W. L. HUBBELL.

AUTOMATIC TOY.

No. 182,194. Patented Sept. 12, 1876.

Fig. 4.

Fig. 1.

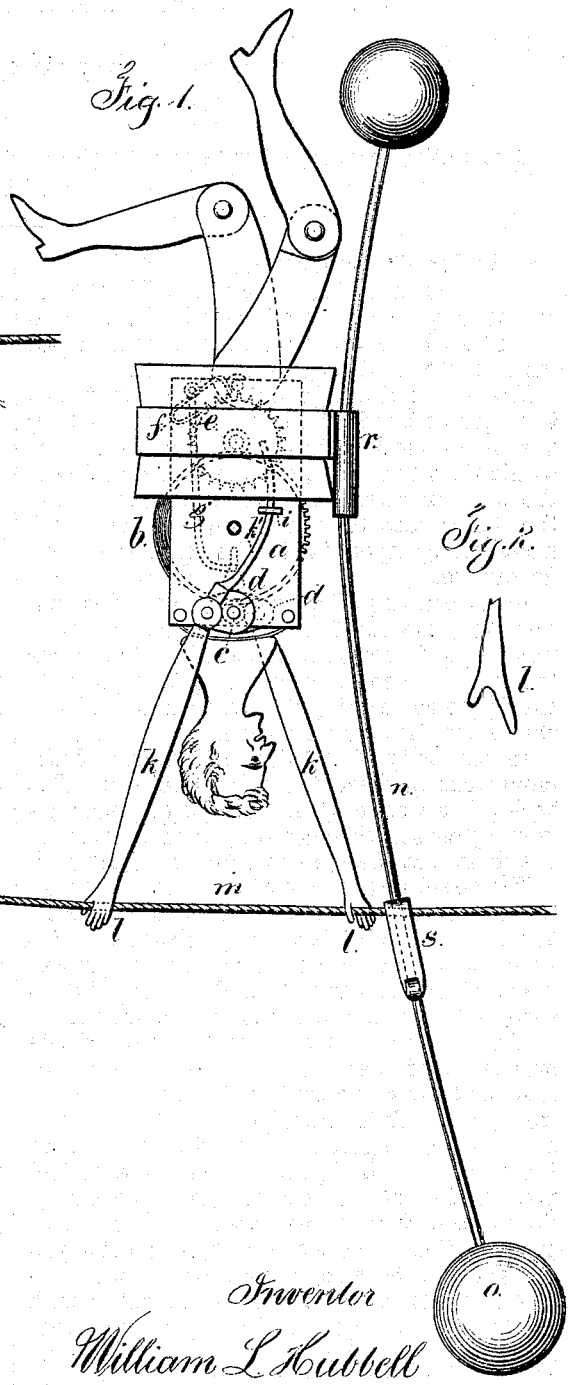

Fig. 3.

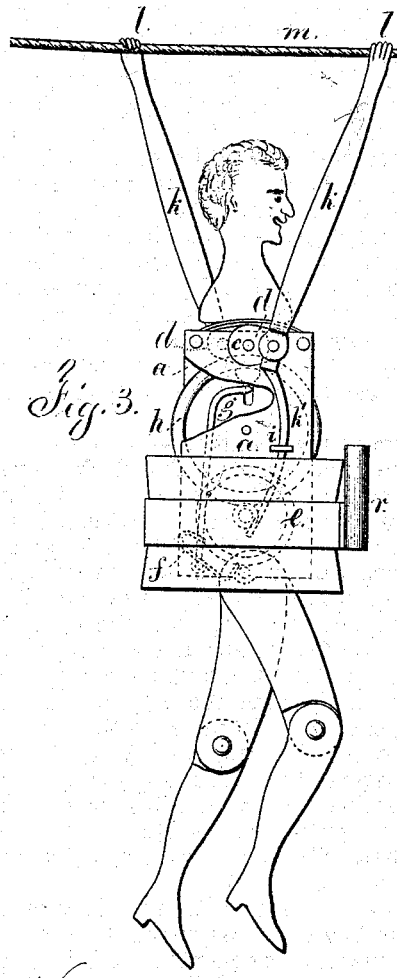

Fig. 2.

Witnesses

Chas. H. Smith

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per Lemuel W. Serrell

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UNITED STATES PATENT OFFICE.

WILLIAM L. HUBBELL, OF NEW YORK, N. Y., ASSIGNOR TO RAYMOND JENKINS, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC TOYS.

Specification forming part of Letters Patent No. **182,194**, dated September 12, 1876; application filed May 29, 1876.

To all whom it may concern:

Be it known that I, WILLIAM L. HUBBELL, of the city and State of New York, have invented an Improvement in Toy Gymnasts, of which the following is a specification:

The object of this invention is to give to the toy figure a hand-over-hand movement along a rope or cord. The means employed are available when the figure is hanging below the cord, or when a balancing-weight is used the figure may be above the cord, and will move along upon its hands with the head downward.

In the drawing, Figure 1 is an elevation representing the toy figure in an inverted position. Fig. 2 shows the shape of the hands for the figure when so used. Fig. 3 represents the figure as hanging from a cord, and Fig. 4 shows the hands of the same.

In the body of the figure there is a clock-movement between the side plates *a a*. The spring *b* is wound up, as usual, and gives a revolving motion through a train of gearing to the shaft *c*, at the ends of which are cranks *d*.

The speed of the movement is regulated by an escapement-wheel, *e*, pallets *f*, and a lever, *g*, the end of which is within a slot in the balance-wheel vibrator *h* that insures a full movement of the pallets in each direction, and insures substantial uniformity of movement.

The arms *k k* are extended beyond the cranks *d*, and the inner ends *k'* slide in guides *i*, so that the movement of the arm received from the crank is that of a lever of the second order, with the guide *i* as the fulcrum; hence the hands *l* of the figure move in an elliptical path, and by placing the cranks *d* at one hundred and eighty degrees apart the movement given to the hands is similar to those of a person going along a rope hand over hand.

When the hands are made hooked or with the fingers bent, as seen in Fig. 4, the figure will hang from the cord *m*, and move along the same by a hand-over-hand motion so long as the clock-work continues to be operative.

If the hands are made open, with the thumb spread, as seen in Fig. 2, the figure is adapted to moving along above the cord; but in that case the rod *n* and balancing-weight *o* must be used. Said rod is attached to the waist-band socket *r*, and is of such a length and weight that the figure will be held in an upright position above the cord as it moves along by a hand-over-hand movement with the head downward. There should be a long spring-loop, *s*, upon one side of the rod *n*, through which the cord passes, and this forms a guide to cause the figure to remain in the proper position relatively to the cord.

This toy gymnast is adapted to afford amusement to children and others, and the hand-motions correspond very closely to those of a man.

I claim as my invention—

1. The combination, with a clock-movement and actuating-cranks, of the arms *k* of a toy figure, with the inner ends *k'* extended to form guide-levers, the guides *i* for the same, and the hands that are hooked or made with the fingers bent, substantially as set forth.

2. The combination, with the clock-movement, a toy figure, and a balance-weight, of the arms guided at *i*, and moved by cranks, and the hands with the fingers and thumbs spread, substantially as set forth.

3. The combination, with a toy figure, of arms operated by cranks to give a hand-over-hand motion, and a clock-movement having an escapement-wheel, pallets, and and a balance-wheel vibrator, *h*, substantially as and for the purposes set forth.

4. As a new article of manufacture, a toy gymnast, having hands, to which a hand-over-hand movement is communicated by a spring and gearing, substantially as set forth.

Signed by me this 25th day of May, 1876.

WM. L. HUBBELL.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.