W. W. KATTERJOHN.

FLYING TOY.

APPLICATION FILED APR. 24, 1909.

951,686.

Patented Mar. 8, 1910.

Fig. 1.

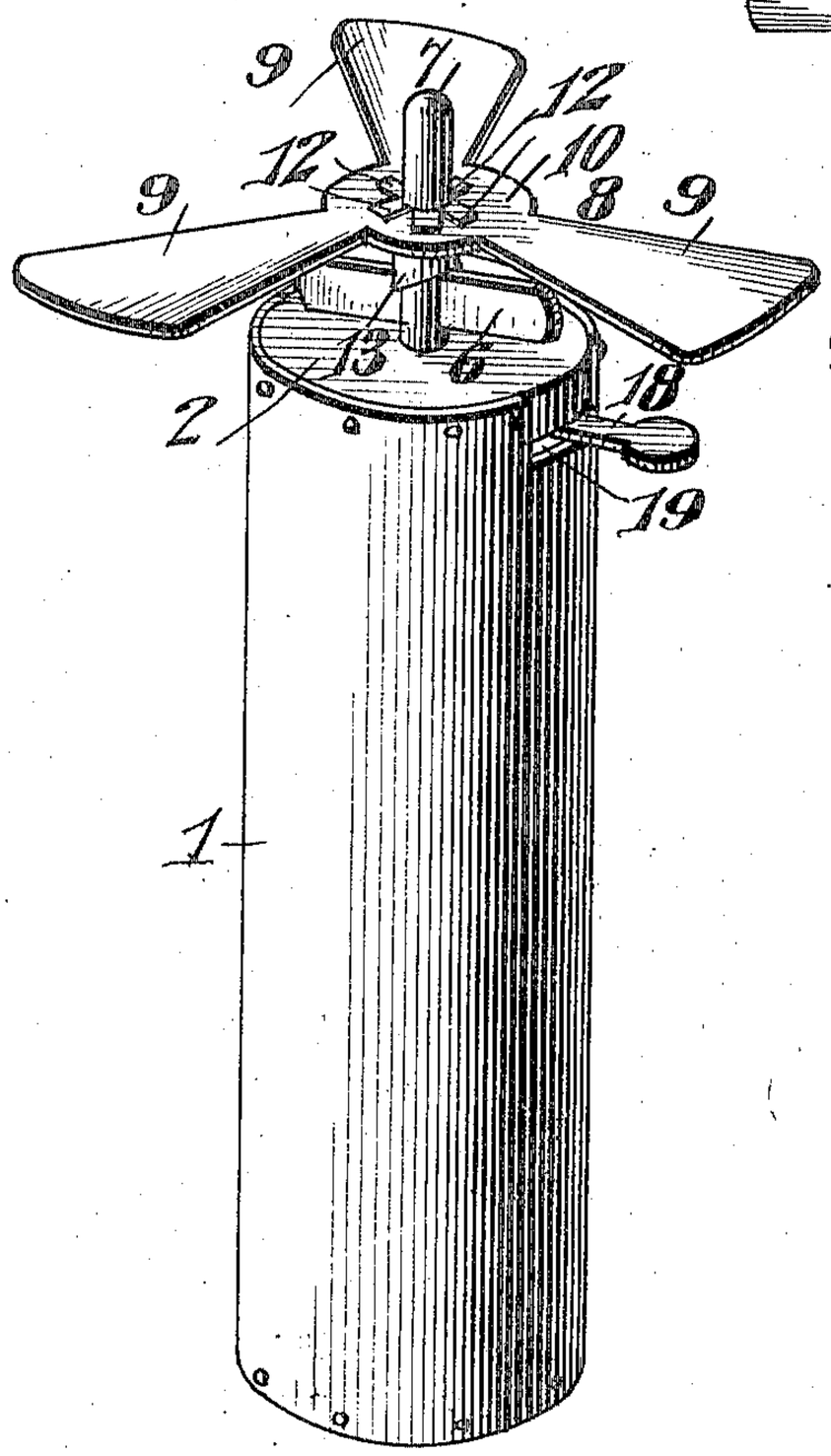


Fig. 2.

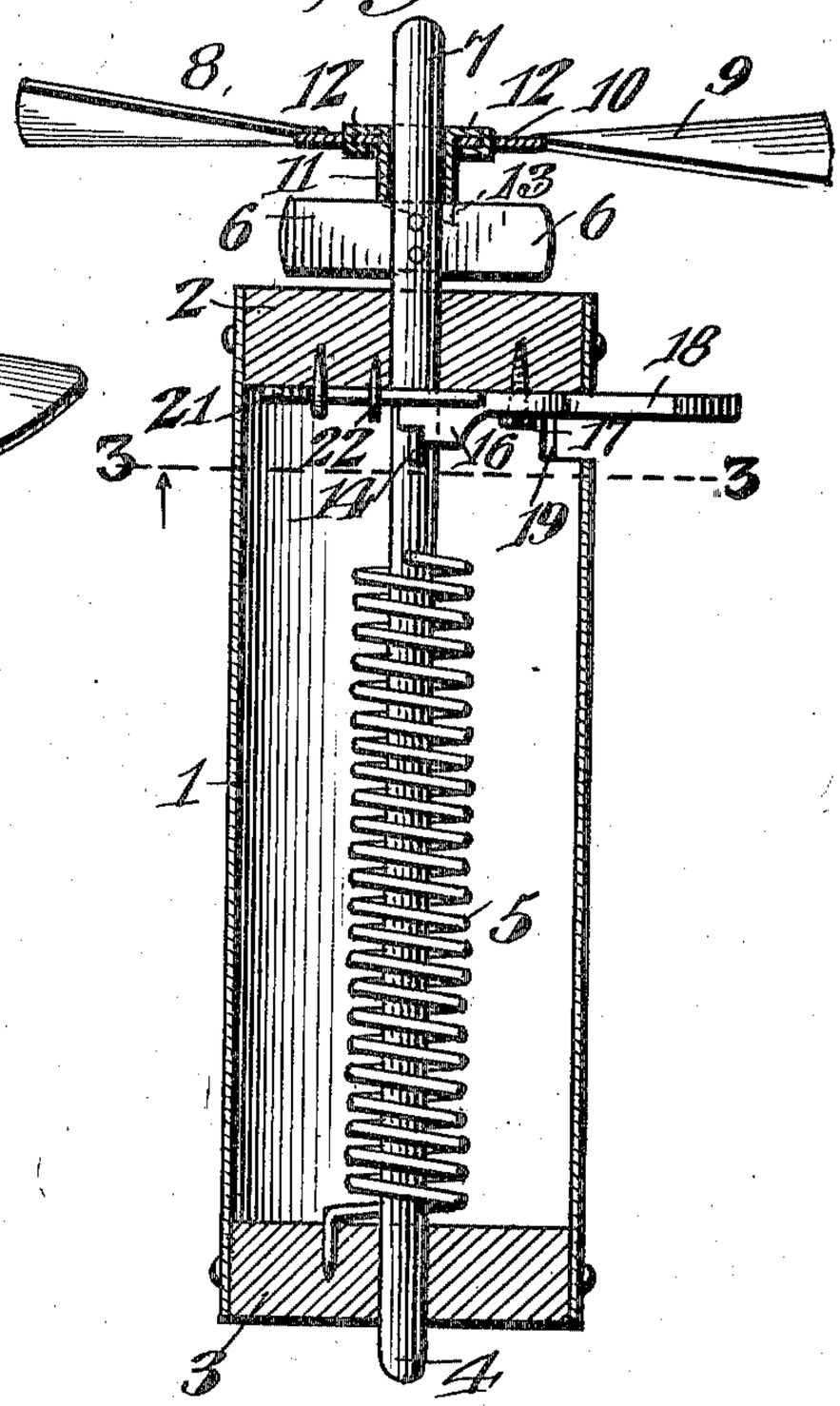


Fig. 3.

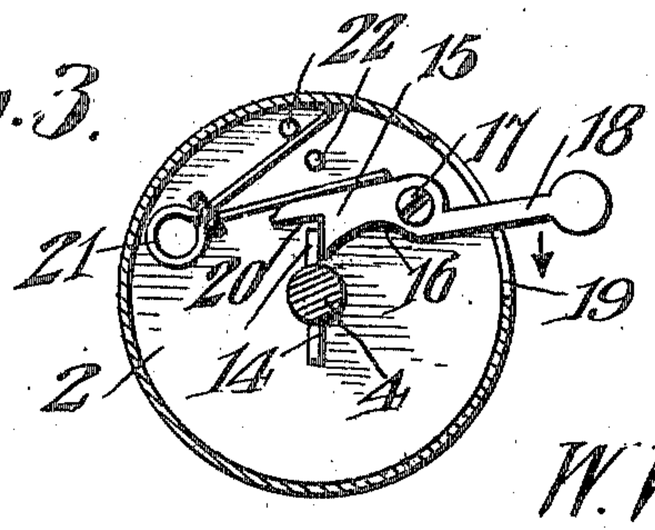
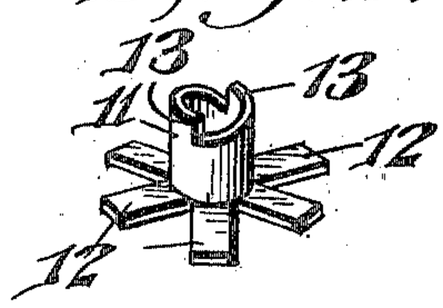


Fig. 4.



Witnesses

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FLYING TOY.

951,686. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed April 24, 1909. Serial No. 492,002.

To all whom it may concern:

Be it known that I, WILLIAM WESLEY KATTERJOHN, a citizen of the United States, residing at Henderson, in the county of Henderson and State of Kentucky, have invented a new and useful Flying Toy, of which the following is a specification.

The invention relates to improvements in flying tops.

The object of the present invention is to improve the construction of flying tops, and to provide a simple and inexpensive toy of this character of great strength and durability, equipped with a flying device, which will fly in the direction in which it is pointed.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a flying top, constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of the tubular stem of the flying device.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a casing having a cylindrical body, constructed of sheet metal, or other suitable material and preferably receiving ends or heads 2 and 3, constructed of wood, or other suitable material and secured within the ends of the body portion by screws, or other suitable fastening devices. The ends or heads 2 and 3 are provided with central bearing openings for the reception of a longitudinal shaft 4, constructed of any suitable material and preferably extended beyond each end of the casing. The shaft is actuated by a coiled spring 5, disposed on the shaft and secured at one end to the same and at its other terminal to the end or head 3 of the casing. The spring is wound up and placed under tension by rotating the shaft, which is provided with a pair of exteriorly arranged arms 6, consisting of flat pieces of metal passed through the extended portion 7 of the shaft adjacent to the end or head 2 of the casing and suitably secured to the said shaft. The metallic piece forming the arms is arranged edgewise or flatwise to present flat side faces, and it forms a convenient handle by means of which the shaft may be readily turned for winding the spring. It is also adapted to engage a top or flying device 8 for rotating the same.

The top or flying device consists of a plurality of propelling blades 9, set at an angle or inclination and preferably formed integral with a central portion 10. In practice the flying device will be equipped with two or more blades, which may be constructed of any suitable material. The central portion 10 is equipped with a tubular stem 11, preferably constructed of sheet metal and provided at the top with a plurality of radial tongues 12, extending outwardly at the upper or outer face of the central portion 10, and having their terminals piercing the said central portion and clenched against the inner or lower face thereof, as clearly shown in Fig. 2 of the drawing. By this construction the tubular hub or stem is securely fastened to the central connecting portion of the blades, and the latter are effectually prevented from wabbling. The lower end of the tubular member 11 is provided with opposite tapered projections or teeth 13, curved to form continuations of the said member and having straight vertical edges or shoulders for engaging the arms 6 of the shaft, and inclined edges for enabling the top or flying device to disengage itself from the arms of the shaft without friction.

The shaft is provided within the casing with opposite projections 14, adapted to be engaged by the inner arm 15 of a lever 16, pivoted at an intermediate point to the inner face of the head or end of the casing 2 by a screw 17, or other suitable fastening device and having an outer arm 18, extending through a slot 19 of the casing and constituting a trigger for discharging the rotary flying device or top. The inner arm 15 of the lever 16 forms a pawl for engaging either of the projections 14, and it is recessed at 20, as shown, to provide an engaging shoulder and a projecting terminal portion. The inner arm of the lever is maintained in

engagement with the shaft by means of a spring 21, suitably secured to the inner face of the end or head 2 of the cylinder casing and composed of two sides and a connecting loop, one of the sides being arranged to bear against the inner arm of the lever, and the other side being located between spaced projections 22, which assist in retaining the spring in position.

In the operation of the toy, the shaft is first rotated by the exteriorly projecting arms 6 to wind up the spring, the shaft being held against retrograde rotation by the spring actuated lever. The flying device or top is then placed on the extended portion 7 of the shaft in engagement with the arms 6. The lever is then operated to release the shaft, which is rapidly rotated by the coiled spring. The sudden and rapid rotary movement imparted to the top or flying device causes the same to move outward from the shaft, and it will fly in the direction in which it is pointed. The blades may be set at different angles or inclinations to vary the speed of the top or flying device.

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

1. A flying toy including a casing forming a handle having end walls provided with bearings, a spring actuated shaft permanently mounted in the bearings of the casing and projecting beyond one end thereof and provided at its exterior projecting portion with a laterally extending arm forming a handle for turning the shaft to wind up the spring, and a flying device having a tubular portion fitted on the outer end of the shaft and engaging with the laterally extending arm, whereby the flying device is actuated.

2. A flying toy including a casing forming a handle and having end walls provided with bearings, a spring actuated shaft journaled in the bearings of the casing and provided within the same with lateral projections and extending outward beyond one end of the casing, the exteriorly projecting portion being provided with laterally projecting arms forming a handle for turning the shaft to wind up the spring, a flying device having a tubular portion fitted on the outer end of the shaft and engaging with the arms, whereby the said flying device is actuated, and a lever pivoted at an intermediate point to one of the ends of the casing and having inner and outer arms, the inner arm being arranged to engage with the lateral projections of the shaft and the outer arm forming a trigger.

3. A flying toy including a casing forming a handle, a shaft journaled in the casing and projecting beyond the same, a coiled spring housed within the casing and connected with the shaft, opposite arms carried by the projecting portion of the shaft, and a flying device having a tubular stem fitted on the said projecting portion of the shaft and provided with tapered projections or teeth having vertical edges to engage the said arms and provided with inclined edges for disengaging the tubular stem from the said arms.

4. A toy of the class described including a casing forming a handle, a shaft journaled in the casing, a coiled spring housed within the casing and connected with the shaft, a flat piece piercing the shaft exteriorly of the casing and forming opposite arms, and a flying device having a tubular stem arranged on the shaft and provided with tapered projections or teeth having vertical edges to engage the said arms and provided with inclined edges for disengaging the tubular stem from the said arms.

5. A toy of the class described including a flying device composed of a series of blades, a central connecting portion, and a tubular stem provided with radial arms fitted against one of the faces of the central portion and having terminals piercing the same and clenched against the opposite face thereof, and means detachably engaging with the tubular stem for rotating the flying device.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WM. WESLEY KATTERJOHN.

Witnesses:

T. A. SANDEFUR,

W. F. CHRISTIAN.