where the spring-rollers D are used, as such rollers would retain the sheeting in position.

The webbing may be woven of a woolen base having a cotton or linen surface, which
10 would render a separate sheet unnecessary. I may dispense with the use of the friction-rollers D, although in most cases I find it preferable to use them.

In using the bedstead for operating purposes I provide the table S, which is of any
15 suitable material and which is mounted on any suitable supports s' , having clamp s^2 for attachment to any convenient part of the bedstead, so that when the patient is raised the
20 bed can be withdrawn and replaced with the operating-board S, which after the operation is performed is removed and the bed replaced prior to the patient being again lowered onto the bed.

25 What I claim, then, is—

1. An invalid bedstead having vertically moving friction rollers at each end, and the stationary rollers journaled above the friction rollers, combined with a webbing passed un-

der the movable rollers and over the station- 30
ary rollers, and means for winding up or tightening the web, substantially as described.

2. An invalid bedstead having elevated rollers, a webbing passing over the same with
35 means for tightening it to raise the central portion, combined with an operating table arranged to be inserted beneath the webbing and having legs provided with clamps for securing them upon the rails of the bedstead,
40 substantially as described.

3. An invalid bedstead comprising the frame, having the hollow head and foot posts, the friction rollers having their ends sliding
45 in vertical slots in the posts, springs in the hollow posts for forcing the friction rollers downwardly, the stationary rollers above the friction rollers, and the webbing passing under the friction rollers and over the station-
50 ary rollers, with means for tightening it, substantially as described.

In testimony that I claim the foregoing as my own I affix my name in the presence of two witnesses.

ANNA MARIE DOUGLAS.

Witnesses:

LEWIS WM. GOOLD,
ARNOLD THOMPSON.