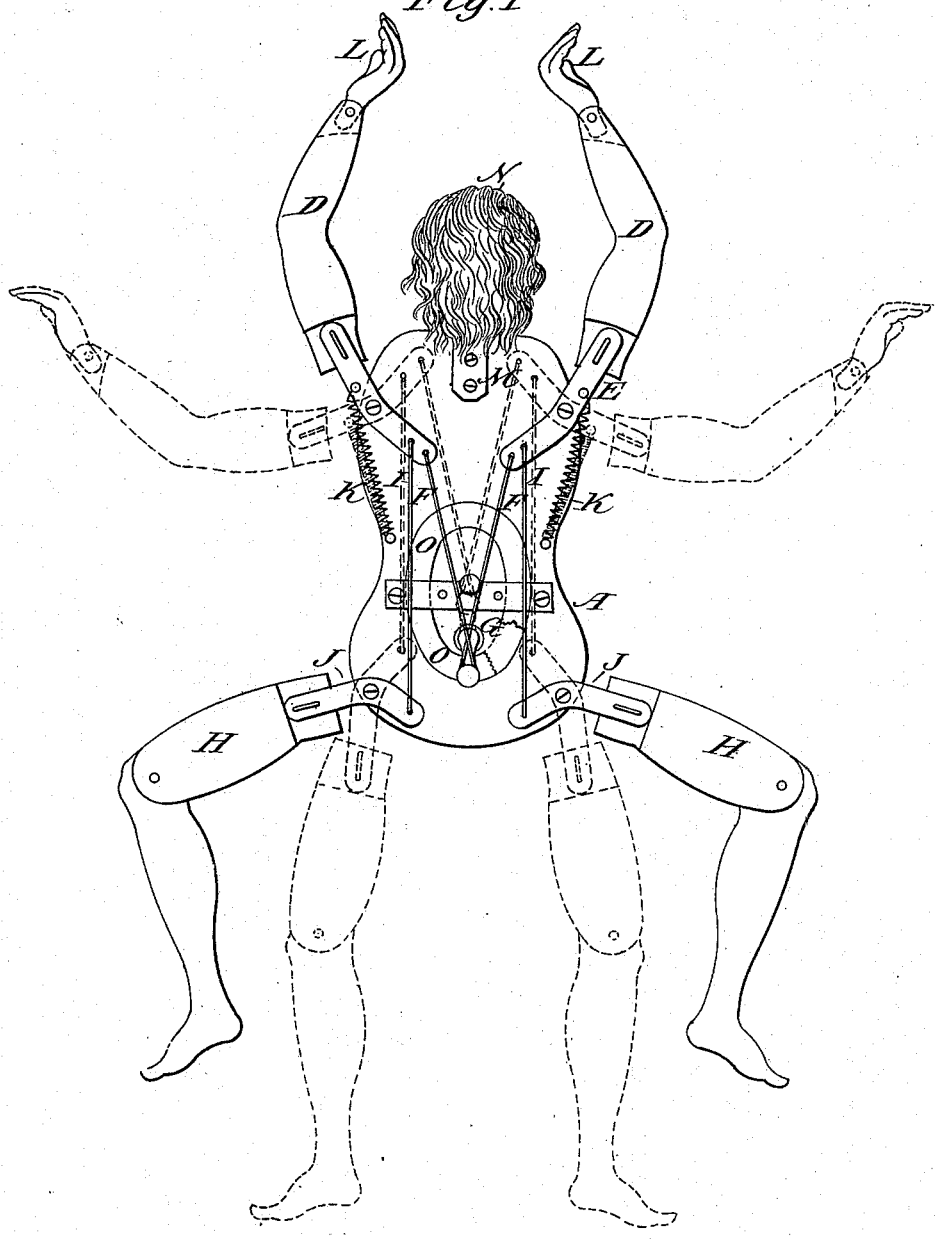
E. MARTIN.

Automatic Swimming-Toy.

No. 207,188. Patented Aug. 20, 1878.

Fig. 1



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Solon C. Kemon

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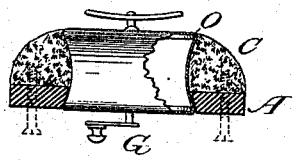

Fig. 2.

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ELIE MARTIN, OF PARIS, FRANCE.

IMPROVEMENT IN AUTOMATIC SWIMMING-TOYS.

Specification forming part of Letters Patent No. **207,188**, dated August 20, 1878; application filed April 4, 1878; patented in France, December 7, 1876.

To all whom it may concern:

Be it known that I, ELIE MARTIN, of Paris, France, have invented a new or Improved Automatic Figure or Toy; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed sheet of drawings.

The object of the present invention is to provide an automatic figure or toy which will go through the motions of swimming with ease and facility, and be simple in construction and not liable to get out of order.

The invention consists in the construction and combination of parts, which will be hereinafter more fully described, and then set forth in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a swimming toy constructed according to my invention, the back plate of cork being removed. Fig. 2 is a transverse section, showing the manner of fitting the spring-barrel.

The body of the toy is made to present the appearance of the human figure, either male or female, and it is clothed in an appropriate bathing-suit. A wooden board, A, carries the operating mechanism and the movable or articulated arms and legs of the figure. Cork blocks or plates of the proper shape are attached to said wooden board, so as to give the proper contour and buoyancy to the figure. Between the back plate of cork and the wooden board a space is left for the reception of the operating mechanism, connected directly with the arms and legs of the figure. The arms D are each provided with a metallic plate, E, which plates are centrally pivoted to the board A, and are connected at their inner ends with the rods F. Said rods are connected with the cranked arbor G of a spring-motor, which is inclosed in the board A and the front cork block or plate C. The rotation of said arbor will cause the arms of the figure to move alternately in a forward and backward direction; or, in other words, to go through the motions which the arms of a human person assume in swimming. The proper motion is imparted to the legs H by means of the rods I, which are connected, the inner ends of the pivoted plates J carrying the legs at their outer ends.

It will be perceived that when the spring-motor is wound up the necessary motion is first communicated to the arms of the figure, and then by said arms to the legs, thus providing a simple and effective mechanism, which will cause the figure to receive a progressive motion when it is placed into a suitable body of water.

For the purpose of moving the arms in a backward direction with considerable force, so as to give the necessary forward impulse to the figure, I provide the spiral springs K, which are connected with the supporting or pivot plates of the arms and with the board A.

The hands L, applied to the arms, are of a suitable form and material, preferably india-rubber, and act in the nature of sculls or paddles. It will be perceived that when the arms move forward or toward the head of the figure the springs are distended, and when the cranked arbor of the spring-motor has reached a certain point in its rotation said springs serve to throw the arms back with quickened vigor or force for producing the effective or propelling stroke.

The operating parts are formed of unoxidizable metal, and the limbs of the figure may be made of wood or india-rubber, colored in imitation of the human limbs.

The head N of the figure is joined to the body or to the wooden band A in such a manner that said head can be brought forward or backward, and thereby enable the automaton to swim either on its back or belly without submerging the head in the water. For connecting the head to the body, I preferably employ a flexible or pliable metallic plate, M, which will yield and remain in the position in which it is placed.

I have stated that the prime motor for giving motion to the limbs of the figure is a spring-barrel inclosed in the body of the figure. The manner of fitting the same, so as to exclude water and protect it from oxidization, consists in applying to the spring-casing, or rather to the front and rear plates forming the same, a bracelet or sleeve, O, of india-rubber, which fits by its pressure or tension on the plates of the casing. The arbor or cranked shaft of the spring is also encircled by an elastic washer,

so as to prevent the entrance of water into the opening in the board A, through which the arbor passes.

When a spring-motor is used, the winding-up shaft of the same projects through the abdominal portion of the figure, and terminates in a rosette of a waist-belt.

I may dispense with the coiled-spring motor, and use a rubber-spring or other suitable prime motor; but in every instance I desire to use the operating devices connected directly with the limbs of the figures.

I am aware that it is not, broadly, new to construct an automatic swimming human figure in which the limbs are operated by scissor-levers and a spring mechanism.

Having thus described my invention, what I claim as new is—

1. The combination, in an automaton swimming toy or figure, of a suitable prime motor, the cranked arbor, the pair of rods connected with said arbor and the arms of the figure, the pair of rods connected with the arms and legs of the figure, and the spiral springs connected with the arms and body, all constructed and arranged to operate in the manner set forth.

2. The combination of an elastic bracelet or sleeve with the casing of a spring-motor and the body of an automaton swimming-toy, as and for the purpose set forth.

ELIE MARTIN.

Witnesses:
ROBT. M. HOOPER,
EUGÈNE HÉBERT.