

No. 775,520.

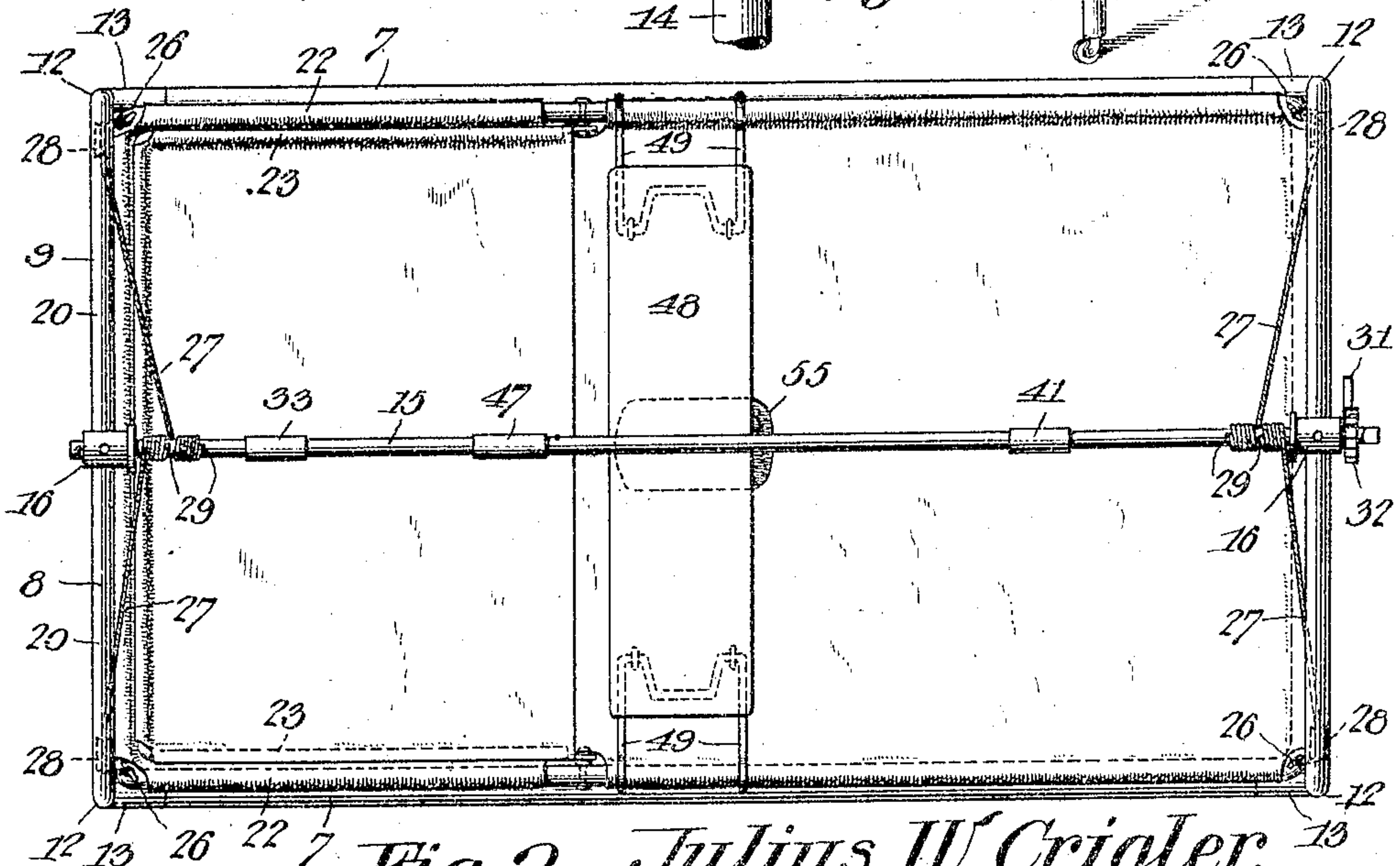
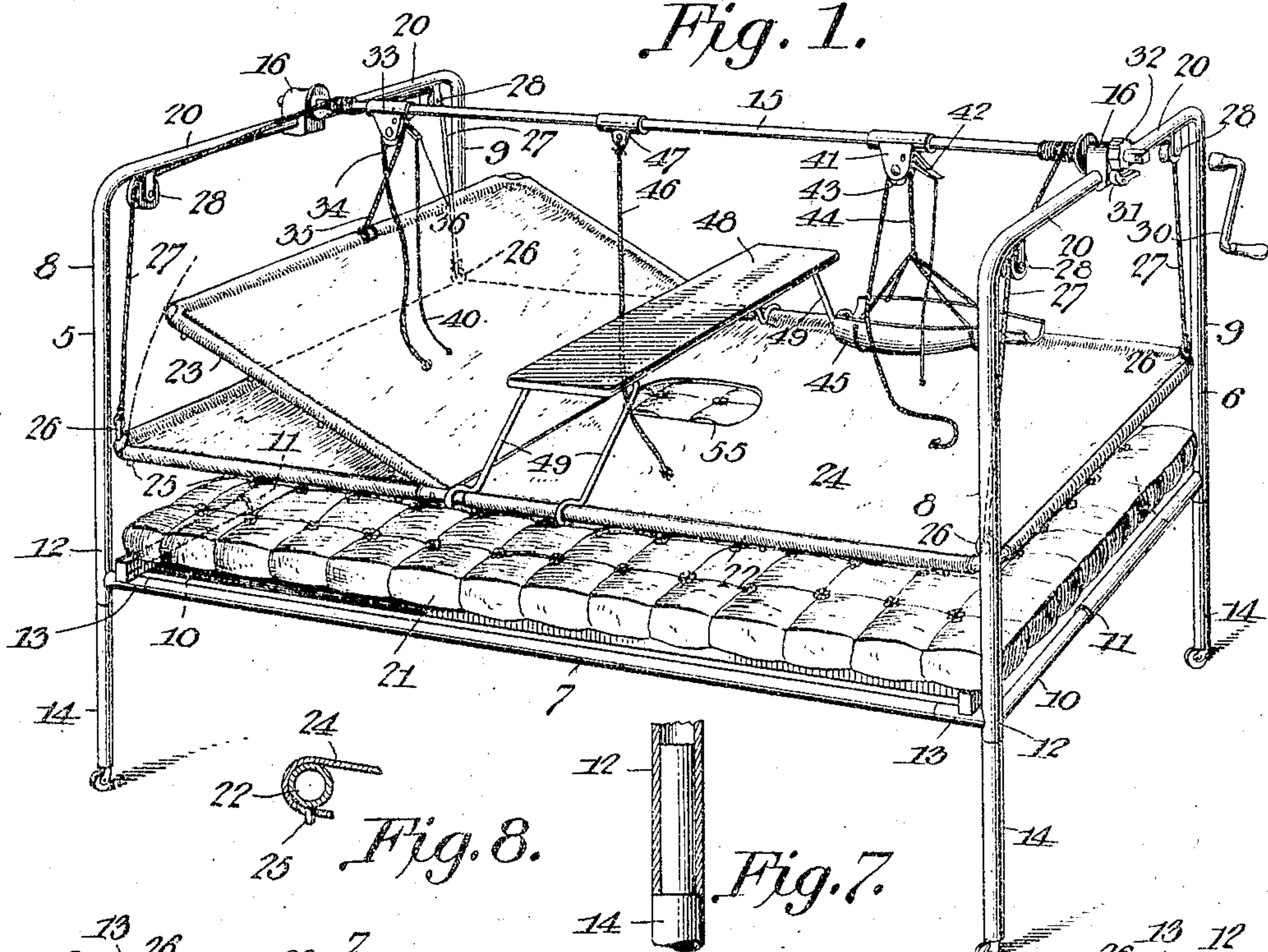
PATENTED NOV. 22, 1904.

J. W. CRIGLER.
INVALID BED.

APPLICATION FILED DEC. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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L. A. Allen

by

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Fig. 2. Julius W. Crigler,
Inventor.

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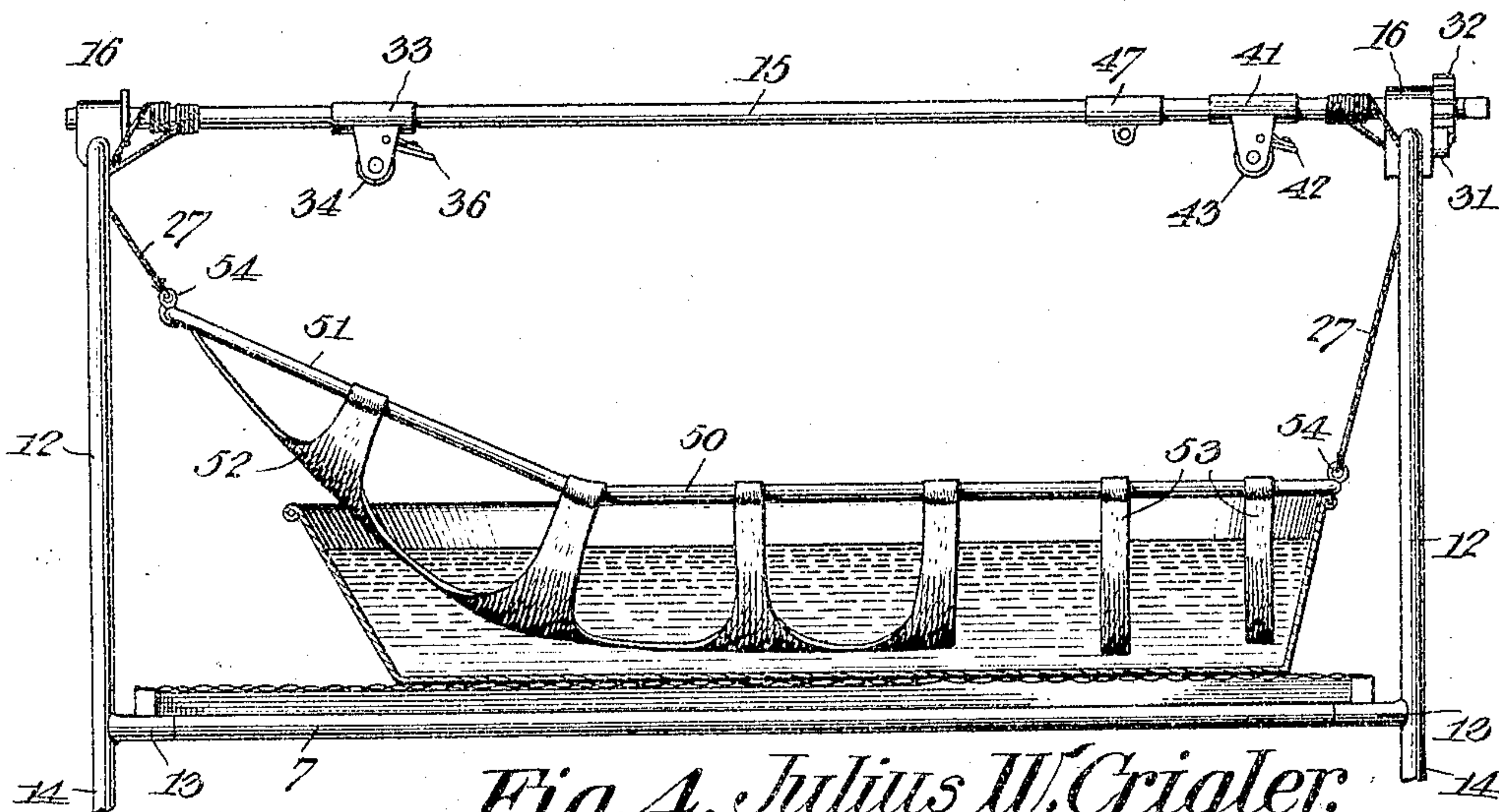
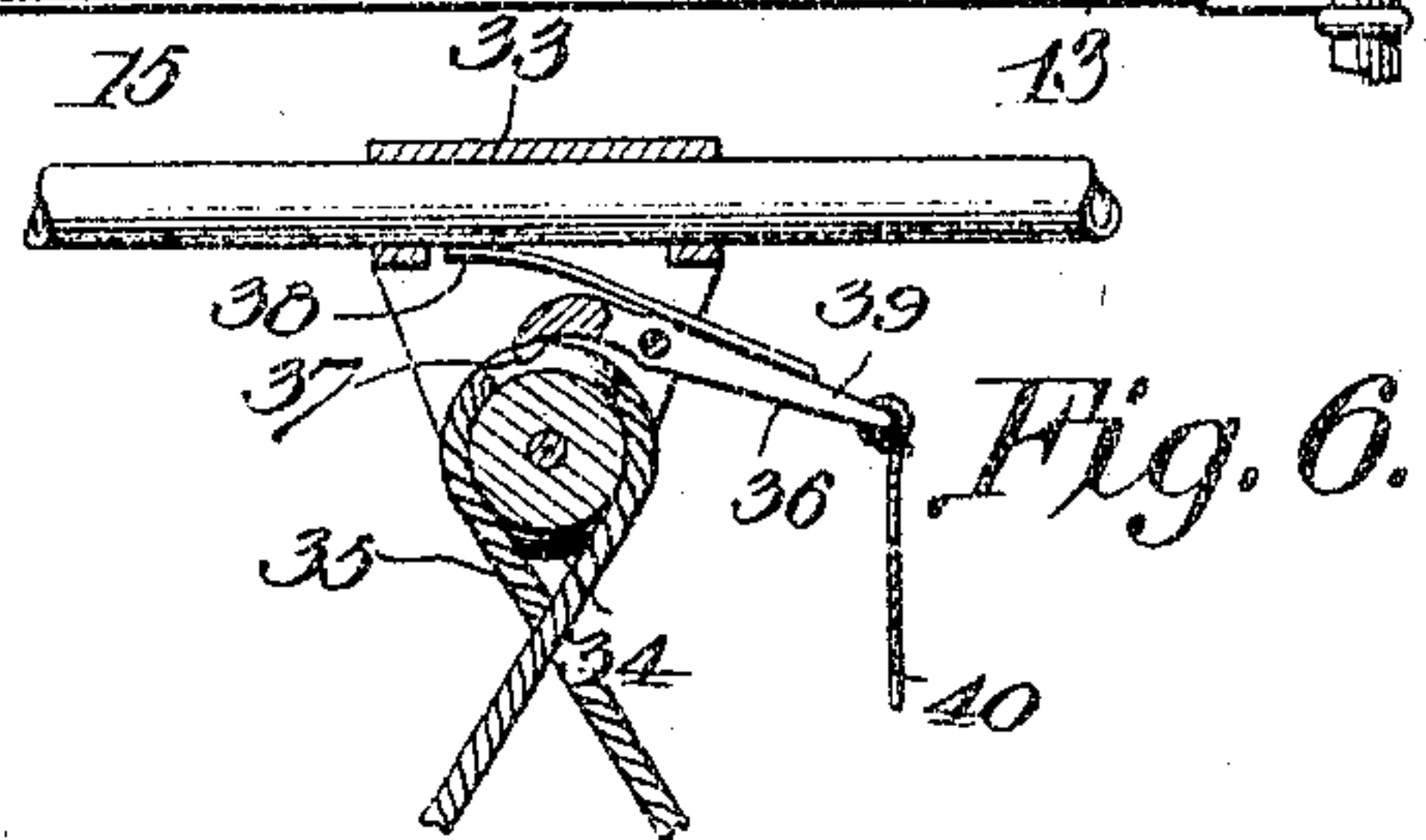
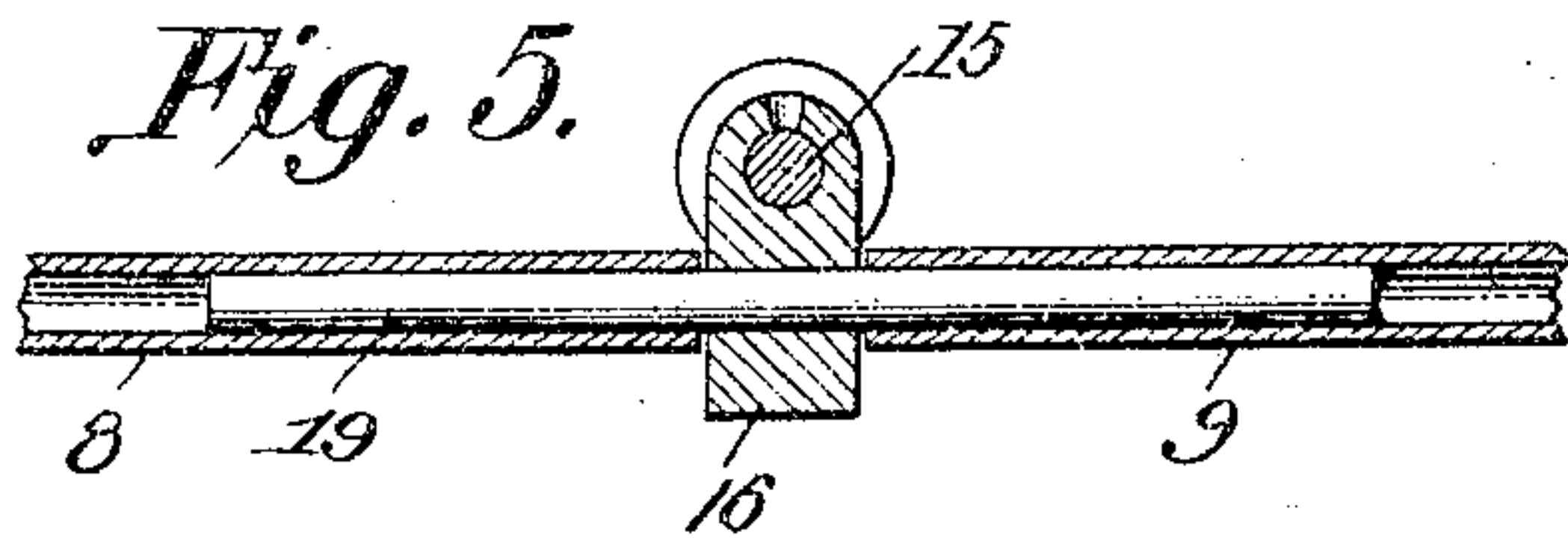
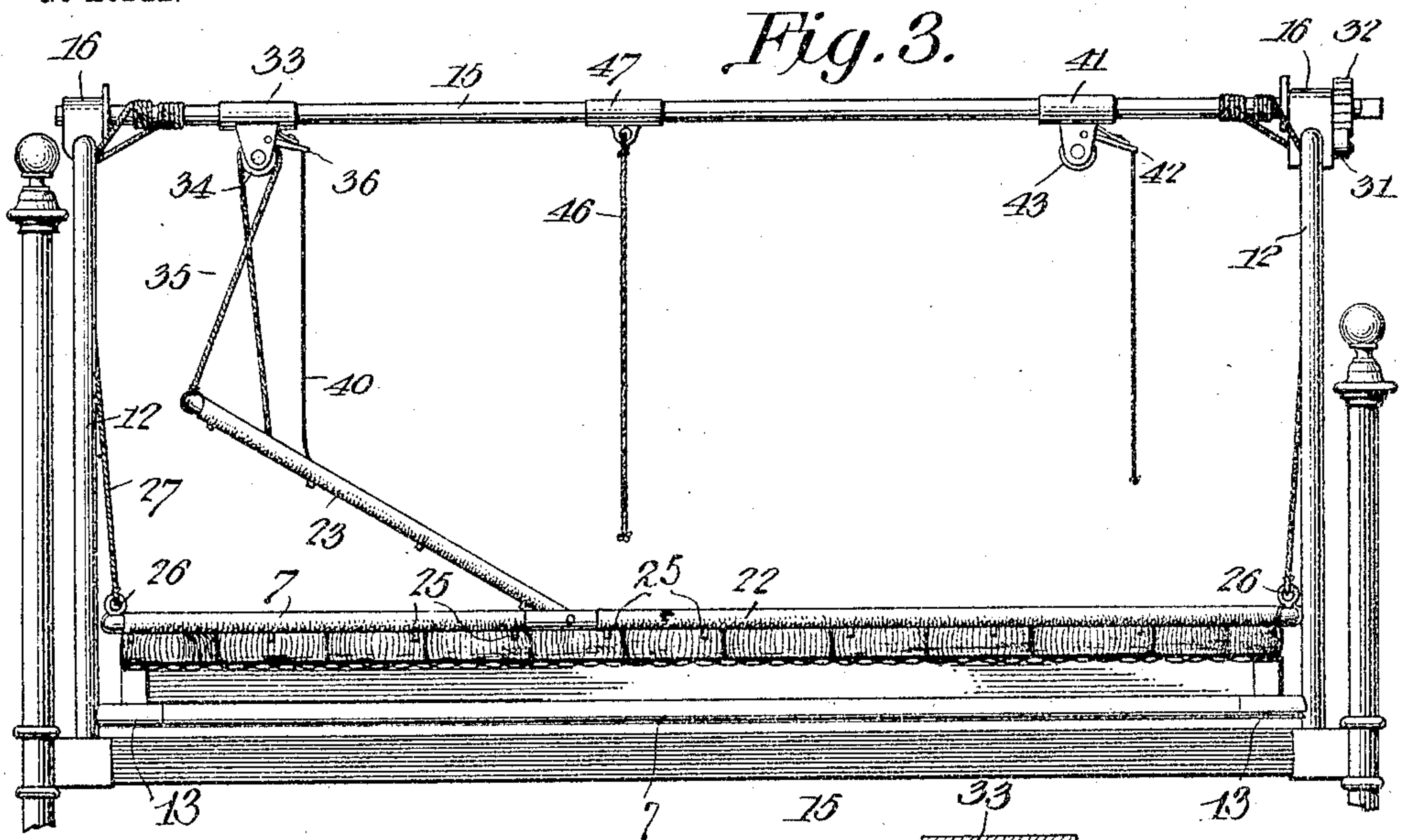


Fig. 4. Julius W. Crigler,

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UNITED STATES PATENT OFFICE.

JULIUS W. CRIGLER, OF BLOOMINGTON, ILLINOIS.

INVALID-BED.

SPECIFICATION forming part of Letters Patent No. 775,520, dated November 22, 1904.

Application filed December 7, 1903. Serial No. 184,161. (No model.)

To all whom it may concern:

Be it known that I, JULIUS W. CRIGLER, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented a new and useful Invalid-Bed, of which the following is a specification.

This invention relates to an improved bed particularly designed for the use of invalids and other disabled persons, and has for its object to provide an inexpensive, durable, and efficient bed by means of which the person occupying the same may be readily raised or lowered to comfortable and convenient positions.

A further object of the invention is to provide a device of this character capable of being used in connection with beds of the ordinary construction and which may be quickly applied thereto and readily adjusted to fit beds of different widths.

A further object is to provide means whereby the head-section of the bed may be adjusted independently of the sheet-carrying frame, so as to insure the comfort of the invalid and permit the patient to conveniently attend the calls of nature, and further to provide means for tilting said frame from side to side to facilitate the handling of the patient.

A still further object is to provide an auxiliary frame or carrier designed to support the invalid in a comfortable position while being bathed, so that necessary ablutions may be performed without the necessity of removing the patient from the bed.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts in all the figures, Figure 1 is a perspective view of an invalid-bed constructed in ac-

cordance with my invention and showing the supporting-frame in an elevated position. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation illustrating the manner of applying the device to an ordinary bed. Fig. 4 is a side elevation of the bed with the auxiliary frame in position for use. Fig. 5 is a detail sectional view of one end of the windlass. Fig. 6 is a detail sectional view of the pulley and clutch member, and Figs. 7 and 8 are further detail sectional views.

The frame of the bedstead, which may be formed of metal, wood, or other suitable material, as preferably formed of metallic tubing of any desired shape in cross-section, being preferably round, as shown, and consists of the headboard 5 and footboard 6, connected by the side rails 7.

The headboard 5 and footboard 6 are each preferably formed in two sections 8 and 9, the lower bar 10 of one section telescoping the bar of the adjacent section, as shown at 11, so as to permit the frame to be adjusted laterally, as will be more fully explained hereinafter. The corner-posts 12 are provided with socket members 13, adapted to receive the ends of the side rails 7, and fitting within said posts are removable legs 14, designed to be detached when the device is used as an attachment for an ordinary bed. Extending longitudinally of the bed-frame is a shaft or windlass 15, the ends of which are journaled in bearing-blocks 16, fastened in any suitable manner to stud-shafts 19, which engage the upper bars 20 of the sections 8 and 9.

The stud-shafts 19 are loosely mounted in the upper bars 20, so as to form a bearing for said bars when the sections of the bed are adjusted laterally. Resting on the mattress 21 is a rectangular supporting frame or carrier 22, to the side bars of which is pivoted in any suitable manner a head-section 23, a bed-sheet 24, formed of canvas or other suitable material, being stretched across said frame and pivoted head-section and fastened in any suitable manner, as by pins 25. Secured to the corners of the rectangular frame or carrier are eyes or loops 26, to which are fastened cords, cables, or other flexible connections 27,

the ends thereof passing over pulleys 28, secured to the foot and head board, respectively, at points adjacent the corner-posts and engaging openings 29 in the shaft or windlass 15, as shown.

The shaft or windlass is operated to raise or lower the frame or carrier 22 by means of a crank 30, a gravity-pawl 31, pivoted to the bearing-block 16 on the footboard, engaging a ratchet-wheel 32, keyed to the shaft 15 and serving to lock the frame in the adjusted position.

Slidably mounted on the shaft 15 is a box or casing 33, having journaled therein a pulley 34, over which passes a cord or cable 35, one end of which is secured to the pivoted head-section, the opposite end of the cord hanging within easy reach of the invalid, so that by pulling on said cord the head-section may be readily raised or lowered and the position of the invalid changed at will. As a means for holding the head-section in adjusted position I provide a clutch member 36, pivoted within the casing 33, one end of which is grooved, as shown at 37, and normally held in contact with the cord or cable 35 by a spring 38, the opposite end thereof being extended to form a handle 39, to which is secured a rope 40, adapted to release the clutch member when downward pressure is exerted thereon. Slidably mounted on the shaft 15 at a point adjacent the footboard is a similar box or casing 41, provided with a clutch member 42 and a pulley 43, over which passes a cord 44, to one end of which is suspended a stirrup 45, adapted to support the leg of the invalid and hold the same out of contact with the bed-sheet when desired. In order to assist the invalid in changing his position, I provide a rope 46, secured in any suitable manner to a sleeve or collar 47, slidably mounted on the shaft 15 at a point intermediate the casings 33 and 41, the lower end of the rope being within easy reach of the patient, as shown. A table 48 may be placed on the bedstead, as indicated in Fig. 1, the upper portion of the legs 49 engaging the top of the table and the lower portion thereof being inclined and bearing against the sides of the supporting-frame 22, thereby effectually preventing accidental displacement of the same.

50 designates an auxiliary supporting frame or carrier formed of metal or other suitable material, one end of which is bent upwardly at a slight angle to the general plane of the same, as shown at 51, and fastened to the sides of the frame in any suitable manner is a web 52, preferably formed of canvas and designed to support the invalid while being bathed, as clearly illustrated in Fig. 4 of the drawings. Extending transversely across the lower end of the frame are one or more straps 53, designed to support the patient's legs and feet; but, if desired, the web 52 may be dispensed with and a series of said straps used instead. The auxiliary frame 50 is provided with eyes

or loops 54, to which the cords or cables 27 may be fastened for raising or lowering said frame after the main supporting-frame 22 has been removed. The bed-sheet 24 is provided with a central opening 55, beneath which may be placed a suitable vessel, so that when the supporting-frame 22 is elevated and the head-section inclined the invalid may conveniently attend to the calls of nature.

From the foregoing description the construction of the device will be readily understood and the operation thereof is as follows: By turning the crank 30 the supporting frame or carrier may be elevated to permit the bedding to be removed or aired, said frame being automatically locked in the adjusted position by means of the pawl and ratchet. The inclination of the head-section 23 may also be regulated either by the patient or an assistant by pulling downwardly on the cord which releases the clutch member, permitting said head-section to be readily raised or lowered through the medium of the rope. In like manner the stirrup 45 may be adjusted to support the leg of the invalid out of contact with the bed-sheet while performing surgical operations or for other purposes. The supporting frame or carrier may be readily tilted laterally to facilitate the handling of the invalid by attaching both the suspending cords or ropes at each end of the bed to one side of the windlass and operating the crank on the windlass, as will be readily understood. When it is desired to bathe the patient, the frame or carrier is removed and the suspending cords or ropes attached to the frame of the auxiliary carrier, which is elevated through the medium of the windlass a sufficient height to permit a tub to be placed beneath the same. The auxiliary frame is then lowered until the sides or ends thereof rest on the tub, as clearly shown in Fig. 4 of the drawings, in which position the patient may be comfortably supported while the necessary ablutions are being performed. In using the device as an attachment for beds of the ordinary construction the legs are removed, and the sections adjusted laterally to accommodate the width of said bed, after which the bed-frame is placed in position, as clearly illustrated in Fig. 3.

Having thus described the invention, what is claimed is—

1. A frame formed of laterally-adjustable telescopic members, a windlass extending longitudinally of the frame and provided with terminal stub-shafts fitting within said members, a sheet, and a vertically-adjustable sheet-carrier having an independently-adjustable head-section supported by said windlass.

2. A frame formed of laterally-adjustable members, a windlass connecting said members, a sheet, a vertically-adjustable sheet-carrier supported by the windlass, a head-section pivoted to the sheet-carrier, and a clamping member slidably mounted on the windlass for ad-

justing the head-section independently of the carrier.

3. A frame formed of laterally-adjustable telescopic members, legs or supports removably secured thereto, a windlass connecting said members, and provided with stub-shafts fitting within the same, a sheet, and a vertically-adjustable sheet-carrier supported by said windlass.

4. A frame formed of laterally-adjustable telescopic members, a windlass connecting said members, and provided with stub-shafts fitting within the same, a sheet, a vertically-adjustable sheet-carrier supported by the windlass, an independently-adjustable head-section pivoted to the carrier, and means carried by the windlass for locking the head-section in adjusted position.

5. A frame formed of laterally-adjustable members, a windlass connecting said members, a sheet, a sheet-carrier provided with a pivoted head-section, flexible connections between the carrier and the windlass, a hand-support slidably mounted on the windlass, and a clamping member carried by said windlass for adjusting the head-section independently of the carrier.

6. A frame formed of laterally-adjustable members, a windlass connecting said members, a sheet, a vertically-adjustable sheet-carrier supported by the windlass, an adjustable head-section pivoted to the carrier, a casing having a roller journaled therein mounted on the wind-

lass, a flexible connection one end of which is secured to the head-section the opposite end thereof passing over the roller, and a clamp for engaging the flexible connection and locking the head-section in adjusted position.

7. A frame formed of laterally-adjustable telescopic members, a windlass connecting said members, and provided with stub-shafts fitting within the same, a sheet, a vertically-adjustable sheet-carrier supported by the windlass, a head-section pivoted to the carrier, a clamping member carried by one end of the windlass for adjusting the head-section independently of the carrier, an adjustable stirrup carried by the opposite end thereof, and a hand-support slidably mounted on said windlass at a point intermediate its ends.

8. A frame formed of laterally-adjustable telescopic members, legs or supports removably secured thereto, a windlass having its opposite ends provided with stub-shafts fitting within said members, a sheet, a vertical adjustable sheet-carrier supported by the windlass, and a head-section pivoted to the carrier and adjustable independently of the same.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JULIUS W. CRIGLER.

Witnesses:

CORA J. DIXON,
ADNEY J. ELMER.