No. 638,913. Patented Dec. 12, 1899.

L. F. CUTTEN.

CRADLE.

(Application filed Feb. 20, 1899.)

(No Model.)

Fig. 1.

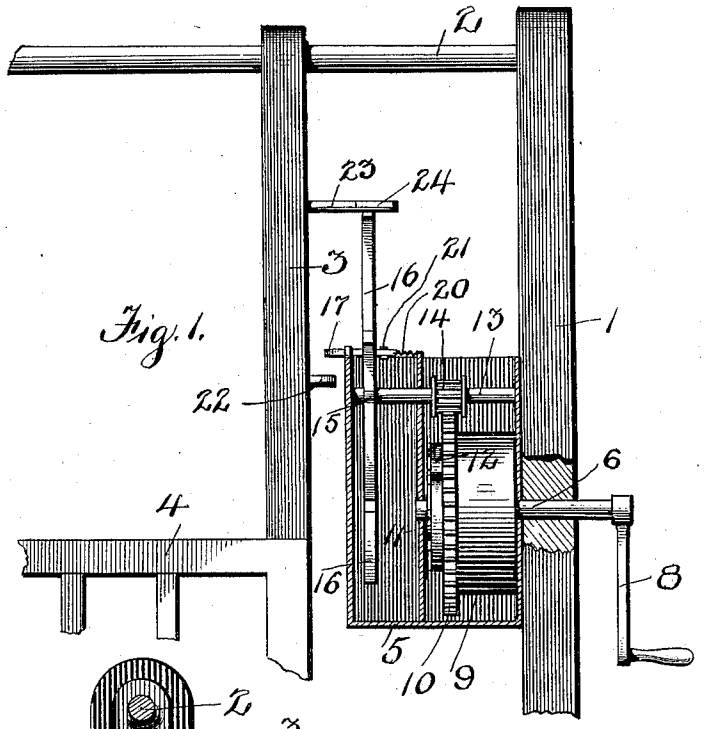


Fig. 2.

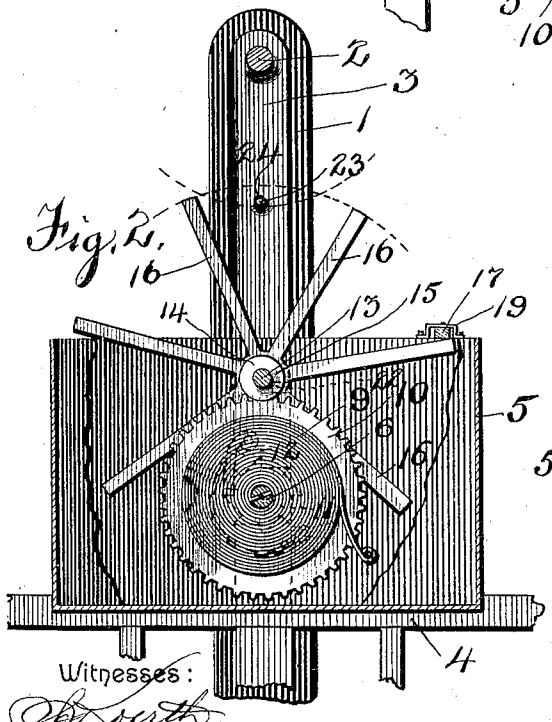
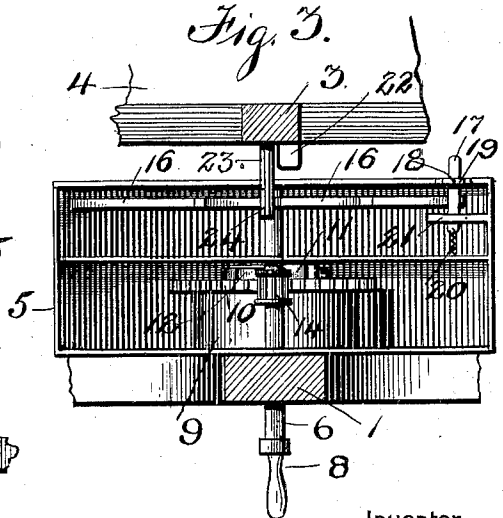


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

LEWYN FRANK CUTTEN, OF BOISSEVAIN, CANADA.

CRADLE.

SPECIFICATION forming part of Letters Patent No. 638,913, dated December 12, 1899.

Application filed February 20, 1899. Serial No. 706,230. (No model.)

To all whom it may concern:

Be it known that I, LEWYN FRANK CUTTEN, a subject of Her Majesty the Queen of Great Britain, residing at Boissevain, county of Turtle Mountain, Province of Manitoba, Canada, have invented certain new and useful Improvements in Cradles; and I do hereby declare that the following is 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 improvements in self-rocking cradles.

The object of my invention is to provide a mechanism for automatically operating cradles and cribs which is simple and efficient in operation, durable in construction, and which can be manufactured at a moderate cost.

To these and other ends my invention consists in the improved construction and combination of parts hereinafter fully described, and particularly pointed out in the appended claim.

In the drawings, in which similar numerals of reference indicate similar parts in all of the views, Figure 1 is a vertical longitudinal sectional view of a portion of a cradle and its support, showing the mechanism for operating the cradle. Fig. 2 is a vertical transverse sectional view. Fig. 3 is a horizontal sectional view showing the mechanism in plan.

1 designates the vertical supporting-standards of the frame, which are connected together at their tops by means of the rod 2, forming the pivot on which the cradle swings.

3 designates the vertical arms of the cradle 4, said arms being pivotally mounted on the rod 2.

Connected to one of the standards 1 is a casing 5, within which is mounted a shaft 6, extending outwardly through the standard 1, the end of said shaft being provided with a handle 8. The shaft 6 is provided with a clock-spring 9 of suitable size, the face end of which is connected to the framework in the usual manner.

A gear-wheel 10 is mounted loosely on the shaft 6 and is adapted to be operated by the spring 9 through the medium of a ratchet-wheel 11, mounted fixedly on the shaft 6, and a spring-pressed pawl 12, secured to the wheel 10, the arrangement being such that when the shaft 6 is rotated to wind the spring 9, the ratchet-wheel 11 rotating therewith, the pawl 12 will pass over the teeth of the ratchet-wheel freely without moving the gear-wheel 10; but when the shaft 6 is caused to move in the opposite direction the pawl will engage one of the teeth in the ratchet-wheel and cause the gear-wheel 10 to revolve.

A shaft 13 is mounted in the standard 1 above the standard 8, and on this shaft is mounted a pinion 14, operatively connected to the gear-wheel 10. Mounted on the shaft 13 is a disk 15, having a series of arms 16 extending radially therefrom, said arms being arranged equidistant from each other.

Mounted on the casing 5 at one side is a lever 17, pivotally mounted, as at 18, within a bracket 19, said lever normally extending across the path of movement of the arms 16, said position being maintained by means of the spring 20, secured to one end of the lever 17 and the casing 5. A bifurcated bracket 21 receives the lever 17 and holds it in a horizontal plane, preventing the arms from moving it out of its proper position.

The arm 3 is provided with a lever-operating lug 22, which is adapted to contact with the lever 17 and move it on its pivot, as hereinafter described. The arm 3 is also provided with a pin 23, having its front end provided with a collar 24, preferably of rubber.

The operation of my device is as follows: With the parts in position as shown in Fig. 2, the cradle is pushed toward the left. On its return movement toward the right the lug 22 strikes one side of the lever 17 and pushes the outer end toward the right until the lug passes beyond the lever, when the spring 20 immediately returns the lever to its normal position. As will be seen, this movement of the lever does not release the arm 16, but causes said lever to move over said arm toward the left, holding the arm in its fixed position. On the return movement of the cradle to the left, however, the lug 22 abuts against the opposite side of the lever 17, moving it on its pivot a distance sufficient to cause the inner end of the lever to pass toward the right beyond the path of movement of the arms 16, thus releasing the arms and allowing the spring 9 to move the arms toward the left. The release of the arm 16

takes place at the same time as the pin 24 has passed into the path of movement of the arms 16, the sequence being that when said arm is released the arm 16 to the right of the pin abuts against the collar 24 and the spring 9 through the gearing causes said arm to push the cradle toward the left, making the completed movement of the cradle. It will be readily understood that as soon as the lug 22 is freed from contact with the lever 17 the spring 20 will return said lever to its normal position to form a stop against the further movement of said arms 16, the movement of said arms being limited by the distance between the arms 16. As the contact between the pin 23 and the arm 16 takes place before the cradle has reached its position of rest, it will be seen that there will be no stoppage in the movement of the cradle and also that there will be no jar or noise, both the pin 23 and arm 16 moving in the same direction when the contact is made.

The advantages of this construction are many and obvious, including the few parts composing the mechanism, the absolute surety of operation, the durability of construction, and low cost of manufacture. Another advantage lies in the fact that unless the cradle is moved to one side a sufficient distance to acquire a momentum there will be no rocking, inasmuch as the lever 17 will prevent any movement of the arms until said lever is tripped.

While I have herein shown a preferred form of carrying my invention into effect, yet I do not desire to limit myself to such preferred details of construction, but claim the right to use any and all modifications thereof which will serve to carry into effect the objects to be attained by this invention in so far as such modifications and changes may fall within the spirit and scope of my said invention.

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

A self-rocking cradle, comprising a frame; a cradle mounted to have an oscillatory movement in said frame; a disk rotatively mounted on said frame and having a series of radially-extending arms; means for rotating said disk in one direction; a bar pivoted on said frame and extending into the path of said arms and normally engaging each of said arms in succession; a lug fixed to the cradle for throwing said bar out of engagement with the arm; means for returning said bar into engagement with the next arm; and a pin fixed to the cradle and extending into the path of said arms and adapted to be struck thereby, for swinging the cradle, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

LEWYN FRANK CUTTEN.

Witnesses:
N. P. BUCKINGHAM,
FRED BROOK.