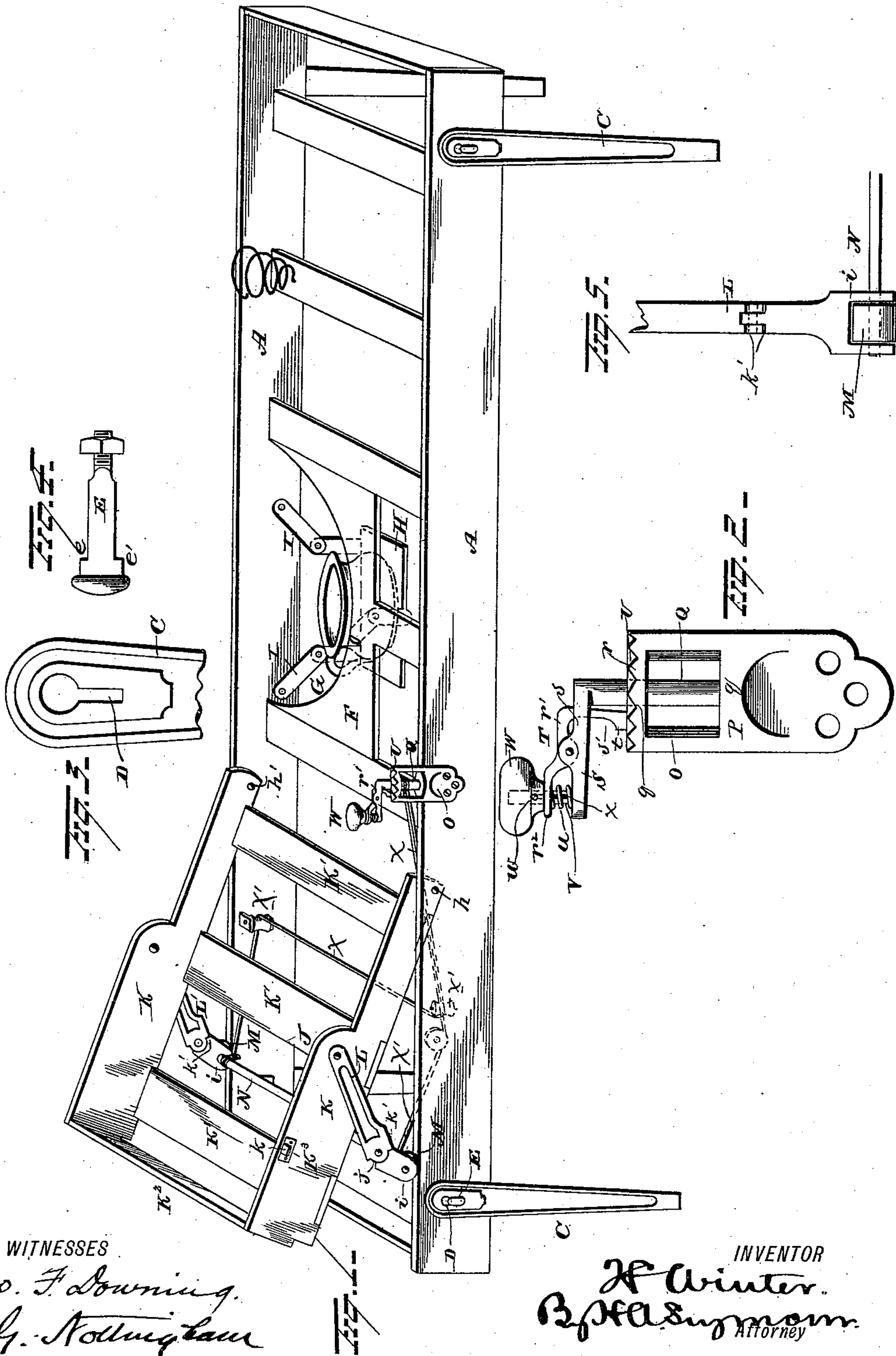


(No Model.)

H. WINTER.  
INVALID BEDSTEAD.

No. 352,941.

Patented Nov. 23, 1886.



**WITNESSES**

WITNESSES  
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# UNITED STATES PATENT OFFICE.

HERMANN WINTER, OF HERMANN, MISSOURI.

## INVALID-BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 352,941, dated November 23, 1886.

Application filed June 19, 1886. Serial No. 205,648. (No model.)

*To all whom it may concern:*

Be it known that I, HERMANN WINTER, of Hermann, in the county of Gasconade and State of Missouri, have invented certain new and useful Improvements in Bedsteads; 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 an improvement in invalid-bedsteads, the object of the same being to provide necessary accommodations for those confined to the bed.

A further object is to provide a light, cheap, and neat bedstead and one which may be folded for convenience in storing and shipping.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved bedstead. Fig. 2 is a detached view of the elevating-reel. Fig. 3 is a view in side elevation of the upper portion of one of the bed-legs. Fig. 4 is a view of bolt E. Fig. 5 is a detached view of the arm.

A represents an ordinary bed-frame, with the slats resting thereon in any approved manner. The bed-frame is conveniently supported on four wooden or metallic legs, C, the upper ends of which are provided with a longitudinal slot, D, preferably narrow at the lower end, but enlarged or round at the upper end, as shown in Fig. 3. The legs C are pivotally secured to the sides of the bed by screws or bolts E, which are formed with a pair of shoulders, *e e'*, integral therewith and located opposite each other and directly beneath the head of the bolt, the object of the said shoulders being to slide into the restricted part of the slot D, where they are held from displacement by the weight of the bed, thus preventing the legs from doubling under and letting the bed onto the floor.

The enlarged portion of the slot D is only brought into use when it is desired to fold the bed. By raising the bed slightly the legs may be lowered until the shoulders *e e'* slide from the narrow into the enlarged part of the slot D, thus allowing the legs to be swung in a vertical plane out of the way for folding the bed.

The slats at the middle of the bedstead, either two or three in number, as may be de-

sired, are preferably substituted by the M-shaped block F, which forms a necessary reinforcement for that part of the bed where the weight of the occupant falls when in a sitting posture. The U-shaped opening G is located at one side of the block F, and directly beneath it the shelf H is suspended by the jointed hangers I, the object of the joints being to allow the shelf H to be elevated to the plane of the bed-slats when not in use holding the chamber-vessel, or when it is desired to fold the bedstead. At points *h h'*, toward one end of the bedstead, is pivoted the head-section J, which may be constructed in any approved or well-known manner, though to insure lightness and cheapness it may consist simply of the side pieces, K, the cross-slats K', and end board, K<sup>2</sup>, rigidly secured together in the relative positions shown in the drawings, and adapted when lowered to horizontal adjustment to lie loosely between the sides of the bed-frame A, where it is prevented from lowering below the plane of the frame by the blocks K<sup>3</sup>, which consist simply of a plate provided with perforations for the entrance of screws by which the blocks are secured to the frame, and a lug, *k*, which rests against the supporting-arms L L'.

The arms L L' are pivotally secured one on either side of the head-section J, and preferably about midway between the ends. It is desirable to form each arm in two sections, the joining ends of which are of the tongue-and-groove form, hinged together at point *j*, and so provided on corresponding sides with shoulders K' as to prevent the arms from doubling either rearward or too far forward. The sections *i* of the arms are bifurcated at the lower end, and between the branches pulleys M are secured on the ends of the elongated pintle N, which, by extending across from one side of the bed to the other, holds the arms L L' properly separated and renders them less liable to displacement from the edge *a* of the bed-frame, where the pulleys M are adapted to roll backward and forward in the operation of lowering and elevating the head-section.

The elevating-reel O may be formed integral with either side of the bedstead; but I usually prefer to form it complete in itself, so that in case any part of it breaks it may be readily replaced, and with slight expense. The reel consists of the skeleton or frame P, preferably round at the top in horizontal cross-section,



and having both faces at the bottom flattened, where it is provided with a series of perforations, through which screws or bolts *o* are inserted for securing the reel to the side of the bedstead. The spool or spindle *Q* is stepped at point *q* in the lower part of the skeleton, while its upper end extends through and a short distance beyond the perforation *p* in the head or top *r* of the skeleton, where it is provided with a crank by which the spool is operated. The crank which I prefer to use in connection with this bedstead contains an automatic locking device, which may be arranged and constructed in various ways.

The main part or web *S* may be provided with an elongated slot, *s*, extending in the direction of the length, with a tongue, *s'*, pivoted therein; or the body of the lever itself may be pivoted between a pair of ears, *T*, provided the engaging lug or tongue *t* is free to project through the web *S* of the crank to register with the radiating rack-teeth *U*, located on the upper surface of the head *r*, where it is made to automatically lock by the spring *u*, the tension of which tends to hold the outer end of the lever *r'* in elevated adjustment, and hence the opposite end, where the lug *t* is located, in depressed adjustment. The outer end of the lever *r'* may be conveniently formed in the shape of a collar, *r''*, adapted to encircle the waist *V* of the crank directly over the spring *u* and under the handle or the thimble *W*, which is loosely mounted on the wrist *V*, on which it is adapted to reciprocate, and from which it is prevented from displacement by the pin *w*, which extends across the thimble through the slot *x*.

Cords, ropes, wires, or any other flexible connections, *X X'*, are attached conveniently to the elongated pintle *N*, near the pulleys *M*, whence they are strung over the small pulleys *x'*, and thence over the spiral or spindle *Q*, where they are secured, and upon which they are adapted to be wound.

The operation of the device is quite simple, and the crank may be manipulated by the occupant of the bed, if necessary. By depressing the thimble or handle *W* the crank may be turned and the elevation of the head-section regulated. As soon as the hand is removed from the handle the elevating-reel becomes immediately locked.

Any convenient kind of mattress may be used on the bedstead, provided it has an opening at one side to correspond in position with the opening *G* of the bedstead bottom. The object of its being slightly to one side of the bed is to allow the occupant plenty of room on the opposite side of the bed while the cover of the opening is removed.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the particular construction herein set forth; but,

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

1. In a bedstead, the combination, with a main frame supported on a set of folding legs and the cross-slats resting thereon, of a series of jointed arms pivotally secured at their upper ends to the bedstead, and a shelf pivotally secured to the lower ends of the arms, substantially as set forth.

2. In a bedstead, the combination, with a main frame and a series of supporting-legs, of a series of arms each made up of sections pivotally secured together, the said arms being pivotally secured at their upper ends to the under side of the bedstead, and a shelf pivotally secured to the lower ends of the arms, substantially as set forth.

3. In a bedstead, the combination, with the main frame and adjustable head-rest pivotally secured thereto, of a supporting or elevating arm pivoted at its upper end to the head-rest, with its lower end resting loosely on the bed-frame, and a flexible device for regulating the position of said arm, substantially as set forth.

4. In a bedstead, the combination, with a main frame and an adjustable head-rest pivotally secured thereto, of a pair of jointed elevating or supporting arms pivoted at their upper ends to the head-rest, with their lower ends resting loosely on the bed-frame, and a flexible device, substantially as described, for regulating positions of said arms, substantially as set forth.

5. In a bedstead, the combination, with a main frame, a head-rest pivoted thereto, and arms pivoted to the head-rest, and provided at their lower ends with rollers, which latter rest and move on the sides of the frame, of ropes connected to the arms and attached to a drum or windlass, substantially as set forth.

6. The combination, in a main frame and a head-rest pivoted thereto, and arms for supporting the outer end of the head-rest, of a spindle or reel, flexible devices connecting the spindle or reel and the arms, and a handle connected to the spindle or reel and adapted to automatically lock itself against movement, substantially as set forth.

7. In a bedstead, the combination, with the main frame and an adjustable head-rest secured thereto, of a pair of jointed elevating-arms with one end pivoted to the said head-rest, and the free ends joined and adapted to roll backward or forward on the said main frame, and means for preventing the head-rest from lowering beneath the plane thereof, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HERMANN WINTER.

Witnesses:

HALBERT A. WHITE,  
R. A. BROWN.