C. M. ALEXANDER.

Automatic Toy-Frog.

No. 224,375. Patented Feb. 10, 1880.

Fig. 5.

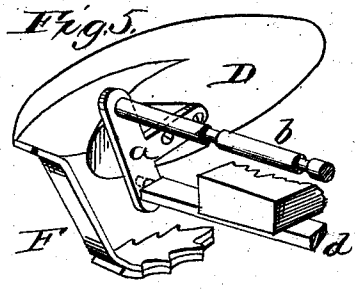


Fig. 4

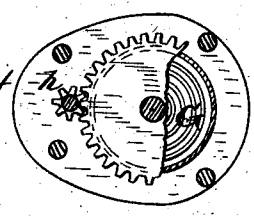


Fig. 1.

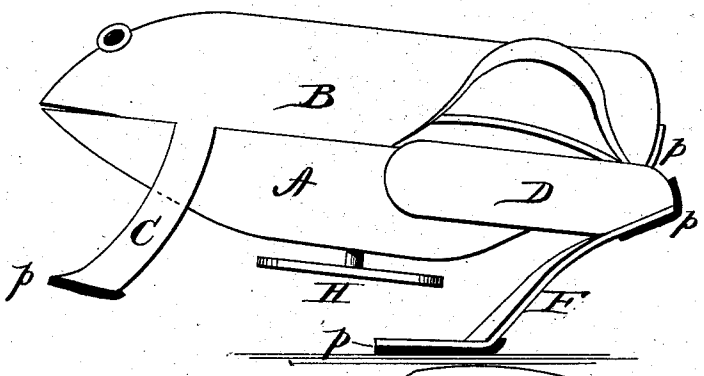


Fig. 2.

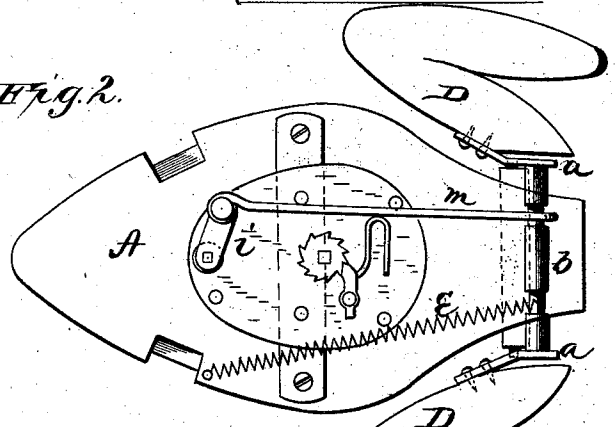
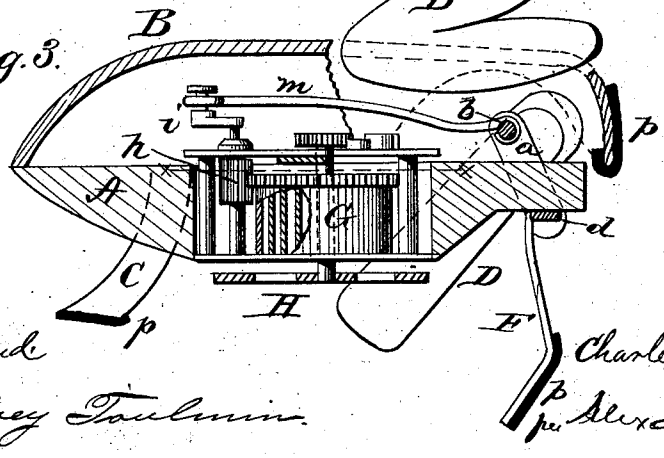


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES M. ALEXANDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

AUTOMATIC TOY FROG.

SPECIFICATION forming part of Letters Patent No. 224,375, dated February 10, 1880.

Application filed November 10, 1879.

To all whom it may concern:

Be it known that I, CHARLES M. ALEXANDER, of Washington, in the county of Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Toy Frogs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to automatic toys; and it consists in a toy frog having internal mechanism for jumping, and provided with rubber cushions on those portions on its limbs and body upon which it will at any time rest while jumping, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, Figure 1 is a side view of my automatic toy frog. Fig. 2 is a plan view thereof with the top of the shell removed. Fig. 3 is a longitudinal vertical section of the same. Figs. 4 and 5 are detailed views of parts of the mechanism.

The body of my toy frog may be made of papier-maché or other light material, and is preferably in two parts—a bottom, A, and a top, B—suitably united together and forming a chamber or space, as shown in Fig. 3.

C C are the front legs, made rigid to either part of the body. D D are the hind legs, bent in suitable shape and provided with the feet F F, which are made preferably of spring metal. The two hind legs, D D, have short bars *a a* attached to their inner ends, which bars are at their upper ends connected by a rod, *b*, and their lower ends pivoted to the ends of a cross-bar, *d*. This cross-bar is fastened to the under side of the body part A near the rear end, while the rod *b* works in the space between the two parts A and B of the body.

e is a spiral spring connecting the rod *b* with the forward part of the body, and has a tendency to draw said rod forward or throw the body in an upright position, so as to rest on the hind legs, where it should be balanced.

In the body part A is inserted a clock mechanism, G, operated by a spring to be wound up by a key, H, underneath. This clock mechanism has an ordinary pawl and ratchet to keep the spring wound up, and is also provided with an escapement-pinion, *h*, which has upon its upper journal a crank, *i*, and this crank is, by a pitman, *m*, connected with the rod *b* of the hind legs. This mechanism is so arranged that when wound up and the frog set in an upright position, as above stated, it will be balanced and the escapement hold the clock mechanism from running; but as soon as the frog is touched so as to overbalance forward the escapement is released, and the mechanism operating suddenly on the crank *i* will turn the hind legs on their pivots, and the continued revolution of the said crank, in connection with the action of the spring *e*, alternately but rapidly stops and starts the mechanism, giving a jumping motion to the frog.

p p are rubber cushions attached to the front and hind feet, the hocks of the hind legs, and on the rear end of the body—or, in other words, on all the portions or parts that are liable to come in contact with the floor while the frog is jumping. These rubber cushions deaden the noise and at the same time add to the spring of the frog.

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

A toy frog having, in connection with internal self-acting mechanism, one or more springs and a ratchet device for operating the hinged hind legs of the frog for giving it a jumping motion, and provided with rubber cushions on such portions of its limbs and body on which it will rest at any time after jumping, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of November, 1879.

C. M. ALEXANDER.

Witnesses:

J. J. MCCARTHY,

H. J. ENNIS.