No. 737,337. PATENTED AUG. 25, 1903.

R. CAIRNS.

MECHANICAL TOY.

APPLICATION FILED MAY 26, 1903.

NO MODEL.

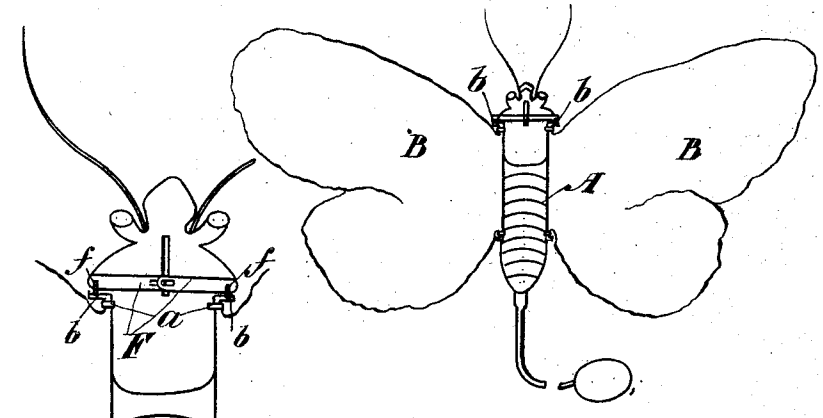


Fig. 1.

Fig. 4.

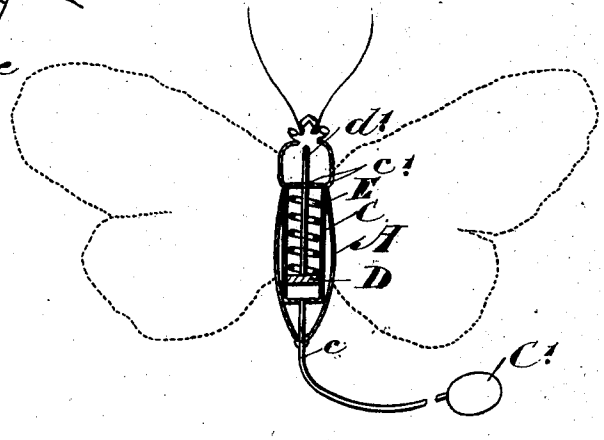


Fig. 2.

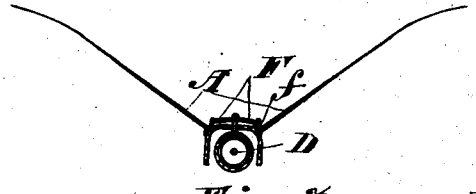


Fig. 3.

Witnesses:
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No. 737,337. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

ROBERT CAIRNS, OF TORONTO, CANADA.

MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 737,337, dated August 25, 1903.

Application filed May 26, 1903. Serial No. 158,890. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CAIRNS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

My invention relates to improvements in mechanical toys; and the object of the invention is to devise a simple device whereby motion may be imparted to limbs or other parts of mechanical toys of various descriptions in a simple, convenient, and easy manner; and it consists, essentially, of a cylinder located within the body portion and having one end closed and provided with a tube extending outwardly and having at the end thereof a compression-bulb, a piston located within the cylinder and having the stem or rod thereof extending outwardly and operatively connected to the parts designed to be moved, and a spring located within the cylinder between the piston and the head thereof, the parts being constructed and arranged in detail, as hereinafter explained.

Figure 1 is a plan view showing the application of my invention to a butterfly. Fig. 2 is a sectional plan. Fig. 3 is a cross-section. Fig. 4 is an enlarged detail showing the operative connection of the stem of the piston to the wings.

In the drawings like letters of reference indicate corresponding parts in each figure.

In the drawings I have shown my invention attached to a mechanical butterfly; but it will be readily understood that it may be applied with equal facility to mechanical and other toys. I have merely shown it as applied to a butterfly to show one of the most useful toys to which it may be applied.

A is the body of the butterfly, and B are the wings, which are provided at the inner edge with bent crank-shaped ends *b* and *b'*, which extend through loops or journals *a a'*, respectively, stamped or formed up out of the body portion.

C is a cylinder suitably held within the body A and having connected thereto a flexible tube *c*, which extends to an operating compression-bulb C'.

D is the piston, which is provided with a stem *d*, which extends through the opposite end of the piston to that from which the tube *c* extends. This end of the piston is provided with holes *c'*. The end of the stem *d* is bent at *d'*, as indicated.

E is a spiral spring extending between the end of the cylinder and the piston D.

F are bars slotted at the end and suitably held over the bent end *d'* of the stem *d* of the piston. The opposite ends of the bars F are connected by links *f* to the crank-shaped ends *b*.

Having now described the principal parts involved in my invention, I shall briefly describe its operation and utility. By pressing on the bulb the air is forced against the piston D, and necessarily the piston is caused to move longitudinally in the cylinder, thereby carrying with it the rod *d*, and consequently the bars F F, thus serving to pull upon the cranks *b* of the wings, thus throwing such wings upwardly. The spring E at the limit of the stroke serves to bring the piston back again to the normal position and necessarily at the same time throws the wings back flat. The bulb is intended to be inserted in the pocket, and the butterfly may be fastened to the lapel of the coat of any person, and it will thus be seen that the motion of the butterfly may be very accurately represented without an observer knowing the source of movement.

What I claim as my invention is—

A mechanical toy in the shape of a winged insect comprising a body, wings hinged thereto having cranks, a cylinder within the body, a piston in said cylinder, a rod or stem carried by said piston, a pair of toggle-links connecting said stem with the cranks of the oppositely-disposed wings and an air-compressing device connected with said cylinder, substantially as described.

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Witnesses:
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