R. J. CLAY.

Automatic Toys.

No. 156,660. Patented Nov. 10, 1874.

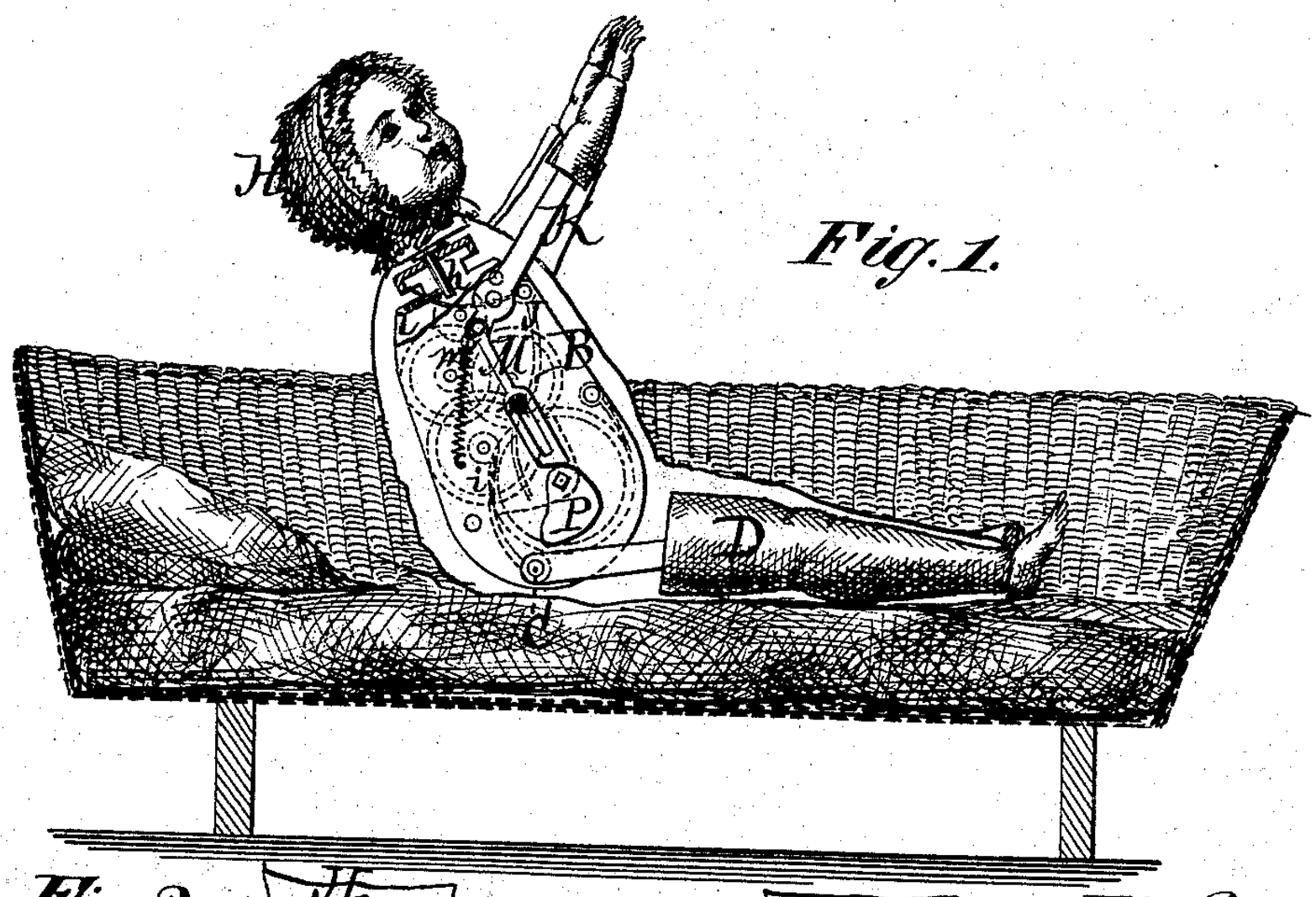

Fig. 1.

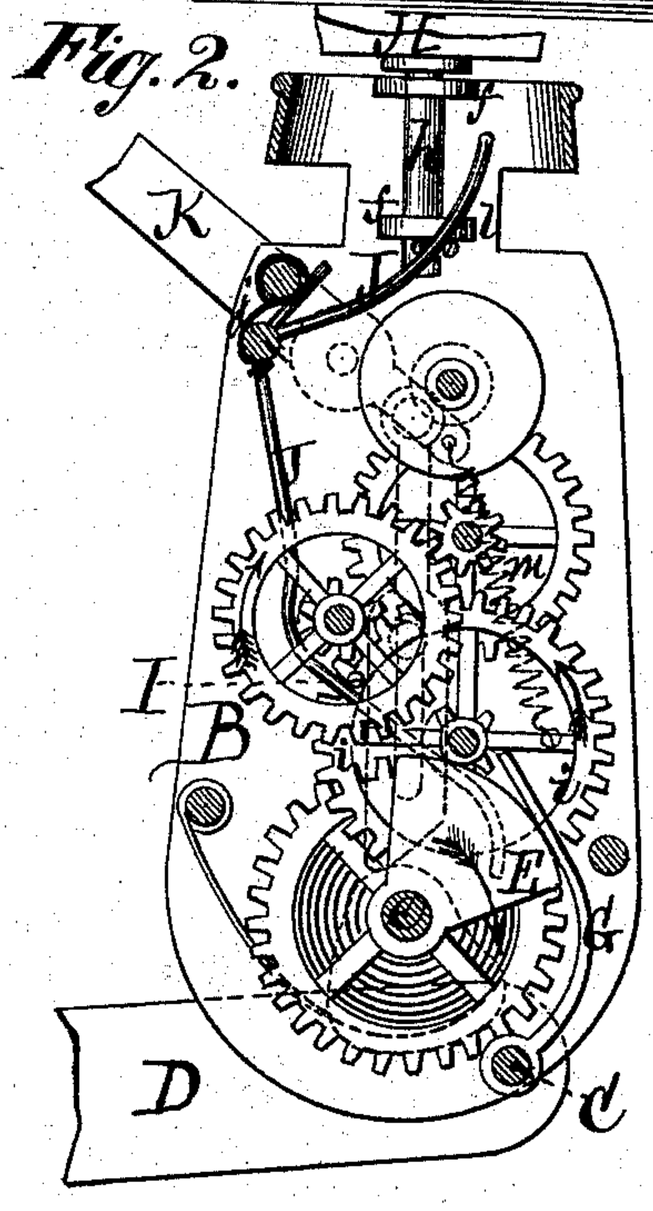

Fig. 2.

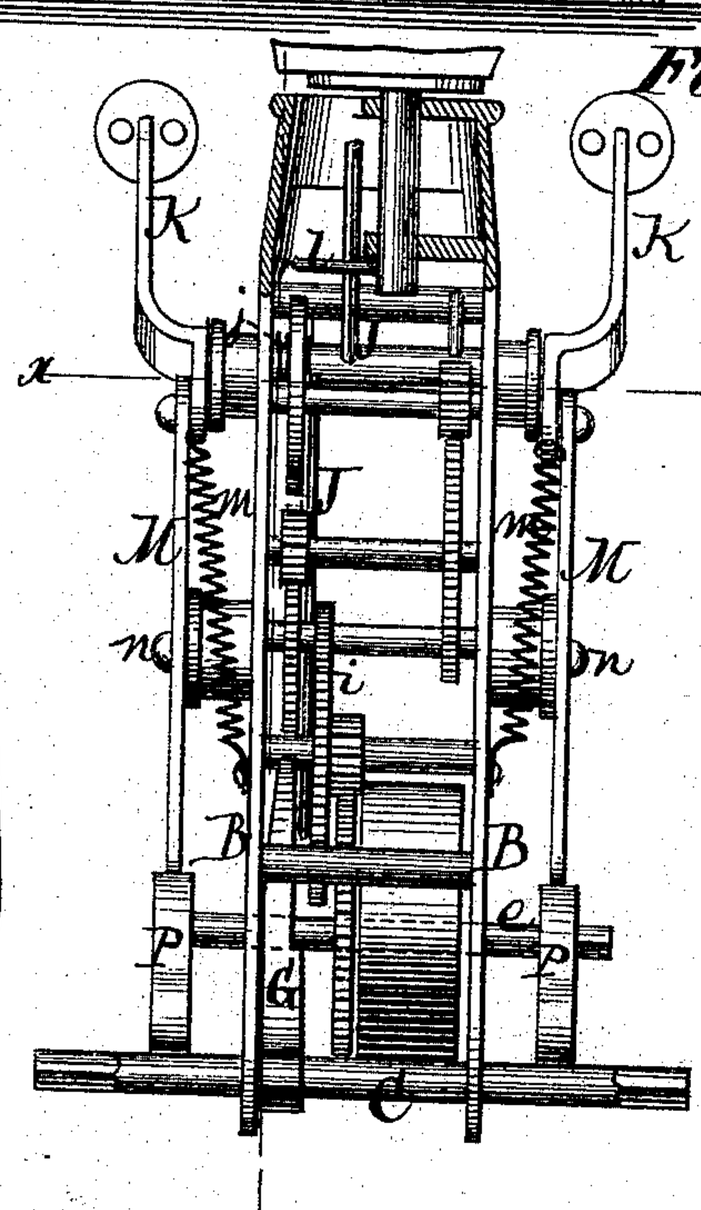

Fig. 3.

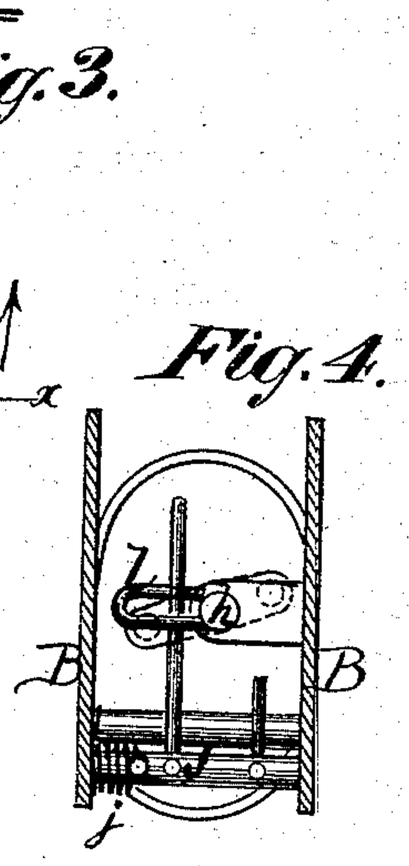

Fig. 4.

Witnesses
John Becker
Fred Haynes

Robert J. Clay
by his attorneys
Brown & Allen

THE GRAPHIC CO. PHOTO-LITH: 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

ROBERT J. CLAY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN AUTOMATIC TOYS.

Specification forming part of Letters Patent No. **156,660**, dated November 10, 1874; application filed March 26, 1874.

CASE B.

To all whom it may concern:

Be it known that I, ROBERT J. CLAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Mechanical Toy, of which the following is a specification:

This invention relates to the application of clock mechanism to a figure representing a child in a reclining position in a cradle or upon the floor.

The invention consists in the combination of the clock mechanism with the body, head, and limbs of the figure, in such a manner as to give a rising-and-falling motion to the body or legs, a reciprocating rotary motion to the head, and a rising-and-falling motion to the arms.

In the accompanying drawing, Figure 1 is a longitudinal vertical section, representing my invention applied to the figure of a child in a cradle. Fig. 2 is a vertical section of the clock mechanism, on the side opposite to that shown in Fig. 1. Fig. 3 is a rear view of the same. Fig. 4 is a transverse section taken in the line *x x* of Fig. 3.

The clock mechanism is inclosed between two plates, which form the body B of the figure of the child. The legs D are rigidly attached to a shaft, C, which passes through the plates B, and forms the pivot by which the legs are attached to the body. Between the plates B, rigidly attached to the shaft C, is a curved lever, G, extending upward. On the main shaft *e* is a cam, E, rigidly attached to said shaft, so as to revolve with it. As the shaft *e* revolves in the direction of the arrow, the cam E bears against the lever G and presses it outward, raising the legs D if the body B is held stationary, or, if the legs are held stationary, it raises the body, as shown in Fig. 1. When the shaft *e* has revolved sufficiently for the cam E to clear the lever G, the body (or the legs, as the case may be) falls of its own weight.

The head H is attached to the upper end of a pivot, *h*, which has its bearings in lugs *f*, projecting from one of the plates B, so as to turn freely therein. Projecting laterally from the pivot *h* is a staple or loop, *l*, through which passes the short arm of an elbow-lever, J, which has its fulcrum near the upper front corner of the body B, and the long arm of which extends downward and engages with a pin or wiper, I, on the second wheel, *i*. The elbow-lever J is provided with a spring, *j*, which has a tendency to keep the long arm of the lever in a position nearly parallel with the pivot *h*. As the wheel *i* revolves, the wiper I bears against the long arm of the lever J, and presses it outward, causing the short arm to bear against one side of the loop *l*, and turn the head H in one direction. When the wiper I has cleared the lever, the spring *j* draws back the long arm of the lever, causing the short arm to bear against the opposite side of the loop *l*, and turn the head in the opposite direction.

The arms of the figure are attached to bars K, which are pivoted near their rear ends to the plates B, and have springs *m*, connecting their extreme rear ends with the body. Between the pivot and the extreme rear end of each arm is pivoted the upper end of a bar, M, the lower portion of which is slotted, and engages with a stud, *n*, projecting laterally from the plate B. Near each end of the shaft *e*, outside of the body B, is a cam, P, rigidly attached to and revolving with said shaft, and engaging with the lower end of the bar M. As the shaft *e* revolves, the cams P bear against the lower ends of the bars M, pressing them upward, and depressing the arms of the figure. When the cams P have cleared the bars M, the springs *m* draw down their rear ends, and elevate the arms to the position shown in Fig. 1.

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

1. The combination, with the body B and legs D, of the cam E and curved lever G, substantially as and for the purpose shown and described.

2. The combination, with the head H, of the staple or loop *l*, elbow-lever J, spring *j*, and wiper I, substantially as and for the purpose shown and described.

3. The combination of the arms K, springs *m*, bars M, and cams P, substantially as and for the purpose shown and described.

In testimony whereof I hereunto sign my name in presence of two subscribing witnesses this 5th day of March, 1874.

R. J. CLAY.

Witnesses:

MICHAEL RYAN,

VERNON H. HARRIS.