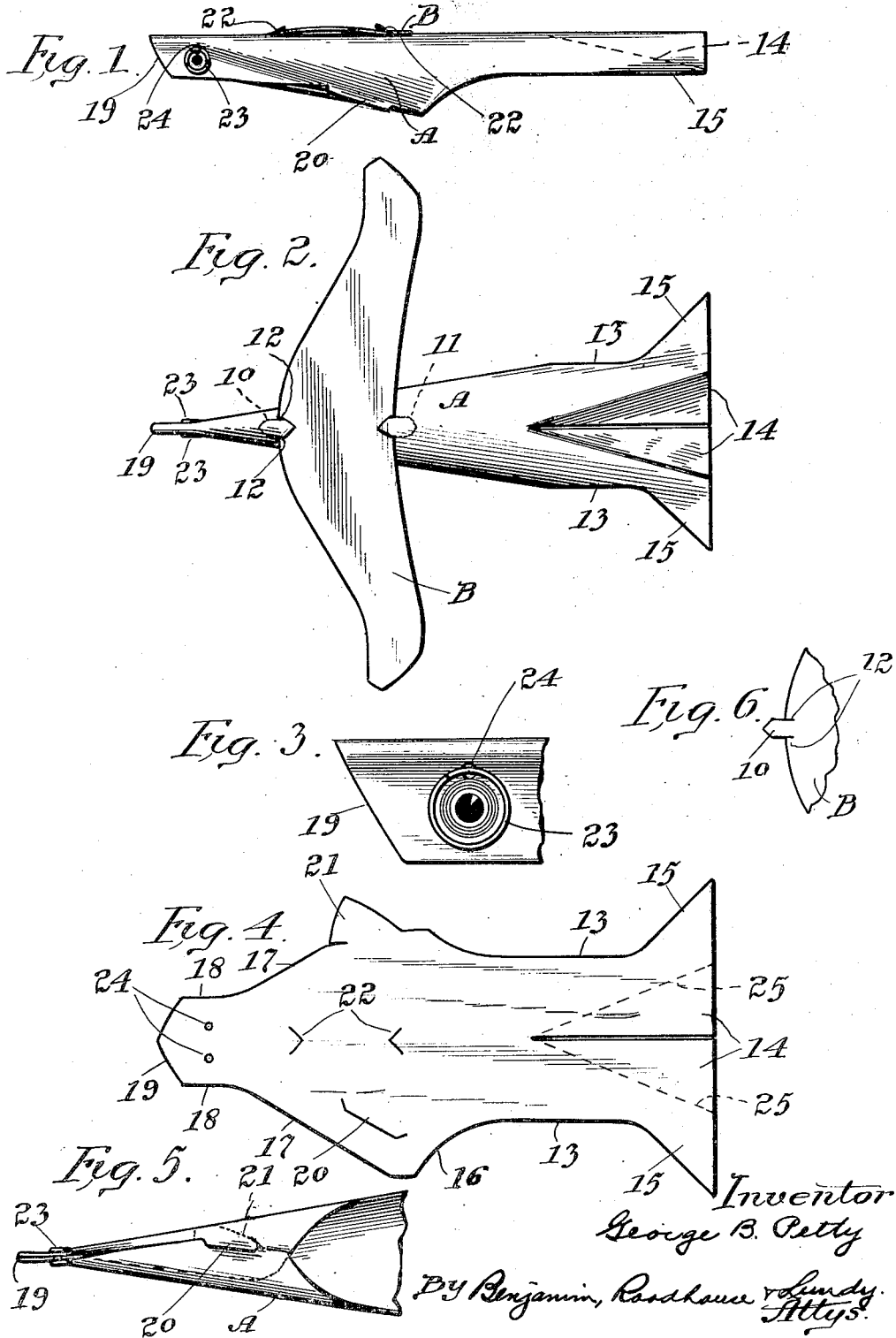


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 FLYING TOY.
 APPLICATION FILED JULY 29, 1920.

1,378,193.

Patented May 17, 1921.



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UNITED STATES PATENT OFFICE.

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FLYING TOY.

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To all whom it may concern:

Be it known that I, GEORGE B. PETTY, a citizen of the United States, and a resident of Evanston, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Flying Toys, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to make and use the same.

My invention relates to a toy, which, when projected or thrown into the air, will soar or sail to simulate the flight of a bird or the gliding of an aeroplane.

Primarily I have designed the toy in a form that permits of its fabrication from sheets of paper and is capable of being readily assembled for flight or disassembled or collapsed in a flat state for convenience in shipping. One of the principal objects of my invention is the provision of a toy of the "cut-out" type, that is, the outline of the structure may be printed or impressed upon a flat sheet of paper or card-board and either sold in this manner or used as a supplement to a periodical. It is also an object of my invention to provide a toy of this character that shall have the appearance of a bird, the plane made in representation of the outstretched wings while the fuselage and empennage represent the head, body, and spread of the tail of a bird. By printing representations of feathers and other portions of the anatomy of a bird upon the sheet from which the toy is made the appearance of a bird in actual flight is intensified and the toy made more interesting. Further, by the particular formation of the body of the plane or toy in a conical shape as hereinafter described the body of the bird is given a plastic effect. Other objects of my invention comprise the provision of an aeronautical toy that is capable of being readily and quickly assembled by unskilled persons without the use of special instrumentalities, and on account of its being made from a sheet of paper or the like is cheap and inexpensive to manufacture and may be sold for a small sum.

I prefer to accomplish the divers objects of my invention in substantially the manner hereinafter fully described and as more particularly pointed out in the appended claims. Reference will now be had to the accompanying drawings which form a portion of this specification, and which are in a sense merely diagrammatical for the purposes of

illustrating the simple embodiment of the principles involved.

In the drawings:

Figure 1 is a longitudinal side view of the paper flying toy as it appears when assembled and ready for use.

Fig. 2 is a top plan thereof.

Fig. 3 is an enlarged detail of the forward end of the body portion of the toy.

Fig. 4 is a plan of the blank for formation into the body portion of the toy.

Fig. 5 is a detail bottom plan of the forward portion of the body of the toy illustrating the manner of assembly.

Fig. 6 is a fragmentary detail of the wing.

In the accompanying drawings I have employed the same reference characters to designate similar parts throughout the several views, and by referring first to Figs. 1 and 2 it will be seen the toy comprises a substantially conical shaped body A and a transversely disposed plane or wings B lying substantially tangentially to the adjacent surface of the body portion.

Specifically the plane B is a flat sheet of relatively stiff paper or card-board, or the like, which is blanked out in substantially the geometrical contour illustrated in Fig. 2 and represents in a conventional manner the outstretched wings of a bird in flight. Mediate its ends this wing blank is provided with lateral projections or tongues 10 and 11 positioned respectively upon the forward and the rear edges of the sweeps forming the wings, and the blank adjacent the forward tongue 10 is provided with rearwardly extended slits 12 the purpose whereof will hereinafter more fully appear.

As seen in Fig. 4 the blank for forming the body portion of the toy comprises a sheet of stiff paper or cardboard of irregular shape but generally uniform upon each side of its longitudinal axis and the rear portion has substantially parallel side edges 13 and is preferably bifurcated to provide tails 14. Lateral wings 15 are provided upon the side edges of the tails 14 that form the empennage of the toy when assembled and in use. The portion of the body blank forward of the transverse center thereof is substantially arrow-head shaped;—that is, the longitudinal parallel edges 13 curve or sweep outwardly as at 16 and then converge as at 17 in straight lines toward each other to a point a slight distance back of the nose of the fuselage where they again extend paral-

lel but closer to each other as at 18. A blunt nose 19 is formed upon the extreme forward portion of the toy blank by bringing the edges of the blank abruptly toward each other as seen in Fig. 4. A short oblique slot 20 is made in the fuselage portion of the blank extending substantially parallel to the adjacent edge of the converging portion 17, and upon the opposite converging edge 1 form an arrow-head key 21 adapted to be interlocked in the slot 20 when the body is rolled into shape and assembled. Two oppositely pointing darts or V-shaped slots 22 are also cut in the converging portion of the body blank for coacting with the wings or plane in the manner hereinafter to be described.

The assembling of the toy is as follows:—
The body blank is roll conical shape as seen in Figs. 1, 2 and 5 with the apex of the cone at or adjacent the nose 19 of the blank and the locking element 21 is inserted inwardly through the oblique slot 20 so as to hold the body in this form. A ring 23 consisting of a plurality of coils of spring wire is inserted through alining holes 24 in the nose of the body so that at least one coil of the ring will be positioned upon each side of the nose as illustrated in Fig. 5. The forwardly projecting tongue 10 of the plane is then inserted through the front dart or V-shaped slot 22 after which the plane is bowed slightly transversely between the thumb and index finger thereby permitting the rearwardly projecting tongue 11 to be inserted through the rear dart or V-shaped slot 22, so that the dart 22 may enter between the rearwardly extending slots 12 provided on the wings or plane portion thus positioning the plane or wings tangentially to the adjacent surface of the body portion. If desired, and in order to further increase the gliding effect during the flight of the toy, the tail portion adjacent the bifurcation may be folded slightly downwardly along the dotted lines 25 (Fig. 4).

What I claim as new is:—

1. A toy aeroplane comprising a body por-

tion formed of a single paper blank rolled into substantially conical shape, and a plane disposed transversely to the axis of the body.

2. A toy aeroplane comprising a body portion formed of a single paper blank rolled into substantially conical shape, and a plane disposed transversely to the axis of the body and substantially tangent to the adjacent surface thereof.

3. A toy aeroplane comprising a body portion formed of a paper blank rolled into substantially conical shape the rear portion whereof is slit to provide a bifurcated tail, and a plane disposed transversely to the axis of the body forward of the slit portion.

4. A toy aeroplane comprising a body portion formed of a paper blank rolled into substantially conical shape the rear portion whereof is slit to provide a bifurcated tail, and a plane disposed transversely to the axis of the body forward of the slit portion and substantially tangent to the adjacent surface thereof.

5. An aeronautical toy comprising a conical air-piercing body and rearwardly extending stabilizing planes formed from a blank of suitable material the forward portion whereof is rolled and interlocked and the upper segment of said body is provided with slits, and a plane also formed from a blank of suitable material and having produced from its medial fore and aft edges means for interlocking with the slits in said body portion.

6. A toy aeroplane comprising a body portion formed of a paper blank rolled into substantially conical form, a plane disposed transverse to the axis of the body, and an element for weighting the nose of the body consisting of a wire coil the convolutions whereof engage opposite sides of the nose.

Signed at Chicago, county of Cook, and State of Illinois, this 23d day of July, 1920.

GEORGE B. PETTY.

Witnesses:

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JOHN WEIDMANN, Jr.