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JACOB CYTRON, GUSTAV CYTRON & JULIUS CYTRON.

MECHANICALLY OPERATED CRADLE.

(Application filed Mar. 27, 1899. Renewed Apr. 14, 1900.)

(No Model.)

Fig. 1.

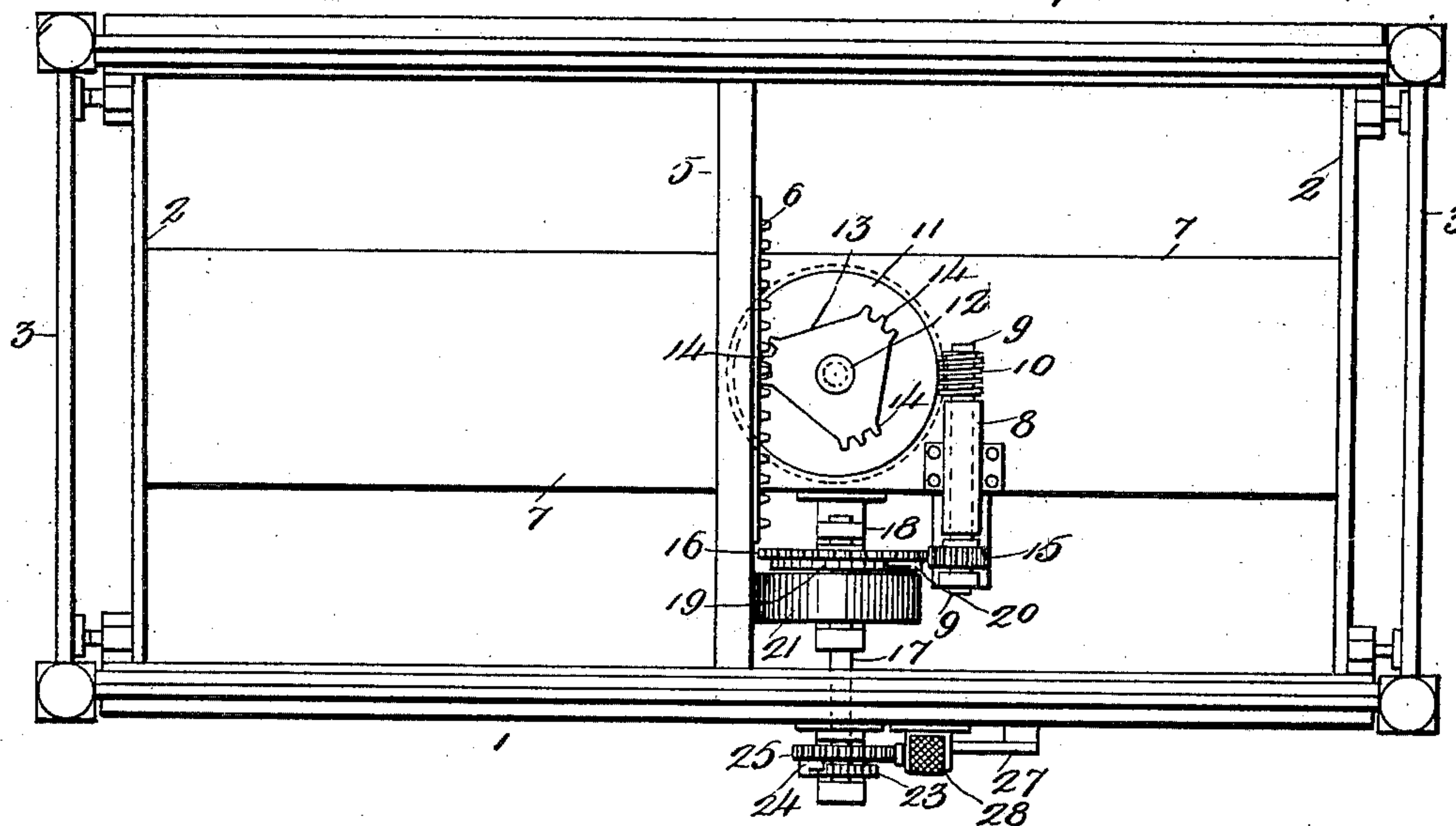
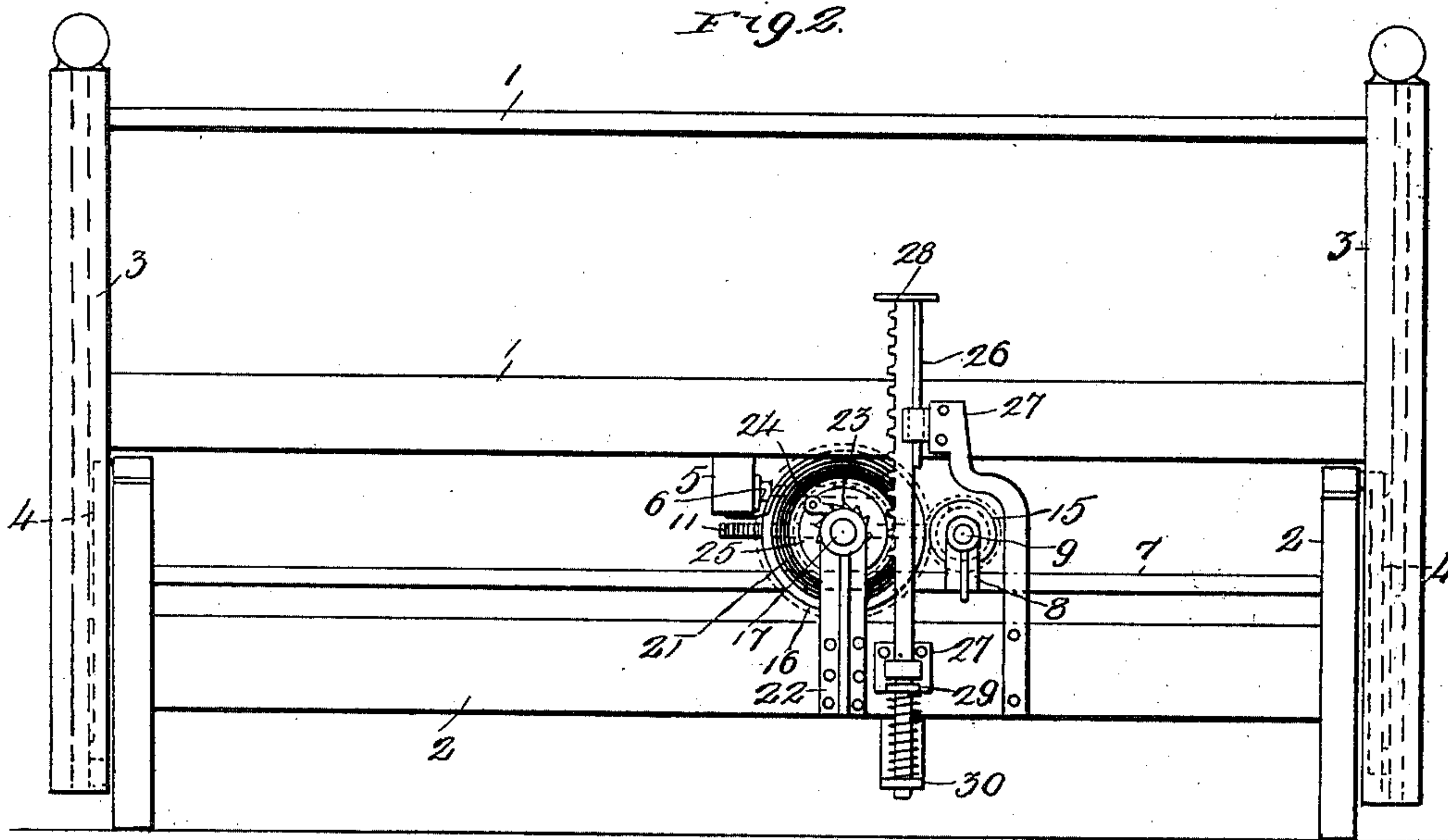


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## MECHANICALLY-OPERATED CRADLE.

SPECIFICATION forming part of Letters Patent No. 659,866, dated October 16, 1900.

Application filed March 27, 1899. Renewed April 14, 1900. Serial No. 12,894. (No model.)

*To all whom it may concern:*

Be it known that we, JACOB CYTRON, GUSTAV CYTRON, and JULIUS CYTRON, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Mechanically-Operated Cradles; and we 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.

Our invention relates to improvements in mechanically-operated cradles; and it consists in the novel combination and arrangement of parts, as will be hereinafter more particularly described and claimed.

In the drawings, Figure 1 is a top plan view of our complete invention, and Fig. 2 is a side elevation thereof.

The object of our invention is to construct a simple and practical mechanically-operated device or movement which may be wound up and when properly attached to a cradle of the well-known construction the latter will be operated or rocked a suitable length of time without further attention.

Referring to the drawings, 1 represents a cradle of the well-known construction and consisting of a stationary supporting-base 2, a swinging or movable portion 3, which is adapted to hold and carry the ordinary mattresses, and 4 hangers, the upper ends of which are movably attached to the stationary base 1 and having their lower ends movably attached to the lower portion of the upper frame 3, whereby the latter is adapted to swing upon said stationary base when operated in either direction.

Secured to the opposite sides of the swinging frame 3 and located on the inside thereof is a transverse beam 5, to one of the vertical sides of which is secured a rack-bar 6, with which the operating mechanism is adapted to cooperate.

Located on the inside of the supporting-base 2 and secured to the opposite ends thereof is a bed 7, to which is attached a bearing 8, carrying a shaft 9, to one of its free ends of which is secured a worm-pinion 10, which meshes with a worm-gear 11, which is fixed to a vertical shaft 12, which is carried and is

movably fixed to the supporting-bed 7. Also fixed to the shaft 12 and located above the worm-gear 11 is a disk or plate 13, having three sets of teeth 14 formed on its edge which cooperate with the rack-bar 6, carried by the transverse beam 5, a suitable space being left between the teeth 14, which freely passes the said rack-bar when the said disk is turned, the teeth only cooperating with the rack-bar intermittingly. Fixed to the opposite end of the shaft 9 is a pinion 15, with which meshes a gear-wheel 16, loosely mounted upon a shaft 17, carried by the bracket 18, and secured to the said shaft 17 adjacent to the gear-wheel 16 is a ratchet-disk 19, which cooperates with a pawl 20, carried by the said gear-wheel.

Secured to the transverse beam 5 is one end of a flat clock-spring 21, the opposite end of which is attached to the shaft 17, which operates to turn the said shaft in one direction when wound up, and thereby operate the remaining parts heretofore described.

The outer end of the shaft 17 is loosely received by a bracket 22, and secured to the said shaft adjacent to said bracket is a ratchet-disk 23, with which cooperates a pawl 24, movably carried by the gear 25, located adjacent to said ratchet-disk and loosely mounted upon the said shaft. Cooperating with the gear-wheel 25 is a vertically-operated rack-bar 26, which is guided and held in its proper position in respect to the gear-wheel 25 by guides 27, the upper end of said rack-bar having a foot-plate 28, which is adapted to be pressed by the foot or hand of the operator for winding up the spring 21, the said rack-bar being raised automatically when released by a coil-spring which encircles the lower end of said rack-bar and is interposed between the collar 29, forming a part of said rack-bar, and the bracket 30, through which the latter passes.

From the foregoing description it will be seen that when the rack-bar 26 is depressed the gear-wheel 25 will be turned in one direction, causing the shaft 17 to be likewise turned by the employment of the ratchet-disk 23, fixed to said shaft, and the pawl 24, carried by said gear-wheel, in which operation the ratchet-disk 29 will also be turned,



causing the pawl 20, carried by the gear-wheel 16, to ride over the ratchet-disk 19, and thereby wind up the spring 21, as is common in all clock mechanism, and when the  
5 rack-bar 26 is released the spring located at the lower end of the same will force the said bar upwardly to its normal position, the pawl 24, carried by the gear-wheel 25, riding over the teeth of the ratchet-disk 23. After the  
10 spring 21 has been wound up, as described, the gear-wheel 16 will be set in motion, turning the pinion 15, shaft 9, and worm-pinion 10, fixed to the same, which in turn operates or turns the worm-gear 11, shaft 12, and  
15 toothed plate 13, the latter meshing with the rack-bar 6 of the transverse beam 5, carried by the swinging frame 3, forming a part of the cradle. Thus it will be seen that the swinging frame 3 is mechanically operated  
20 only in one direction and the momentum given the same swinging the said frame in the opposite direction after the teeth 14 of the plate 13 have passed the rack-bar 6.

25 We do not limit ourselves to the exact construction of the mechanical device herein employed, as the same may be varied or changed without departing from the nature of our invention, nor do we limit ourselves to its specific application herein shown and de-

scribed, as any other furniture of a rocking 30 nature may be likewise operated. Furthermore, any suitable power may be employed for operating the various parts comprising our invention, and, further, any suitable means may be used for placing the motor in 35 its proper condition for use.

Having fully described our invention, what we claim is—

A cradle, comprising a stationary and movable part, a transverse beam forming a part 40 of the latter, a rack-bar secured to said beam, suitable power-transmitting mechanism, a worm-pinion comprising a part of the same, a worm-gear cooperating with the same, a plate forming a rigid part of said gear having three 45 sets of teeth formed on the edge of the same and adapted to cooperate with the said rack-bar, and suitable means for winding the power-transmitting mechanism, as and for the purpose described. 50

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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