E. FRIZ.

TOP SPINNER.

APPLICATION FILED FEB. 7, 1910.

969,264.

Patented Sept. 6, 1910.

FIG. 1.

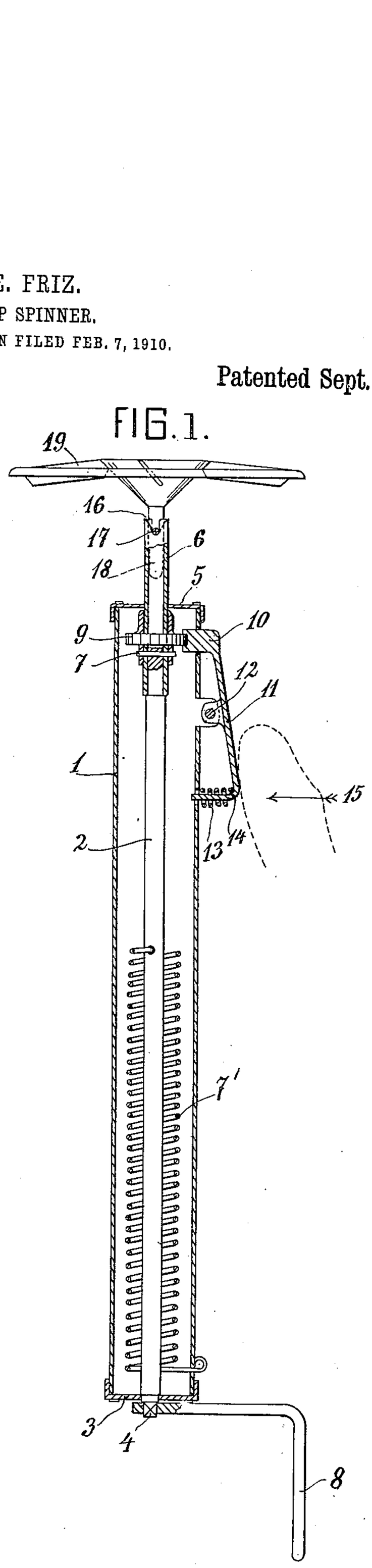
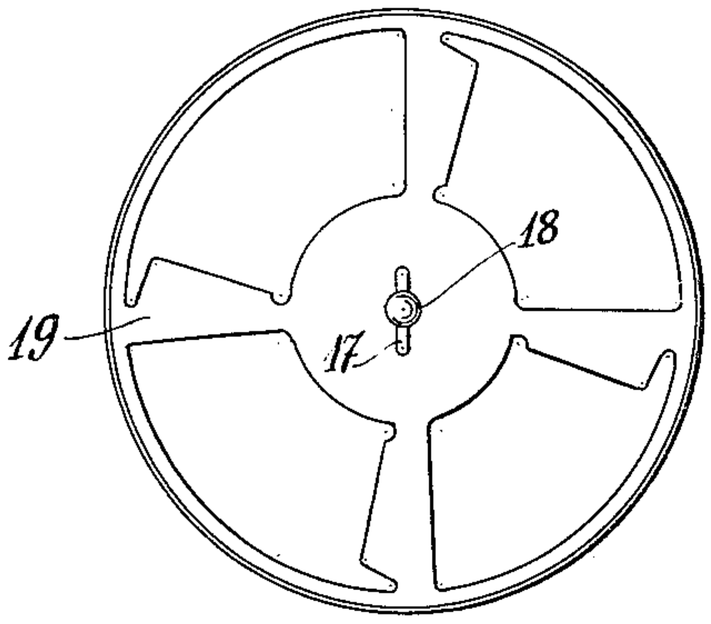


FIG. 2.



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UNITED STATES PATENT OFFICE.

EMIL FRIZ, OF GÖPPINGEN, GERMANY.

TOP-SPINNER.

969,264. Specification of Letters Patent. Patented Sept. 6, 1910.

Application filed February 7, 1910. Serial No. 542,437.

To all whom it may concern:

Be it known that I, EMIL FRIZ, a subject of the German Emperor, residing at Göppingen, in the Empire of Germany, have invented new and useful Improvements in Top-Spinners, of which the following is a specification.

This invention relates to a top spinner, the characteristic feature of which consists in a lockable and releasable spring driving device, whose winding spindle receives the pin of the spinning top by means of a slot which is upwardly inclined on the winding off side. In order that the spinning top may always assume a horizontal position and after the completion of the flight in the open air, that the spinning may be continued on the ground, the top is preferably provided with a peg or axle heavier than itself.

Referring to the accompanying drawing the subject matter of the invention is shown in a constructional form by way of example.

Figure 1 is a vertical longitudinal section of the spinner with top thereon. Fig. 2 is a plan of the top.

In the cylindrical casing 1 is a spindle 2 with winding pin 4 projecting outwardly through the bottom 3 and tube 6 projecting outwardly through the lid or cover 5, such tube being secured to the spindle 2 by pin 7. There is mounted on the spindle 2 a spiral spring 7′ which is hooked with its lower end in a hole of the casing 1 and with its upper end in a hole of the spindle 2. If the spindle 2 is turned by a clockwork key or hand crank 8, the spiral spring 7′ becomes tensioned; it is locked in position by a ratchet wheel 9 on the tube 6 and by the projection 10 of a double-lever shaped clamp 11 which is adapted to turn on the casing 1 by means of pivot 12 and is controlled by spring 13. The latter is mounted on the lower end 14 of the clamp which, like the upper projection 10 of the clamp, is adapted to move freely in a corresponding recess or notch of the casing 1.

If by exerting a pressure on the lower end 14 of the clamp in the direction of the arrow 15, the ratchet wheel 9 is released, the spiral spring 7′ of the winding spindle 2 will also be released and return to its original position. The tube 6 of the spindle 2 is provided above with a slot 16, which receives the transverse pin 17 of the axle 18 of the top 19 and is inclined upward on the winding off side so that in the event of a rapid rotation of the spindle 2 owing to the said release of the spiral spring 7′, the top 19 will assume the same rapid rotation and be forced upward, while owing to its helical shaped construction, the top 19 will tend to release itself from the tube 6. According to the degree of tension, which is imparted to the winding spring 7′ by means of the hand crank 8, the top 19 is forced upward to a certain level. After the tube 6 and spindle 2 cease rotating owing to the force of the spring 7′ being exhausted, the top 19 will by its own momentum continue to revolve, and have an upward tendency, and as the slot 16 is inclined the top will be caused to move in an inclined path as it flies upwardly from the tube. As the axle or peg 18 is below the center of gravity of the top and is heavier than the latter, the top will continue to spin after completion of its flight and return to the ground.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim and wish to secure by Letters Patent is:

In a device of the character described, the combination with a casing having two alined openings near its upper terminus, of a two armed lever pivoted longitudinally of said casing and arranged to have its arms enter said openings, respectively, a spring encircling the lower arm and tending normally to press the upper arm inwardly toward the casing, a spindle extending longitudinally within said casing, a tube carried by the upper part of said spindle and being provided with slots for receiving a transverse pin carried by the peg of a top, a ratchet encircling the spindle at a point where the teeth of said ratchet are adapted to be engaged by the upper arm of said lever, a crank for revolving the spindle, and a tension spring having no connection with said crank and having an end attached to the spindle and its other end secured to the casing.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMIL FRIZ.

Witnesses:

HENRY HASPER,

WOLDEMAR HAUPT.