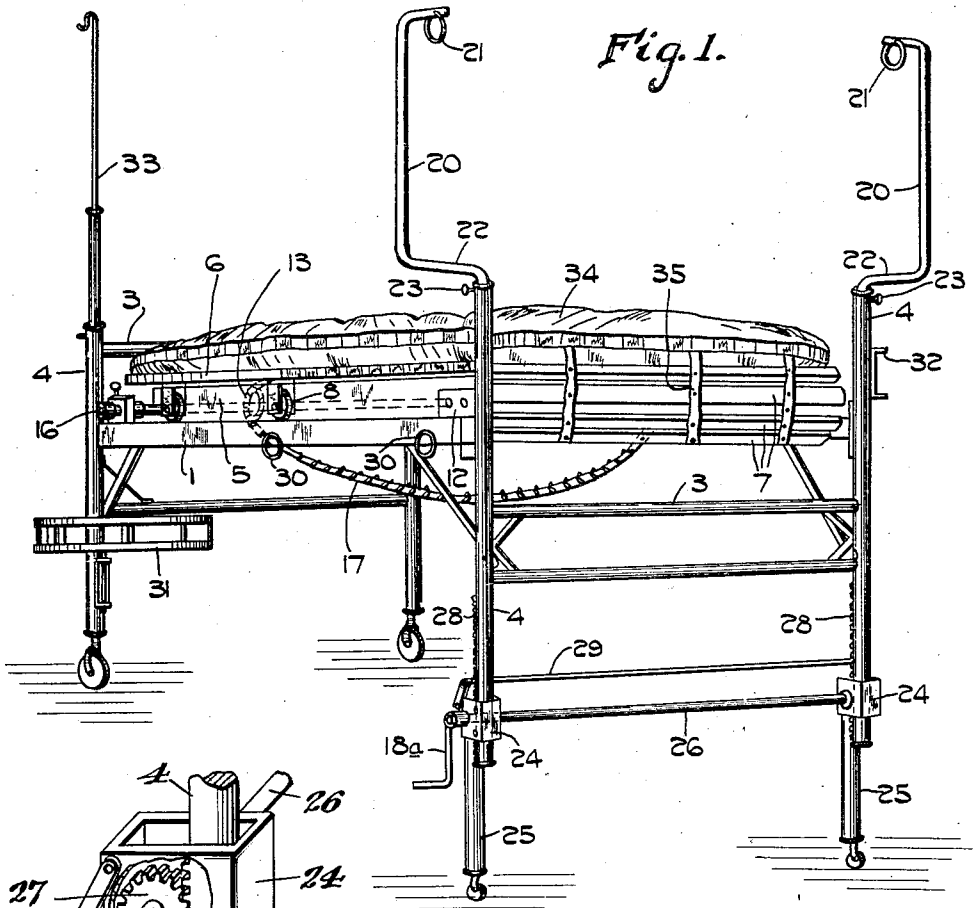
Jan. 5, 1932. J. H. SCHIFFHOUER ET AL 1,839,705

OBSTETRICAL BED

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Fig. 1.



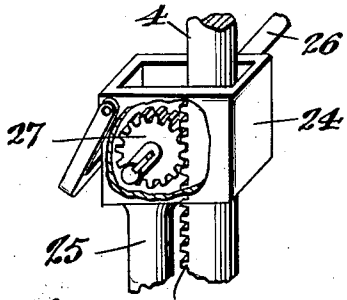
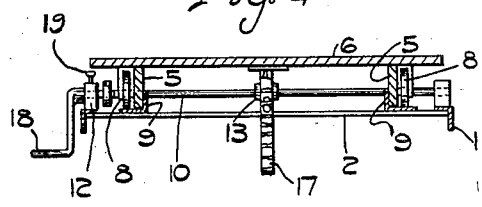


Fig. 5.

Fig. 4



WITNESSES
A. B. Wallace
F. B. Flick.

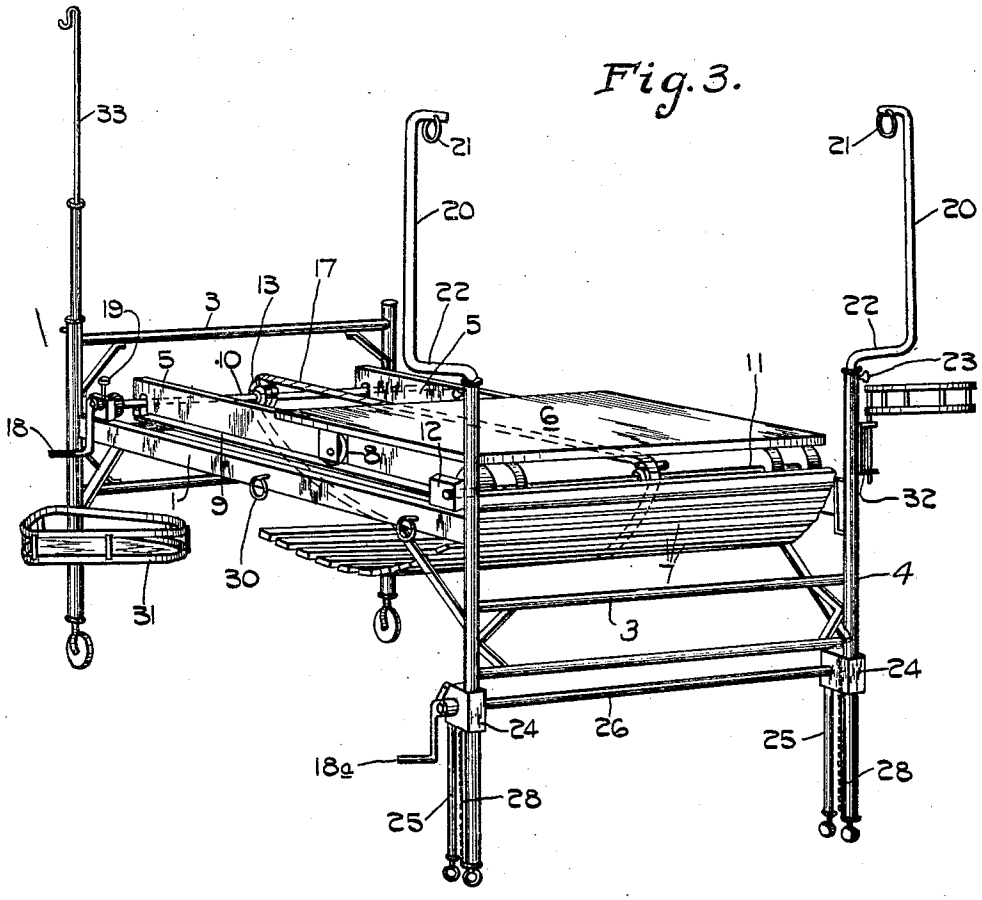
INVENTORS:
Joseph H. Schiffhouer and
John C. Ell
by Brown & Critchlow
their attorneys

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OBSTETRICAL BED

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Fig. 3.



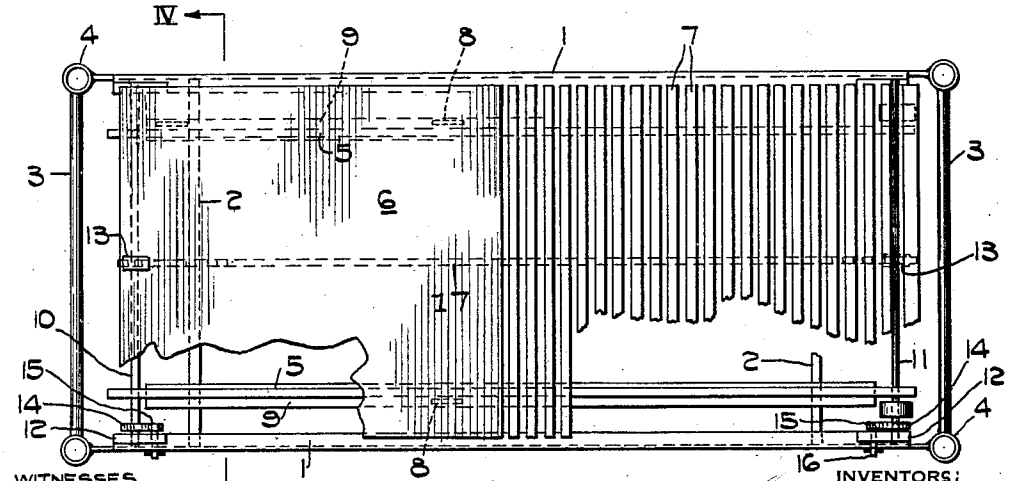


Fig. 2.

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Patented Jan. 5, 1932 1,839,705

UNITED STATES PATENT OFFICE

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OBSTETRICAL BED

Application filed September 11, 1929. Serial No. 391,774.

This invention relates to hospital beds, and especially to beds for gynecological and obstetrical uses.

It is among the objects of the invention to provide a bed of the type referred to, which is of ordinary hospital size and built from the materials customarily used in such beds, is strong, rigid, of simple construction, readily manipulated, adapted to provide maximum comfort to the patient while rendering easier the manipulations, assumption of various positions, and other operations incident to gynecological and obstetrical practice.

A particular object is to provide a bed of the stated type which is particularly adapted to facilitate infant delivery, which materially reduces or eliminates manual shifting of the patient during delivery and effects assumption of the various positions by mechanical means, permits easy handling of heavy patients, and is provided with vertically and laterally adjustable leg-supporting means.

The invention is described in connection with the accompanying drawings, in which Fig. 1 is a perspective view of the preferred embodiment; Fig. 2 a plan view of the bed, parts being broken away to assist in illustration; Fig. 3 a view similar to Fig. 1 with the mattress removed and with the bunk moved to a delivery position; and Fig. 4 a cross section of a portion of the bed, taken on line IV—IV, Fig. 2; and Fig. 5 a fragmentary perspective side view, partly in section, of the leg elevating mechanism shown in Fig. 3.

The bed provided by this invention comprises a bedstead frame structure of any suitable construction which carries a patient-supporting bunk in the form of a platform having connected head and foot portions adapted to be moved longitudinally of the bed the foot portion rolling around the foot of the bed to shift the head portion toward or from the foot of the bed. The bunk is preferably slidably supported on guides carried by the bed frame, and guide rollers mounted on the head portion of the bunk run on trackways carried by the guides. The bunk may be shifted in any suitable manner, for example by a suitably actuated chain connecting its ends, forming, in effect, an endless belt arrangement, the foot end of the bunk being rolled around and under the foot of the bed in moving the head portion downwardly.

The bed is also provided with leg stirrups which are adjustable for independently varying both the vertical elevation and the angular extension of the patient's legs, and it also embodies means for quickly and easily elevating the foot end.

Having reference now to the drawings, the embodiment shown comprises a bedstead including side sills 1, cross braces 2, and end frames 3 whose side members 4 are preferably tubular, all connected in the customary manner to form a strong, rigid structure. Mounted longitudinally of the bed are spaced guides 5, for carrying the patient-supporting bunk.

A particular feature of the invention resides in the provision of a longitudinally movable bunk which rolls around an end of the bed, and which in no way hampers access to a patient resting on the bunk. In accordance with the invention the bunk comprises an upper, or head platform portion 6, and a lower or foot portion 7 adapted to be coiled or rolled. In the form shown, the foot portion comprises slats connected to one another and to the head portion by articulated joints, preferably in a manner presently to be described. The bunk is supported by the guides 5, and to assist in shifting it and to prevent lateral displacement, the head portion of the bunk is provided with rollers 8 which run on trackways 9, preferably formed by angles connected to the bottom of the guides as shown in Fig. 4.

The bunk-shifting means shown comprise rotatable shafts 10 and 11 mounted transversely of the bed adjacent the end frames in bearing members 12 connected to the side sills. Each shaft is provided centrally with a sprocket wheel 13, and at its end with a gear 14 which meshes with a pinion 15 on a stub shaft 16 mounted in bearing 12. A sprocket chain 17 connected to opposite ends of the bunk passes around sprocket wheels 13, thus forming a type of endless chain con-

struction. The bunk is moved by means of a hand crank 18 adapted to be applied to either of stub shafts 16. Any suitable means may be used for locking the bunk in position, such as a set screw 19 mounted in one of the bearings to act upon the shaft.

The articulated construction of the foot portion of the bunk may be, and preferably is, achieved by placing the sprocket wheels 13 at the centers of shafts 10 and 11 along the center of the bunk, and extending sprocket chain 17 along the lower bunk portion, connecting its links to individual slats, as may be seen from Figs. 1 to 3. When the foot end of the bunk is in a patient-supporting position, guides 5 support the slats at the sides and prevent tipping, and by rounding the guides at the foot end, as shown in Fig. 3, the slats slide easily thereover when the bunk is moved.

Leg-supporting rods 20, provided with stirrup rings 21, and each having a horizontally offset portion 22, are slidably mounted in tubular side members 4 of the foot end frame. The rods may be held at any desired height by means of set screws 23, and the distance between the rings may be varied by rotation of the rods in their supports, thus providing independent vertically and laterally adjustable supports for the legs of a patient.

As is known, it is desirable at times to elevate the foot of beds of this type. The invention also provides means for accomplishing this object quickly and easily. As seen in Figs. 1 and 3, the side members of the foot end frame are slidably disposed in housings 24 carried by extension legs 25 and connected by a rotatable shaft 26, on which there are mounted pinions 27 meshing with racks 28 connected to the legs of the end frame. The elevating mechanism is actuated by means of a crank 18*a* applied to shaft 26, which crank may be the same as, or interchangeable with bunk crank 18 to eliminate any possible confusion. When elevated, as shown in Fig. 1, the bed may be held firmly by a pivotally mounted pawl or latch bar 29.

The bed is also provided with metal rings 30 connected to the side sills 1, for receiving hand-engaging straps. A shelf 31 pivotally connected to the right hand side of the head end frame is provided for anesthetists' supplies, and another shelf may be similarly disposed in a bracket 32 connected to the foot end frame. A hooked extension rod 33 is disposed in one of the head frame side posts, for use with enteroclysis or like treatments.

The bunk is, of course, provided with a mattress 34, Fig. 1, held in position on the bunk in any suitable manner, as by snap-connecting straps 35. The foot portion of the mattress is preferably segmented or articulated, so as to roll easily with the foot portion of the bunk in passing around the end.

The use of the bed is exceedingly simple. With the bunk in the position shown in Fig. 1, the patient is positioned with the hips at or below the middle portion of the mattress, for example on the lower portion of the bunk. As delivery proceeds, the patient may be moved downwardly any desired amount by turning crank 18, and by making the upper and lower portions of the bunk of substantially equal length, provision is made for different size patients. Normally, of course, the foot of the bed is lowered to the position shown in Fig. 3. Thus no pulling or lifting of the patient is necessary, which relieves the attendants and adds to the patient's comfort, and should the patient move out of position, she can be returned by simple movement of the crank. Patients are thus easily and readily brought into position at any desired rate, and even the heaviest patients may be handled with great ease, and the position of the foot stirrups can be quickly changed as need be. Because the bunk rolls under the end of the bed, the surgeon's and nurse's access to the patient is in no way interfered with. Thus the invention provides a bed which eliminates much manual effort on the part of attendants, simplifies obstetrical practice, renders manipulation easy and efficient, is simple and readily operated, and which in general makes for a greater degree of comfort for and more efficient cooperation between the patient, surgeon and nurses.

According to the provisions of the patent statutes, we have explained the construction and operation of our invention, and have illustrated and described what we consider to represent its best embodiment. However, we desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

We claim:

1. An obstetrical bed comprising the combination of a bedstead including end frames and side sills connected to the end frames, a patient-supporting bunk carried by the bedstead for movement longitudinally thereof, said bunk comprising rigid head and articulated foot portions, a rotatable shaft mounted on the bedstead, and means acting between said shaft and bunk to roll said articulated portion around the foot of the bed to adjustably position the head portion relative to the foot of the bed.

2. An obstetrical bed comprising the combination of a bedstead including end frames and side sills connected to the end frames, a patient-supporting bunk carried by the bedstead for movement longitudinally thereof, said bunk comprising connected rigid head and articulated foot portions, and means including a rotatable shaft mounted transversely of the bed for moving the bunk to adjustably position its head portion, a sprocket wheel mounted on said shaft, and a sprock-

et chain having its ends connected to said bunk meshing with said sprocket wheel, rotation of said shaft in opposite directions being effective to roll said articulated portion around the foot of the bed and to return it to its patient-supporting position, and to adjustably shift said rigid upper portion relative to the foot of the bed.

3. An obstetrical bed comprising the combination of a bedstead including head and foot end frames and side sills connected to said end frames, spaced guide members disposed longitudinally of and carried by the bedstead, a patient-supporting bunk mounted for sliding movement on said guides longitudinally of the bed and comprising rigid head and articulated foot portions, a rotatable shaft mounted transversely of the bed adjacent each of its ends, a sprocket wheel on each of said shafts, a sprocket chain having its ends connected to the ends of said bunk and meshing with said sprocket wheels, rotation of the shafts rolling said articulated bunk portion around the foot of the bed and correspondingly shifting said rigid portion.

4. An obstetrical bed comprising the combination of a bedstead including head and foot end frames and side sills connecting said end frames, a rotatable shaft mounted transversely of the bed adjacent each of said end frames, a sprocket wheel on each of said shafts, a patient-supporting bunk mounted for movement longitudinally of the bed and comprising a rigid head portion and a foot portion formed of slat members, and a sprocket chain engaged by said sprocket wheels and having one end connected to said head portion and extending longitudinally of the slatted foot portion with links connected to the slats to provide articulated connecting joints between them, rotation of said shafts rolling said foot portion around the foot of the bed and effecting a desired positioning of the head portion relative to the foot of the bed.

In testimony whereof, we hereunto sign our names.

JOSEPH H. SCHIFFHOUER.
JOHN C. SELL.