Jan. 24, 1939. O. L. KOCH ET AL 2,144,805

TOY CATAPULT

Filed July 6, 1936

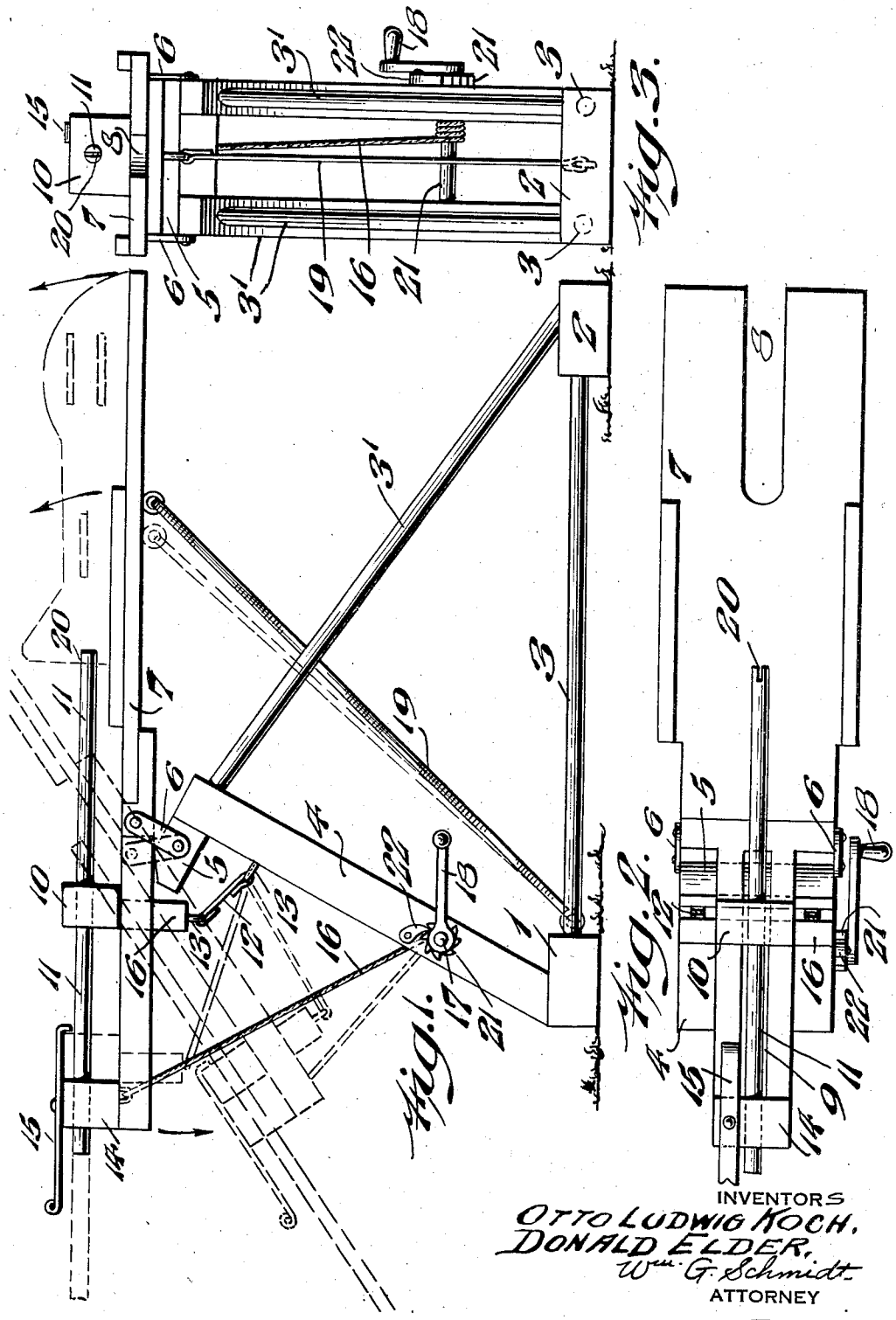


Fig. 1.

Fig. 2.

Fig. 3.

INVENTORS
OTTO LUDWIG KOCH,
DONALD ELDER,
Wm. G. Schmidt
ATTORNEY

Patented Jan. 24, 1939 2,144,805

UNITED STATES PATENT OFFICE

2,144,805

TOY CATAPULT

Otto Ludwig Koch and Donald Elder,
Philadelphia, Pa.

Application July 6, 1936, Serial No. 88,925

1 Claim. (Cl. 124—21)

This invention relates to a toy catapult and has for its primary purpose the provision of a novel and improved mechanism for the impulsion into the air of toy aeroplanes.

The recent outstanding accomplishments of aviators throughout the world have excited the enthusiasm of boys and girls in the construction of apparatus that will move through the air in more or less sustained flight. Boys and girls try, in their childlike and imitative way, to emulate the daring and skilful feats of adults, and not only construct aeroplanes that will keep aloft, but at the same time try, by means of impulsion apparatus, to supervise or control their movements.

In order that toy aeroplanes may be impelled into the air with direction and a certain degree of precision the hereinafter described toy catapult is an efficient instrumentality for achieving this end.

In the accompanying drawing;

Figure 1 is a side elevation of the toy catapult and also shows in dotted outline the relationship of certain of its parts when it is set for the impulsion of an aeroplane.

Figure 2 is a plan view of the catapult.

Figure 3 is a front elevation of the catapult.

In the drawing, similar characters of reference indicate corresponding parts throughout the several views. While we have shown only the preferred form of the invention, we wish to have it understood that various changes or modifications may be made within the scope of the claim hereto attached without departing from the spirit and scope of our invention. In our preferred form our toy catapult consists of two base blocks 1 and 2 which are joined by means of the tie rods 3. Obliquely attached to one of the base blocks, namely 1, are the struts 4 which in turn are joined at their outermost ends by means of the tie rods 3' to the other base block 2. To the cross member 5, which joins the upper ends of the struts 4, there is hingedly attached by means of the hinge 6 the flight platform 7. The aforesaid platform 7 has a portion cut away at one end to constitute the slot 8. Into the said slot 8 a toy aeroplane can be positioned preliminarily to impelling it into space and in which the wound-up propeller can be locked preparatory to the flight of the toy aeroplane. The other end of the platform 7 is cut away to constitute the slot 9 in which the impelling block 10, fixedly attached to the impelling plunger 11, is free to move against the action of the rubber band or spring 12. As can be easily seen in the drawing, the spring or rubber band 12 is attached to the lower end of the impelling block 10 and to the upper end of the struts 4 by means of the staples 13 or in any other suitable manner. At the end of the platform 7 is rigidly attached the detaining block 14 suitably perforated in order to accommodate the entrance of the impelling plunger 11 when the block 10 is drawn back. Mounted on the block 14 is the rotatable latch 15 which can engage the block 10 after it has been sufficiently withdrawn. To the lower surface of the flight platform 7 is attached the string or cable 16 which can be wound around the drum 17 mounted between the struts 4 when the said drum 17 is revolved by the crank 18. This winding of the cable 16 on the drum 17 is undertaken against the action of the spring or rubber band 19 attached at one end to the base 1 and at its other end to the flight platform 7 for the purpose of tilting the flight platform 7 into any desired angular position with respect to the earth. The struts, the tie rods, the bases and the various members throughout are preferably fabricated wood or other suitable material. The catapult, as constructed in accordance with the foregoing description, can be distributed to children in a so called "knocked down" condition for the purpose of giving them instruction and practice in the assemblance of its parts prior to use. The mode of operation of the toy catapult is not complicated and is readily learned by children who use it primarily for impelling their aeroplanes into the air. The toy aeroplane is mounted upon the flight platform 7, as indicated in dotted outline in Figure 1, so that part of it engages with the slot 20 in the impelling plunger 11 after the block 10 and the plunger 11 have been withdrawn and locked in position by the latch 15. The child then turns the crank 18 for the purpose of tilting the platform 7 at the desirable angle of impelling the aeroplane. Any degree of angularity can be obtained and fixed because movement of the cable 16 of the drum 17 is arrested by the ratchet 21 and its accompanying pawl 22. By a simple sidewise movement of the latch 15 the block 10 and the plunger 11 can be released and will move forcefully outwardly pushing the aeroplane in advance of them and impelling it into the air at a predetermined angle. A child can readily learn from an occasional use of the catapult what angles for the flight platform are necessary in order to secure for the aeroplane a maximum horizontal range before it strikes the earth.

Having described our invention in terms de-

signed to illustrate it but not to limit it, we claim:

A toy catapult comprising a base having a triangular superstructure mounted thereon, a tiltable flight platform hingedly attached to the upper part of said superstructure; a means within said platform for receiving a toy aeroplane and locking a wound-up propeller of said toy aeroplane, a latch and plunger mechanism mounted on said platform adapted to impell a toy aeroplane into the air, and a cable and drum mechanism adapted to regulate the angularity of the said tiltable platform.

OTTO LUDWIG KOCH.
DONALD ELDER.