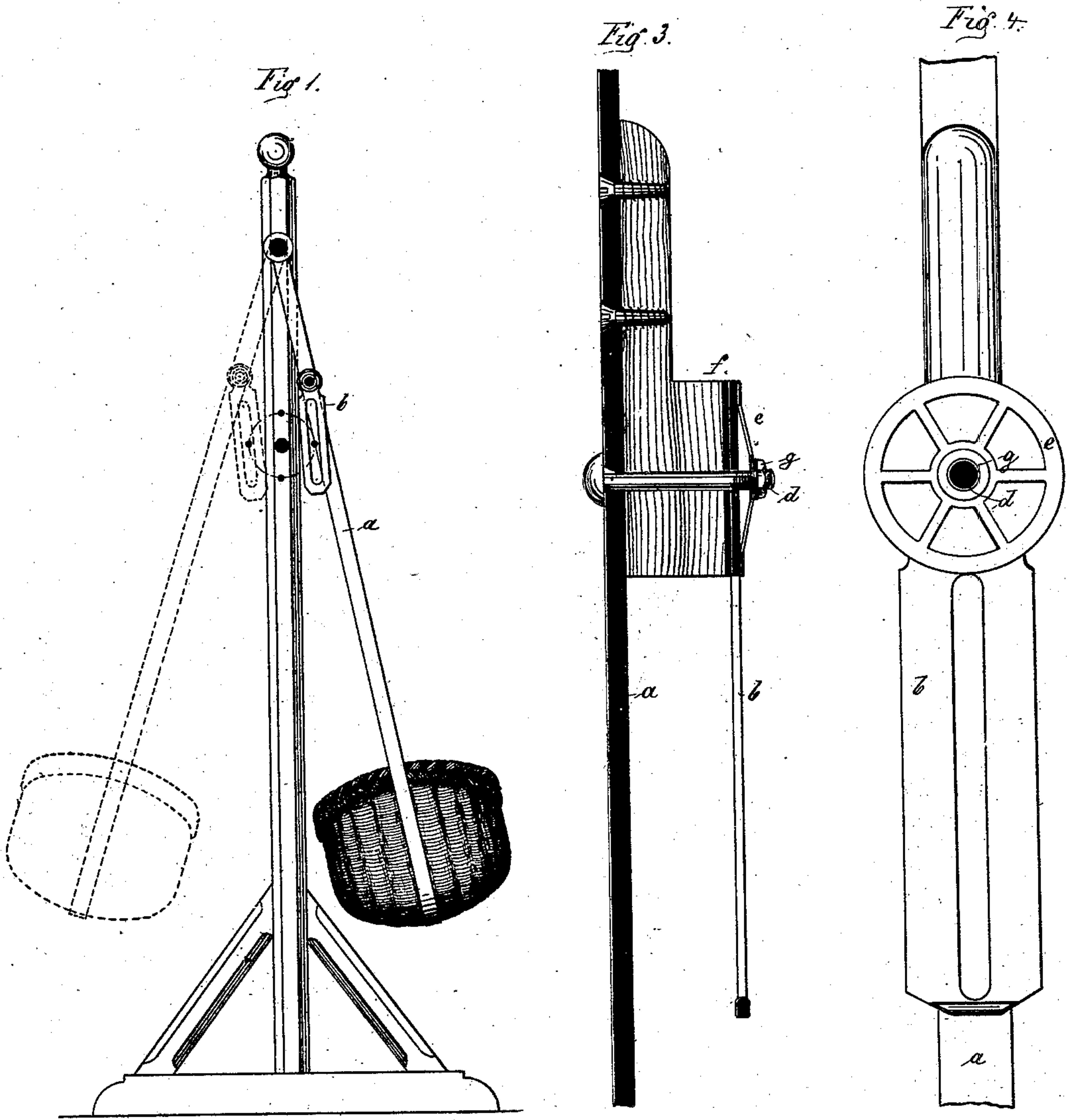


J. W. MUCKS.
Rocking-Cradle.

No. 225.233.

Patented Mar. 9, 1880.



Witnesses
G. A. Burt.
H. F. Lischer

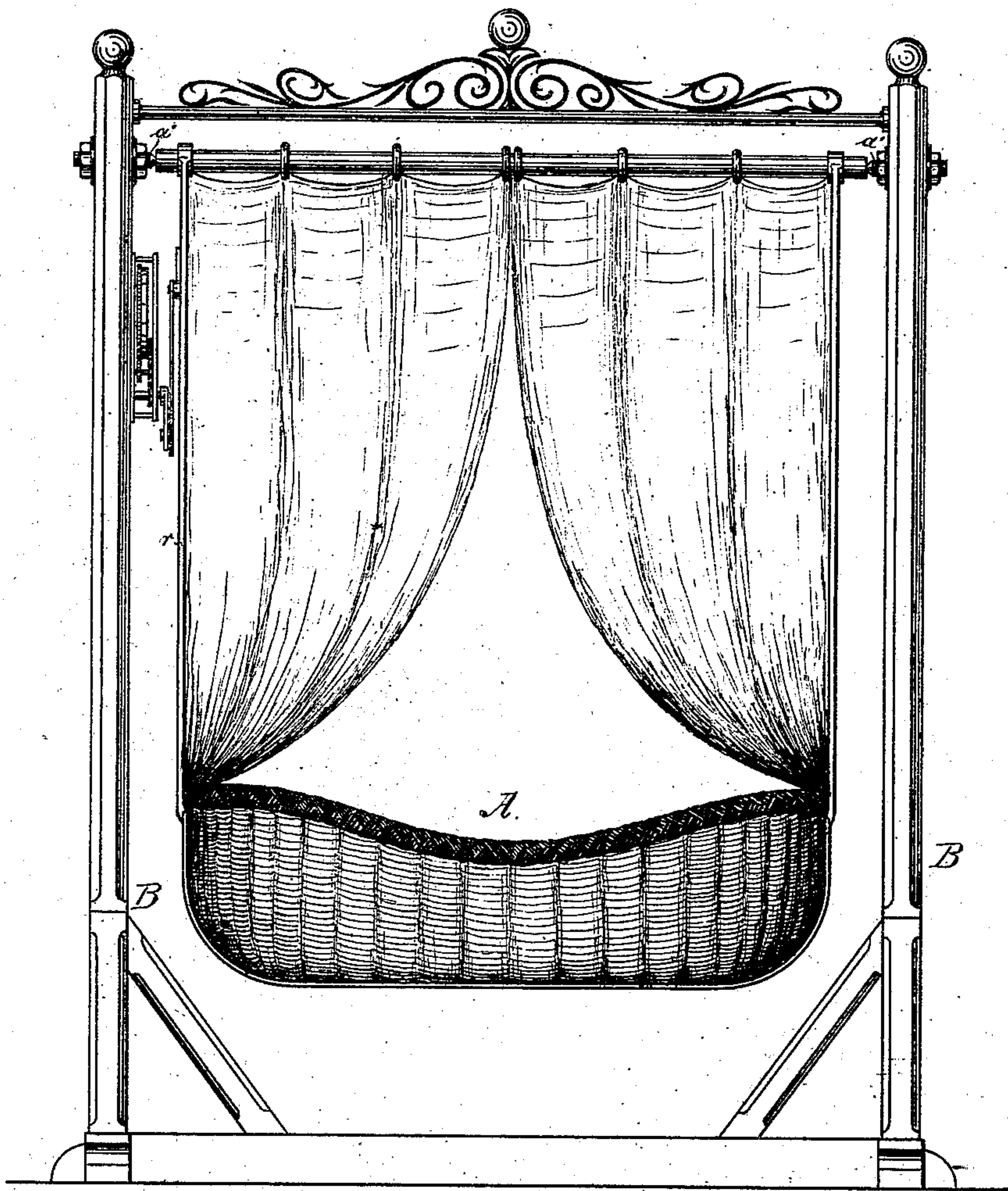
Inventor:
J. W. Mucks
by Robert Grimshaw.
Atty.

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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHANNES W. MUCKS, OF LIPPEHNE, PRUSSIA, GERMANY.

ROCKING-CRADLE.

SPECIFICATION forming part of Letters Patent No. 225,233, dated March 9, 1880.

Application filed August 1, 1879.

To all whom it may concern:

Be it known that I, J. W. MUCKS, of Lippehne, in the Empire of Germany, have invented certain new and useful Improvements in Rocking-Cradles, of which the following is a specification.

In the accompanying drawings, Figure 1 represents an end view of my improved rocking-cradle; Fig. 2, a side elevation of the same; and Figs. 3 and 4 are, respectively, a vertical transverse section and a front view of the slotted regulating-arm.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in rocking-cradles of that class in which the rocking motion is imparted by means of a crank that is rotated by a driving mechanism worked by springs or weights.

In the rocking-cradles of this class heretofore in use the crank-pin enters into a slot of an arm attached rigidly to one of the hangers of the cradle. This rigid connection of the slotted arm with the hanger of the cradle compels the cradle to follow the motion of the crank and to oscillate only as far as the crank permits. When, however, the weight in the cradle should be shifted to one side or the other of the center line—as, for instance, when the child throws himself to one side thereof—the center of oscillation is changed and the motion of the cradle interrupted, as the crank has not sufficient power to control the irregular oscillations of the cradle. In other words, a strain is exerted by the rigid arm on the crank, which causes the stopping of the driving mechanism.

For the purpose of avoiding this very objectionable feature of the present constructions of rocking-cradles the rigid arm is connected yieldingly to the hanger, so that the crank can complete its revolutions even when, in consequence of the shifting of the weight in the cradle, irregular oscillations would otherwise result.

The invention consists, more especially, of the combination, with the hanger of the cradle and a rotating driving-crank, of a slotted arm, which is pivoted to the hanger and retained thereon by a regulating friction device.

Referring to the drawings, *a* represents the hangers by which the cradle *A* is hung to the horizontal cross-rod of the supporting-frame *B*. To one of the standards of the supporting-frame *B* is secured a suitable driving

mechanism consisting of a train of wheels actuated by springs or weights, or of any other mechanism. The driving mechanism rotates a crank that is connected by a pin at its end with a slotted arm, *b*. This arm is not rigidly secured to the hanger *a*, but pivoted thereto by a pivot-pin, *d*, and to an intermediate bracket-shaped plate of the same. The upper part or head of the slotted arm *b* is made of circular shape and pressed by a spring-plate, *e*, against the bracket-plate *f*. The spring-plate *e* is pressed upon the head of the slotted arm by a screw-nut, *g*, so as to exert a greater or less friction thereon, according as the spring-plate is compressed more or less by the screw-nut *g*.

The frictional pivot-connection of the hanger and slotted arm allows the crank to rotate, whether the oscillations of the cradle are larger than the stroke of the crank, or whether the oscillations of the cradle are irregular, the arm giving in each case without causing the stopping of the crank. In both cases the slotted arm will not remain in line with the hanger, as is the case when the cradle follows regularly the motion of the crank, but it is thrown to one side or to the other of the hanger, as shown in Fig. 1, according as the center of oscillation has shifted to one side or the other of the center line. In this way the cradle is oscillated in a regular manner without interruption, whatever be the position of the child in the cradle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improvement in rocking-cradles suspended on oscillating hangers, the combination of a rotating driving-crank with a regulating-arm that is connected by a pivot and friction device, substantially as described, to one of the hangers, as set forth.

2. In a rocking-cradle suspended on oscillating hangers, the combination of a rotating driving-crank with a slotted arm of the hanger, said arm being connected to the hanger by a pivot-pin, frictional spring-plate, and regulating-nut, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANNES WILHELM MUCKS.

Witnesses:

GERARD VON NAWROCKI,
BERTHOLD ROEL.