

W. B. STERLING.
INVALID BED.
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952,957.

Patented Mar. 22, 1910.

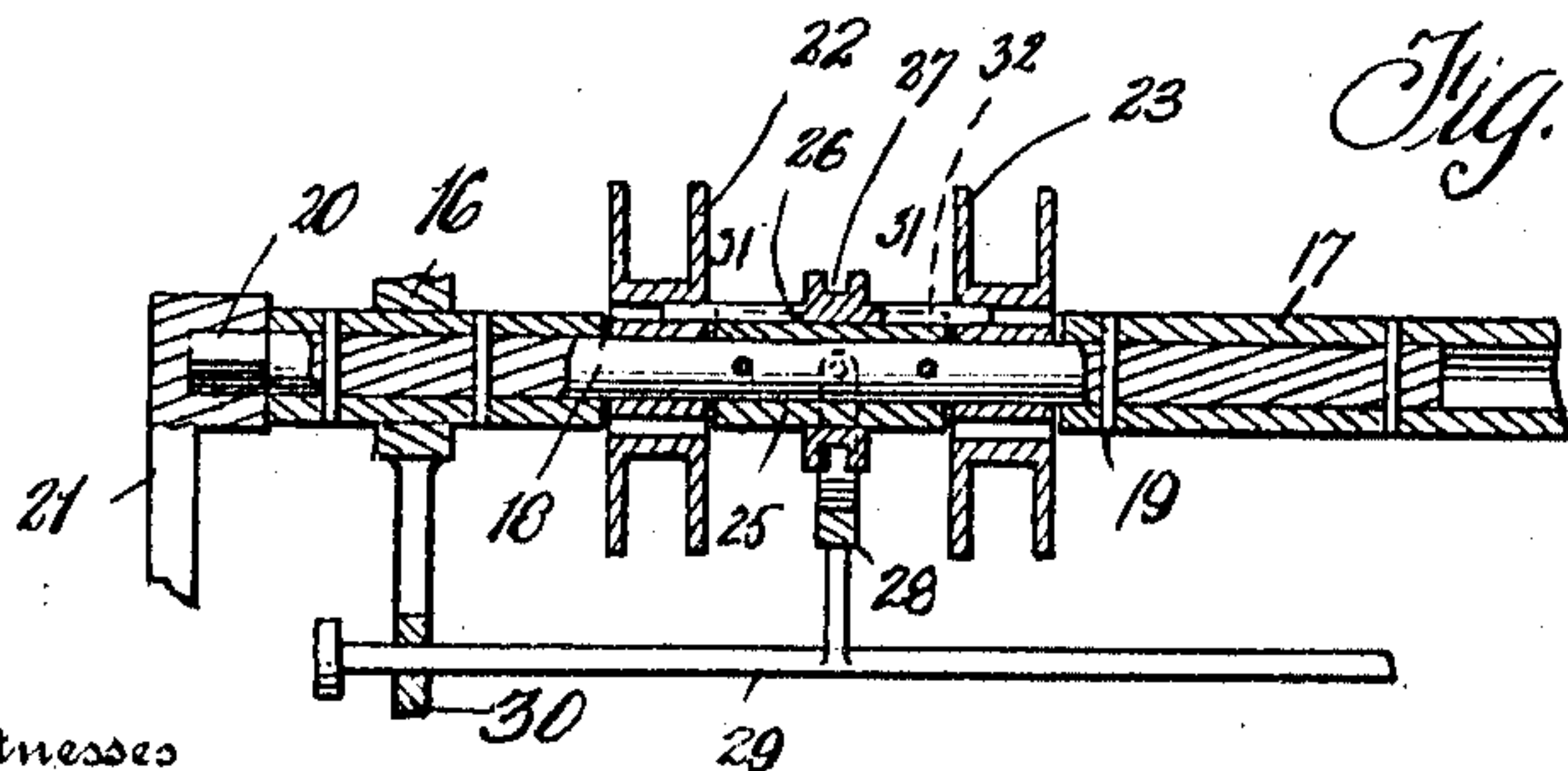
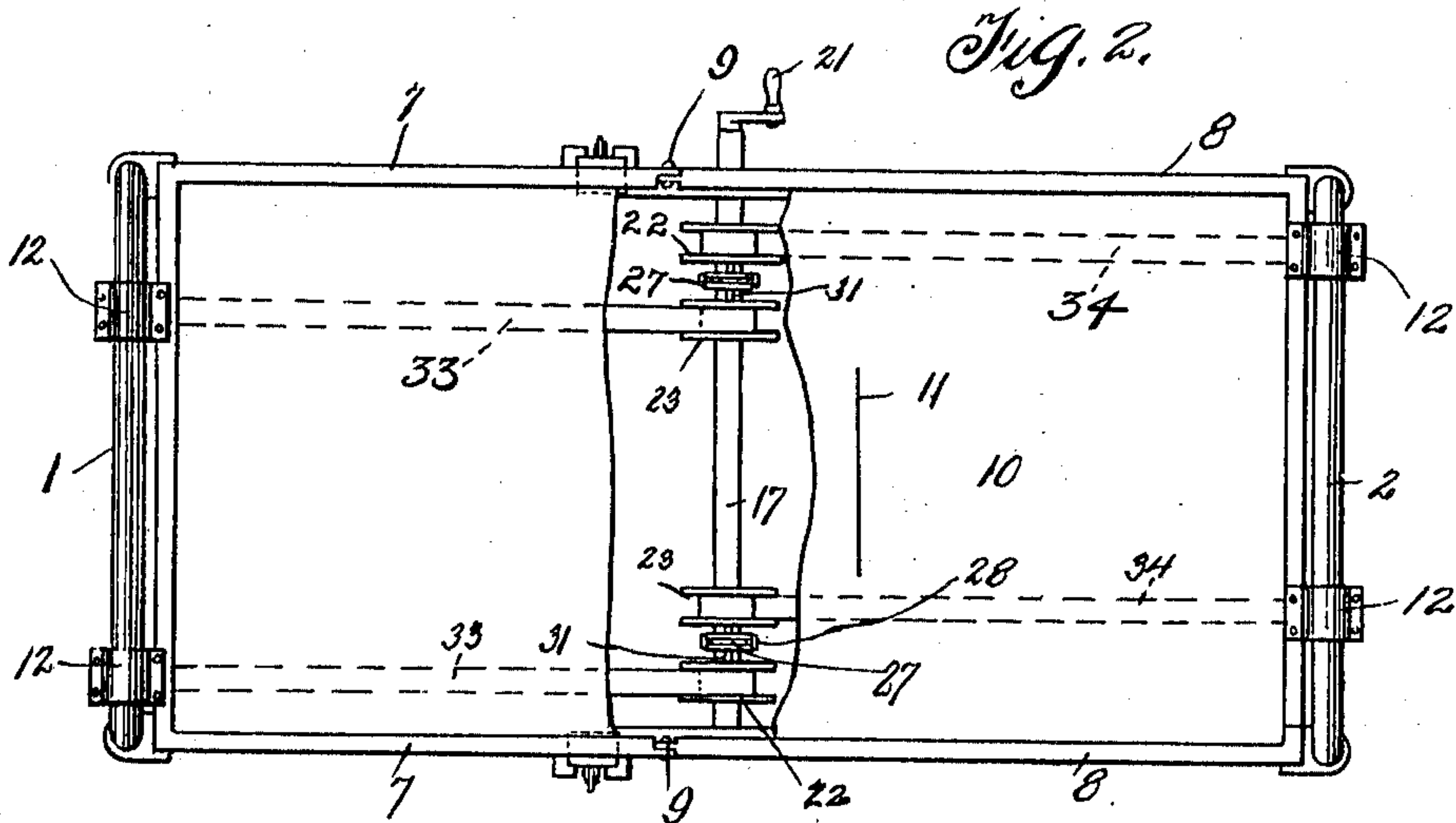
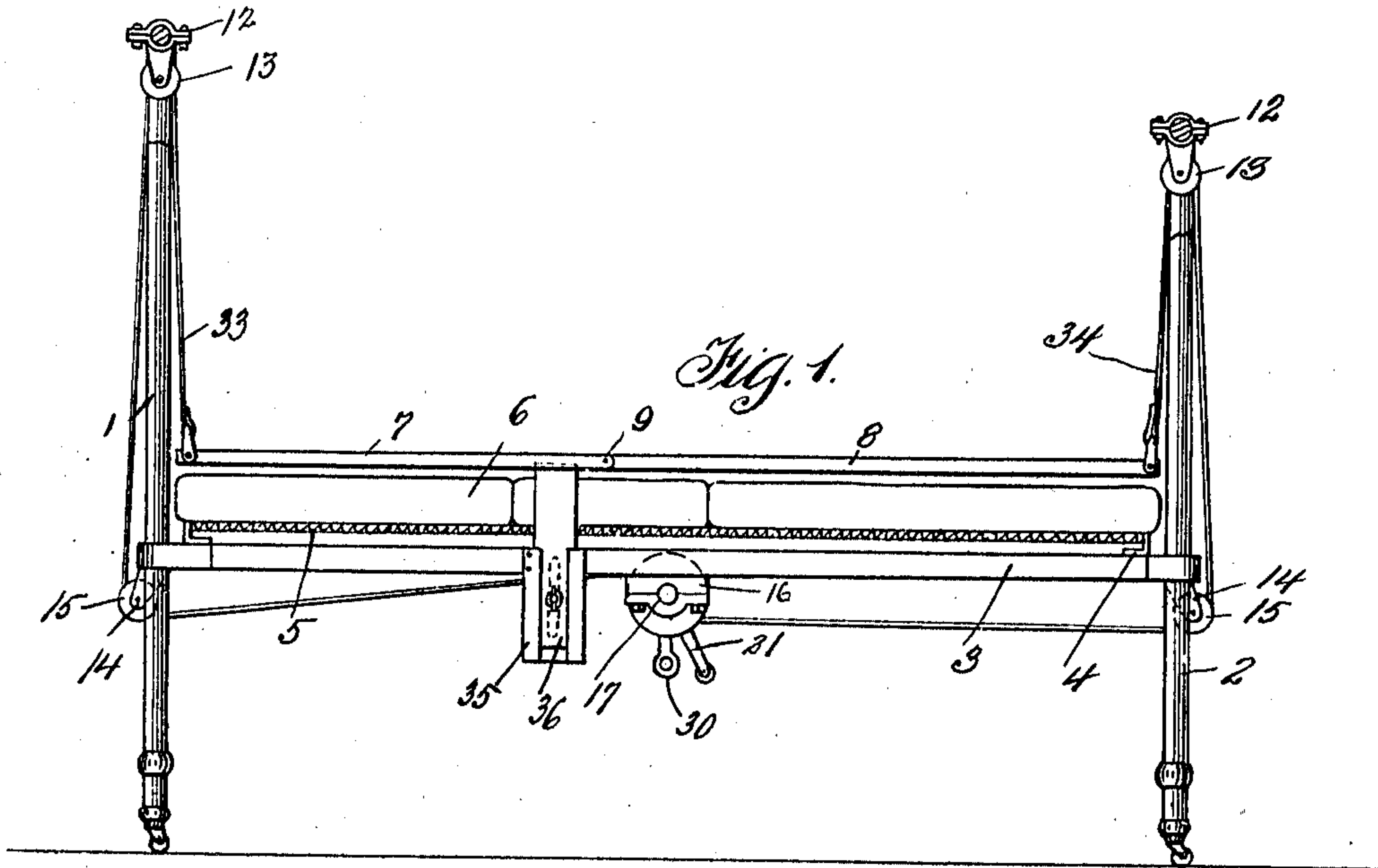


Fig. 4. *Inventor*
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Witnesses

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UNITED STATES PATENT OFFICE.

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INVALID-BED.

952,957.

Specification of Letters Patent. Patented Mar. 22, 1910.

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To all whom it may concern:

Be it known that I, WALTER B. STERLING, a citizen of the United States of America, residing at Wellsburg, in the county of Brooke and State of West Virginia, have invented certain new and useful Improvements in Invalid-Beds, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to invalid beds, and the invention has for its object to provide a bed having an adjustable supporting surface that will meet all the requirements of a sick room.

Another object of this invention is to provide a bed with a supporting surface that can be adjusted for comfortably supporting those who enjoy reading or resting in bed.

A further object of the invention is to provide an invalid bed for hospitals, that will comfortably support an invalid upon whom surgical operations of a serious character are to be performed, the bed in this connection permitting of bed-pans being easily used, and prevent a patient from becoming "bed sore".

A still further object of the invention is to provide an adjustable invalid support that can be attached to the present type of hospital bed.

With the above and other objects in view, which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be presently described and then claimed.

In the drawings, Figure 1 is a side elevation of a bed constructed in accordance with my invention, Fig. 2 is a plan of the same partly broken away, Fig. 3 is a longitudinal sectional view of a portion of the operating shaft, and Fig. 4 is a cross sectional view of one of the flanged sheaves carried by the shaft.

In the accompanying drawings, 1 designates the head piece of a bed and 2 the foot piece, these pieces being connected by side rails 3 which support the transverse rails 4 of springs 5 on which latter the mattress 6 is placed.

Arranged above the mattress 6 is an adjustable stretcher surface, comprising two frames 7 and 8 having the mutually adjacent ends thereof pivotally connected together, as at 9, said frames supporting a

sheet 10 of canvas or similar durable material. This sheet can be provided with suitable openings or slits 11, whereby easy access can be had to any under-part or posterior portion of a person lying upon the sheet.

The top rails of the head and foot pieces are provided with hangers 12 carrying sheaves 13 and the lower rails are provided with hangers 14 carrying sheaves 15.

The side rails 3 intermediate the head and foot pieces are provided with depending bearings 16 for a transverse revoluble hollow and sectional operating shaft 17. The sections of the shaft 17 adjacent to the ends thereof are spaced apart, and connected together by coupling rods 18, fixed in the sections of the shaft by transverse pins 19. The outer end of one of the coupling rods 18 protrudes from the shaft 17 and is rectangular, as at 20 to accommodate a detachable crank 21, employed for rotating the hollow shaft 17.

Revolubly mounted upon the coupling rods 18 between the sections of the shaft 17 are two sets of flanged sheaves 22 and 23, the hub portions of said sheaves having a plurality of circumferentially arranged longitudinal openings 24. Slidably mounted upon the shaft section 25 between the sheaves 22 and 23 is a collar 26 having a peripheral groove 27 formed therein. Engaging in the groove 27 is a yoke 28 carried by a transverse shifting rod 29, said rod being slidably mounted in hangers 30 carried by the bearings 16. The collar 26 is provided on opposite side faces with pins 31 which extend through grooves 32 in the shaft section 25 into the openings 24 of the sheaves 22 and 23.

Attached to the outer end of the frames 7 and 8 are straps 33 and 34 respectively, said straps extending upwardly over the sheaves 13, downwardly under the sheaves 15 and forwardly to the sheaves 22 and 23. Said straps are secured to the sheaves whereby the straps 34 will wind upon the sheaves in an opposite direction to the straps 33. To accomplish this, one strap 33 is connected to one of the sheaves 22 and the other strap 33 is connected to one of the sheaves 23 while one of the straps 34 is connected to the remaining sheave 22 and the other strap 34 to the remaining sheave 23.

The side rails 3 of the bed, are provided

with depending guides 35, and adjustably mounted in said guides are posts 36 adapted to support the frames 7 and 8 adjacent to the pivoted ends thereof.

5 The elements 26, 28, 29 and 31 in conjunction with the sheaves 22 and 23 constitute a clutch mechanism, and to operate this clutch mechanism, the rod 29 is shifted. By shifting said rod, the sheave 22 on one side and
10 the sheave 23 on the opposite side can be fixed relative to the shaft 17 to rotate therewith, or both sets of sheaves can be fixed whereby all of said sheaves will rotate with the shaft 17. It is therefore possible to easily adjust the frames 7 and 8, whereby the
15 person lying upon the sheet 10 can be elevated at the foot or head, or both as occasion may require.

Since the sheaves can be independently
20 used, the rod 29 can be shifted to lock said sheaves together, whereby the frames 7 and 8 will be retained at a desired inclination.

While in the drawings forming a part of this application, there are illustrated the preferred embodiments of my invention, I
25 would have it understood that the details of construction can be varied or changed as to the shape, proportion and manner of assemblage without departing from the spirit
30 of the invention.

Having now described my invention, what I claim as new, is:—

1. In an invalid bed, the combination with
35 a bedstead comprising head and foot pieces, and rails connecting said pieces, of a stretcher comprising pivotally connected frames arranged above said rails, and a sheet carried by said frames, sheaves supported from top and bottom rails of said head and foot pieces
40 of the bedstead, a transversely-extending hollow and sectional shaft revolubly supported from the rails of said bedstead, coupling rods connecting the sections of said shafts, sheaves loosely mounted upon said

coupling rods and provided in the hub thereof with circumferentially arranged openings, straps passing over said sheaves with one end connected to the outer ends of said frames and their other ends connected with said sheaves, grooved collars slidably mounted on said coupling rods and provided with
50 pins to take into the holes in said sheaves, hangers carried by said shaft, a shift rod mounted in said hangers, and yokes connecting the shift rod with said grooved
55 collars.

2. In an invalid bed, the combination with a bedstead comprising head and foot pieces, and rails connecting said pieces, of a stretcher comprising pivotally connected frames arranged above said rails, and a sheet carried by said frames, sheaves supported from top and bottom rails of said head and foot pieces of the bedstead, a transversely-extending
65 hollow and sectional shaft revolubly supported from the rails of said bedstead, coupling rods connecting the sections of said shafts, sheaves loosely mounted upon said coupling rods and provided in the hub thereof with circumferentially arranged openings, straps passing over said sheaves with one end connected to the outer ends of said frames and their other ends connected with said sheaves, grooved collars slidably mounted on said coupling rods and provided with
75 pins to take into the holes in said sheaves, hangers carried by said shaft, a shift rod mounted in said hangers, yokes connecting the shift rod with said grooved collars, and adjustable posts carried by said frame for supporting the pivoted ends of the frame sections.
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In testimony whereof I affix my signature in the presence of two witnesses.

WALTER B. STERLING.

Witnesses:

MAX H. SROLOVITZ,
A. J. TRIGG.