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J. F. KLINE

1,802,386

FLYING TOP

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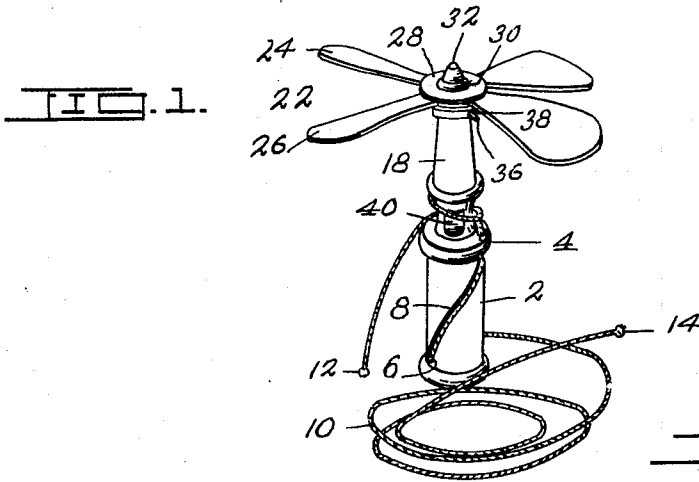
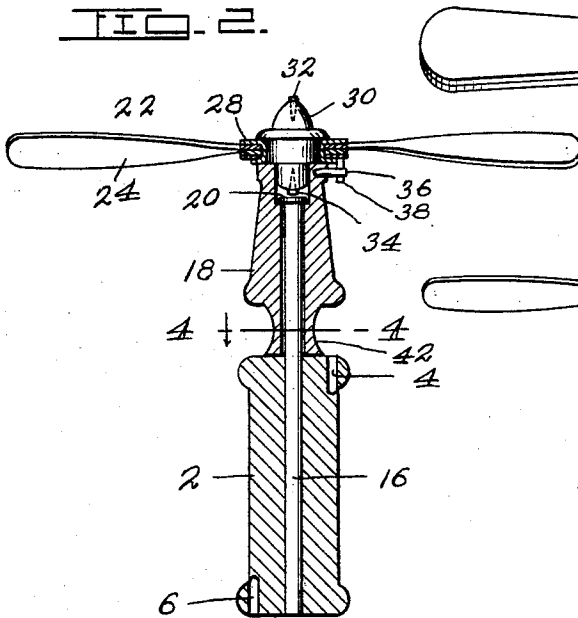
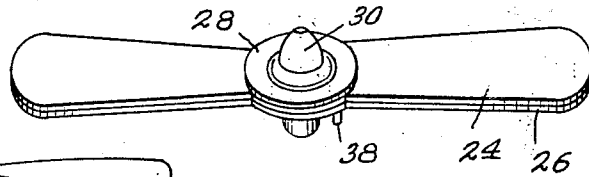
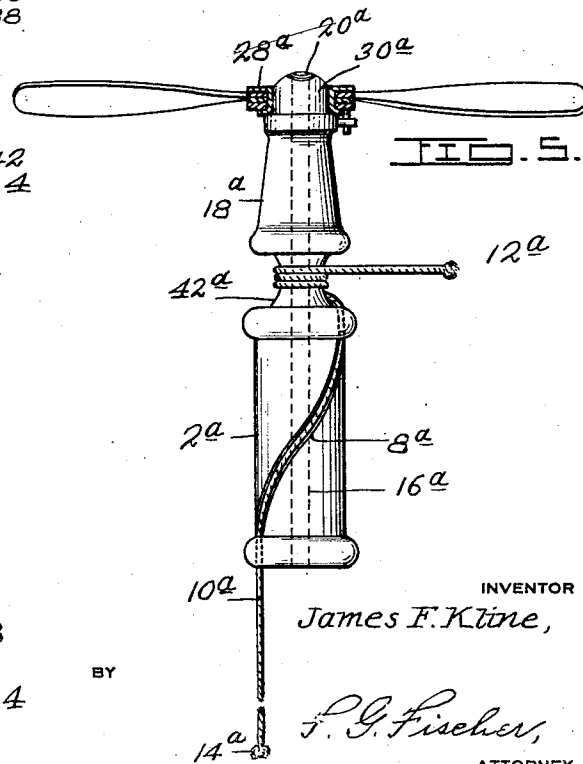
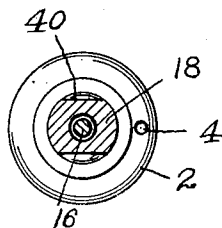


FIG. 4.



Witness:
F. G. Fischer.

BY

INVENTOR
James F. Kline,

F. G. Fischer,
ATTORNEY.

UNITED STATES PATENT OFFICE

JAMES F. KLINE, OF AMARILLO, TEXAS

FLYING TOP

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My invention relates to a novel device in the form of a flying toy and it includes two main parts such as a propeller adapted to spin in contact with the floor or ceiling of a room, and actuating means whereby said propeller may be rotated at high speed to cause it to fly through the air.

The propeller includes two pairs of blades, one pair of which is adapted to fold into parallel relation with the companion pair, so that said propeller and its actuating means can be readily carried in the pocket when they are not in use.

In order that the invention may be readily understood, reference will now be had to the accompanying drawing, in which:

Fig. 1 is a perspective view of the device with the parts assembled ready for use.

Fig. 2 is a longitudinal section of the complete device.

Fig. 3 is a detail perspective view of the propeller folded into compact form so that it can be readily carried in the pocket with the other parts of the device.

Fig. 4 is an enlarged cross section on line 4-4 of Fig. 2.

Fig. 5 is a side elevational view, partly in section of a modified form of the device.

Referring in detail to the different parts, 2 designates a handle provided at its ends with eyes 4 and 6 which communicate with the ends of a peripheral groove 8 extending in spiral or thread-like form part way around the handle 2.

10 designates a cord extending through the eyes 4 and 6 and having a sliding fit within the groove 8. Said cord is provided at its ends with knots 12 and 14 to prevent it from being pulled through the eyes 4 and 6 when it is slipped longitudinally through the groove 8 as hereinafter described.

16 designates a shaft fitting tightly within the handle 2 from which it projects to provide a support for a drum 18 which is rotatably mounted upon said shaft 16. A head 20 is formed on the shaft 16 to coact with the handle 2 in holding the drum 18 in place.

22 designates a propeller which may be made of any light, tough material such as sheet fiber which will withstand the rough

usage to which the propeller is put. In the present instance the propeller 22 consists of two pairs of blades 24 and 26, respectively, which are frictionally connected by a hub 28 so that one pair of blades may be folded into parallel relation with the companion blade as shown by Fig. 3.

The hub 28 is provided with a tightly fitting plug or stub shaft 30 which is tapered towards each end and reinforced by headed tacks 32 and 34 which provide points upon which the propeller 22 may spin on a floor, ceiling or other flat surface.

Actuating means for the propeller 22 consist of a wrist pin 36 depending from the propeller and a stud 38 projecting from the upper portion of the drum 18.

In practice the handle 2 is grasped with one hand while the stub shaft 30 of the propeller 22 is placed in the upper end of the axial opening 18 with the other hand. The cord 10, which has been pulled downwardly in the groove 8, is then wound at its upper portion around the lower part of the drum 18 two or three turns. The upper end of the cord is then pulled swiftly in a direction to rotate the drum 18 until the cord is checked by the knot 14 contacting with the lower end of the handle 2. As the drum 18 is rotated it rotates the propeller 22 at high speed by means of the coengaging wrist pin 36 and the stud 38, thereby causing the propeller to fly through the air and spin on any flat surface with which the head of either of the tacks 32, or 34 may come into contact with. While the friction between the surface of the groove 8 and the cord 10 will ordinarily tension the latter sufficiently to prevent it from slipping upon the drum 18 while rotating the same, the circular part of said drum is provided with two diametrically opposed flat portions 40, to give the cord a better grip thereon and thus avoid any possibility of slippage.

The lower portion 42 of the drum is of convex form so that the cord 10 will not tend to pile up thereon, or get locked in the joint between the lower end of said drum and the upper end of the handle 2 and thus fail to spin the drum.

In some instances the drum 18 may be

made in cylindrical form so that the cord can be wound thereon from top to bottom in much the same way as when wound upon a toy top, and in such case the spiral groove 8 may be dispensed with.

When not in use the blades 24 and 26 may be folded into parallel relation with each other as shown by Fig. 3, so that they can be laid along side of the handle 2 and the drum 18, and thus be readily carried in the pocket.

In the modified form disclosed by Fig. 5, the parts are similar to those disclosed by the preferred form as is evidenced by the corresponding reference numerals with exponents *a*, the chief differences being that the stub shaft 30 of the propeller is dispensed with while the upper end of the drum 18*a* is reduced as indicated at 30*a* to fit within the axial opening of the hub 28*a*. Being without a stub shaft upon which to spin, the foregoing modified form is intended for aerial flight only.

From the foregoing description it is apparent that I have provided a flying toy of inexpensive but durable construction and which will provide considerable amusement for children, and while I have shown two forms of the invention, I reserve all rights to such other forms and modifications thereof as properly fall within the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. A toy of the character described consisting of a propeller, a drum adapted to support said propeller, a handle to which said drum is rotatably connected, said handle having a spiral groove with an eye at each end, a cord slidable in said groove and eyes and adapted to be wound at one end around the drum for rotating the latter, and coengaging means on the drum and the propeller whereby the latter is driven by said drum.

2. A toy of the character described consisting of a propeller, a drum adapted to support said propeller and having diametrically opposed flat portions on its circular part, a handle to which said drum is rotatably connected, said handle having a spiral groove with an eye at each end, a cord slidable in said groove and eyes and adapted to be wound at one end around the drum for rotating the latter, and coengaging means on the drum and the propeller whereby the latter is driven by said drum.

3. In a toy of the character described, a handle provided at each end with an eye and a spiral groove communicating at its ends with said eyes, and a cord slidably mounted in said groove and extending through said eyes.

In testimony whereof I affix my signature.