May 17, 1955 V. CIAMPOLINI 2,708,330

GLIDER TOY

Filed March 7, 1950

Fig. 1

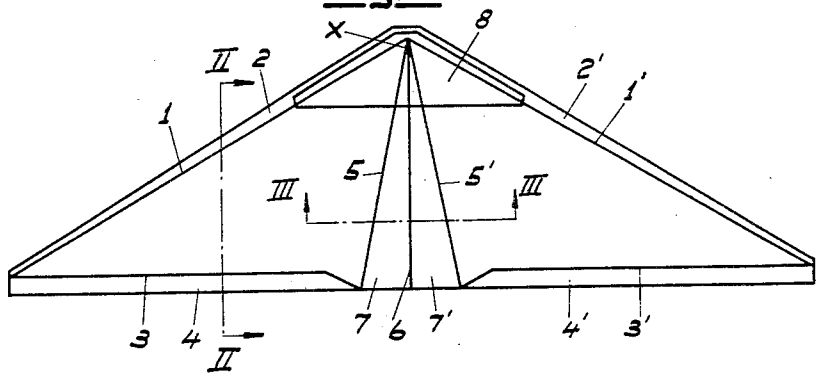


Fig. 2

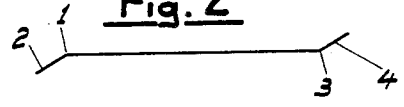


Fig. 3

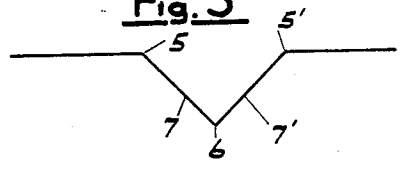
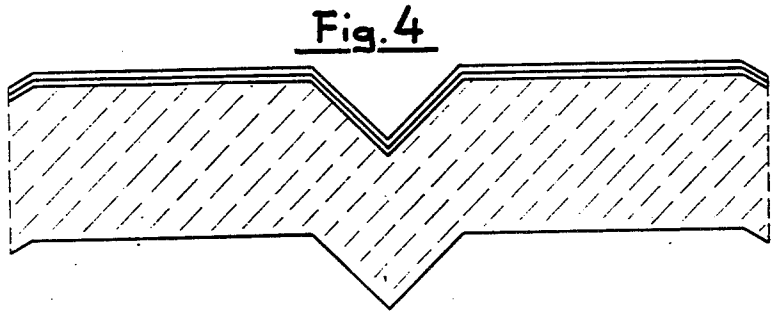


Fig. 4



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1 Claim. (Cl. 46—79)

This invention relates to a self-gliding flying device that is capable of gliding, and is capable of being aggregated in a compact bundle made of a plurality of such elements, all alike, placed one upon the other.

The said bundle can thus be let fall from a high flying plane, aerostat or the like, or also from a catapult, or an iron tower, buildings or the like.

By unfastening the link by which the flying devices are kept together, the bundle opens, the flying devices spread off, each flying device separates itself from the others, beginning thus a gliding with a high efficiency coefficient.

The subject of the present invention is suitable for advertising purposes as well as playing purposes.

The said self-gliding flying device is characterized by the fact that it is built from a very thin foil material and has folds which cannot jeopardize the capacity of the flying devices to be put one upon the other into a compact bundle, and means for making heavier the central front part, the said means being also made from a thin foil material. This flying device can be made from any material such as paper, Celluloid, metal and the like and can be variously shaped as long as it maintains the capacity of being placed one upon the other in a bundle.

The means that make heavier the front part thereof may consist of a metallic plate suitably shaped and folded which acts for displacing the centre of gravity of the flying device in the required position of the aerodynamic centering of the glide and at the same time can absorb the cantilever moment of the wing areas.

As the wing struts and the fin areas are eliminated, the dimensions of the flying device as far as its thickness is concerned are very small and generally less than 1 mm. thick, inclusive of the plate, so that a bundle of height equal to the wing span of the flying device can hold a few hundred elements.

The self-gliding flying device has on the other hand suitable cross and longitudinal folds, which form angles usually not greater than 45° to permit the flying devices to be put one upon the other, with the aim of obtaining fin areas and the stiffening of the unit, thus increasing the aerodynamic efficiency coefficient and the self-stability of the glide.

The accompanying drawings show some embodiments of the invention. In the drawings:

Fig. 1 is a plan view of an embodiment of the invention, a so called "flying wing";

Fig. 2 is a section of the said form of embodiment on the line II—II in Fig. 1;

Fig. 3 is a section on the line III—III in Fig. 1;

Fig. 4 diagrammatically shows the aggregating in a bundle of flying devices according to the embodiment of the invention shown in Fig. 1.

One of the most convenient embodiments of the invention is the "flying wing" embodiment, as shown in Fig. 1.

The fold lines 1—1' of the attachment edge 2—2' extend downward and the fold lines 3—3' of the exit edge 4—4' extend upward, to stiffen and make self-steadying the flying wing. The fold lines 5—5' and 6 create a keel 7—7' that stiffens the wings and gives them the necessary directional stability. The fold lines 5, 5' and 6 converge towards a point X placed slightly backward as compared with the vertex of the attachment edge in order to permit the continuity of the attachment edge 1, 1', which stiffens the wing transversely. In the front of the flying device is placed the metallic plate 8, molded so as to perfectly adhere to the fold lines of the wing. The said plate is of such a weight as to realize the aerodynamic centering of the flying wing, and at the same time to complete the rigidity thereof. Thus is obtained the advantage of not increasing the actual thickness in the aggregation in a bundle.

What I claim is:

An advertising device in the form of a flying glider made of very thin sheet material and having the shape of an isosceles triangle with a central straight fold extending from its apex to its base along the line of symmetry with its concave portion on the upper surface of the device and a fold on each side of the central fold extending obliquely to the central fold from the base to the apex and converging with the central fold at the apex, the side folds having their concave portions on the under surface of the device, said folds cooperating to form a keel of triangular pyramid form extending from the apex to the base, the edges of the sides of said triangular sheet forming leading edges and being bent downwardly and the edge of the base being bent upwardly and forming trailing edges, and a ballasting member at the apex of said triangle in the form of a strip of metallic foil extending substantial distances from the apex along both leading edges and conforming with the contour of said leading edges.

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