

W. V. VAN DERVORT & R. B. WALKER.

Automatic Cradles.

No. 139,838.

Patented June 10, 1873.

Fig. 1.

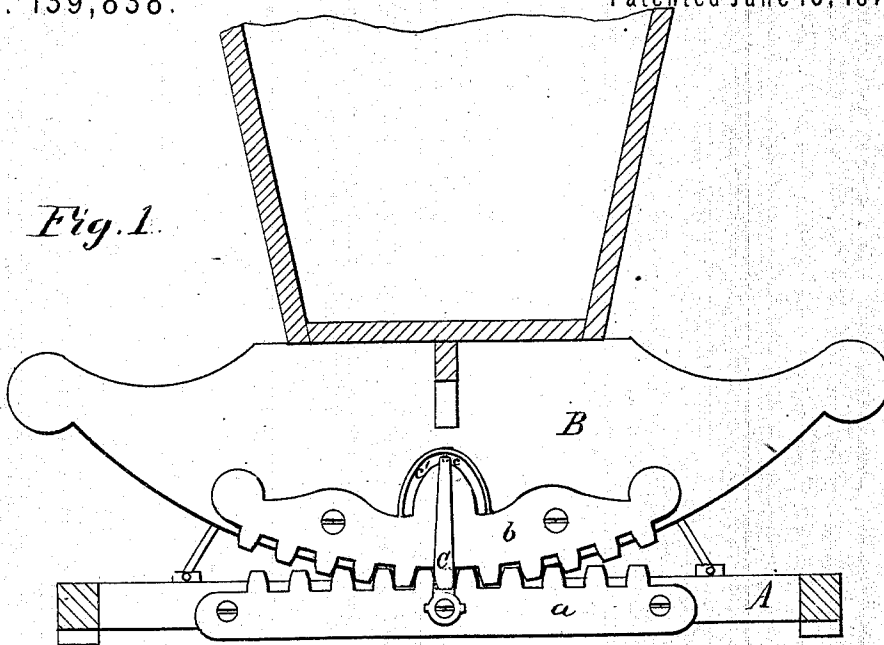
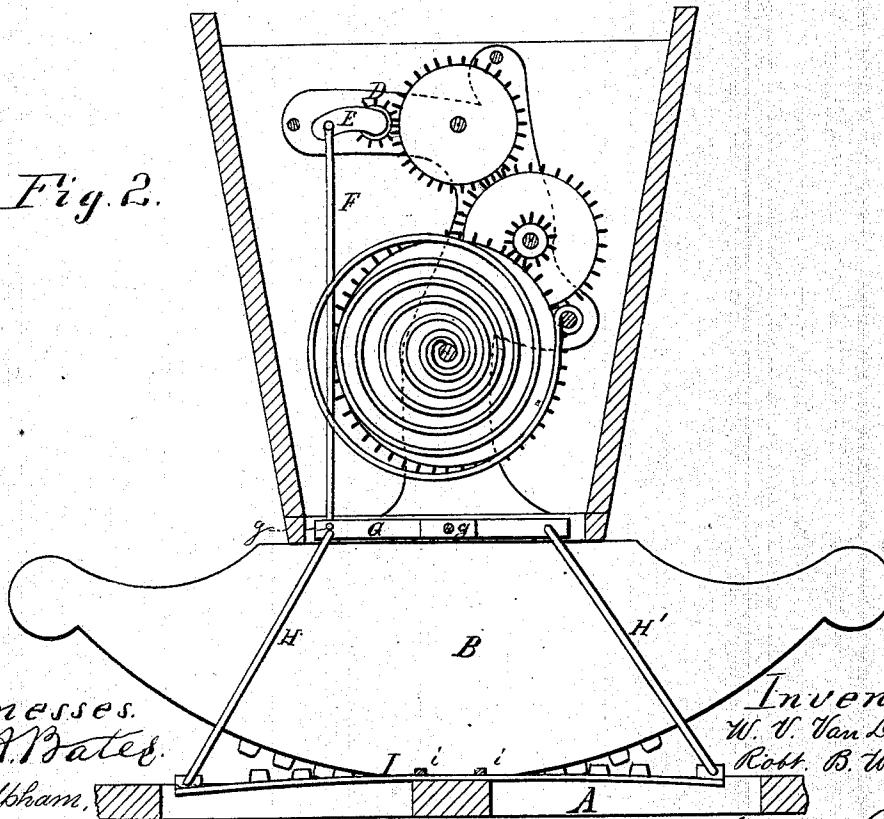


Fig. 2.



Witnesses.
E. A. Bates.
J. E. Upham.

Inventors
W. V. Van Dervort
R. B. Walker

Chapman & Smith
attys.

UNITED STATES PATENT OFFICE.

WILLIAM V. VAN DERVORT AND ROBERT B. WALKER, OF NEW ANTIOCH, OHIO.

IMPROVEMENT IN AUTOMATIC CRADLES.

Specification forming part of Letters Patent No. **139,838**, dated June 10, 1873; application filed May 3, 1873.

To all whom it may concern:

Be it known that we, WILLIAM V. VAN DERVORT and ROBERT B. WALKER, of New Antioch, in the county of Clinton and State of Ohio, have invented a new and valuable Improvement in Automatic Cradles; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 in the drawing is a representation of our automatic cradle by a central cross-section, exhibiting the construction of the rockers. Fig. 2 is an end view with the outer head-board removed, exhibiting the motive power.

Our invention relates to an improved construction of a cradle driven by clock-work, whereby the thrusts of the oscillating motion are greatly lessened, the usual click and noise of the clock movement avoided, and the cradle is prevented from traveling.

A is a foundation-frame, on which the rockers of the cradle oscillate. It is provided with a straight rack, *a*, into which a toothed sector, *b*, on the rocker B, is geared. The rocker B is prevented from jumping and throwing the rack *a* and the sector *b* out of gear by an arm, C, with a guide-pin, *c*, which latter slides in a cycloidal groove, *c'*, on the sector *b*. The arms C may be fastened to the rack *a*, or they may be both wrought or cast in one piece. We fasten a sector, *b*, with the groove *c'*, to each rocker, and supply the frame A with two racks, *a*, and guide-arms C, for the purpose of gearing and guiding, as above described. To prevent the rockers from working off their support in a longitudinal direction, we place the racks and sectors on opposite sides of the rockers, by which arrangement the rockers are placed be-

tween the arms C, and cannot move away from them. The motor for our cradle is a clock movement incased in the same near the head or foot board, so that it may be wound up outside the cradle. The last wheel D of the clock-train is provided with a crank, E, which, by means of a connecting-rod, F, oscillates the double lever G. The said lever is pivoted to the cradle by a pin, *g*, and it is coupled to a spring, I, by two connecting-rods, H H'. The spring I is fastened to the frame A by screws *i i*, or otherwise. The above-described construction of our machine has the advantage of working without noise, because there are no pallets and ratchets or pallet-wheels used to change the rotary motion of the wheel D in the clock-train to the required oscillatory motion of the cradle, the crank-motion being the only silent connection between cradle and clock movement. Another advantage is this, that the cradle is started when the crank E works with its greatest leverage, and exercises its greatest power when it is most necessary. The spring I serves to moderate the movements of the cradle, to avoid unpleasant shocks, and to prevent the upsetting of the cradle.

What we claim as new, and desire to secure by Letters Patent, is—

The combination, with a cradle-rocker, of the rack *a*, arm C, pin *c*, toothed sector *b*, cycloidal groove *c'*, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

WILLIAM V. VAN DERVORT.
ROBERT B. WALKER.

Witnesses:

FRANCIS KELSEY,
S. H. RULON.