

No. 823,809.

PATENTED JUNE 19, 1906.

M. L. POWERS.
SPINNING TOP.

APPLICATION FILED DEC. 7, 1905.

Fig. 1.

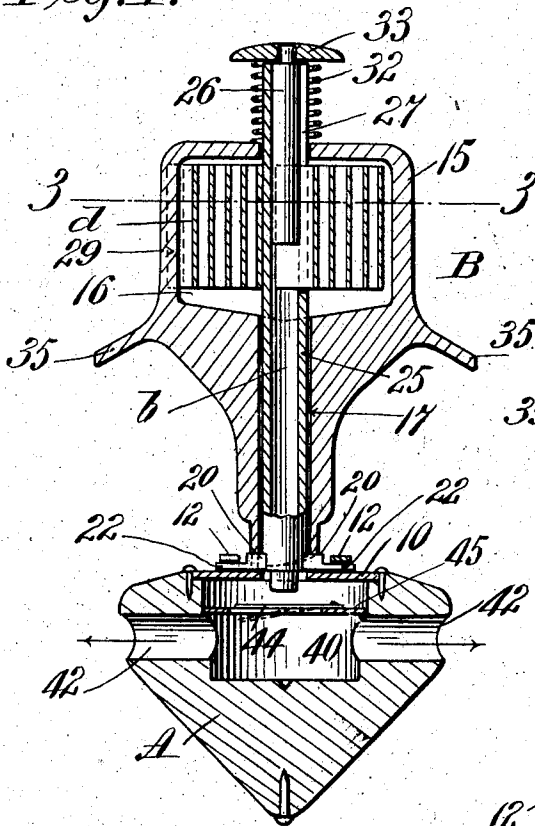


Fig. 2.

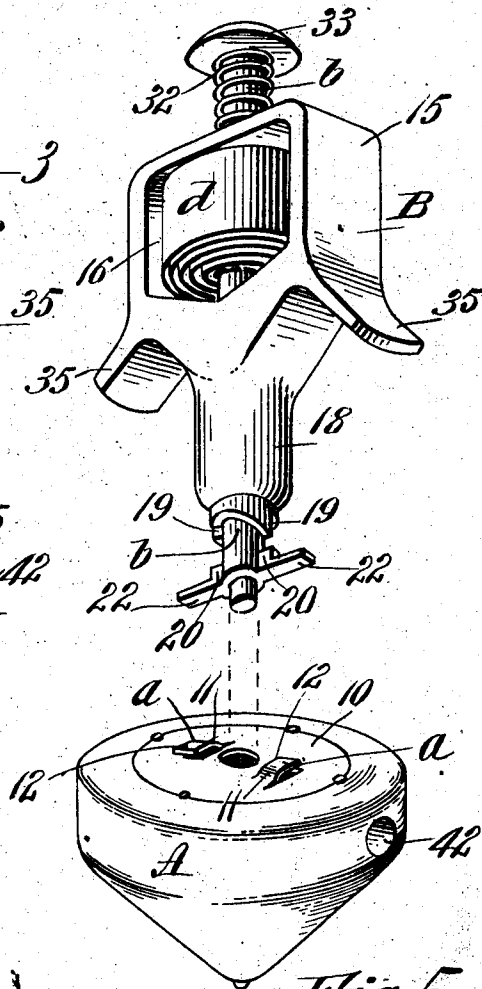


Fig. 3.

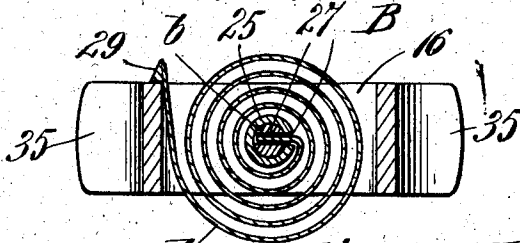


Fig. 5.

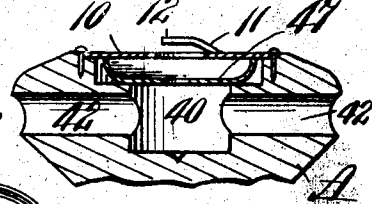
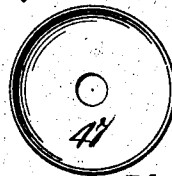
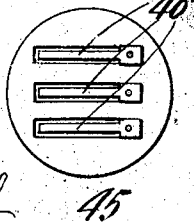


Fig. 4. Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

MICHAEL L. POWERS, OF SPRINGFIELD, MASSACHUSETTS.

SPINNING-TOP.

No. 823,809.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed December 7, 1905. Serial No. 290,797.

To all whom it may concern:

Be it known that I, MICHAEL L. POWERS, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Spinning-Tops, of which the following is a full, clear, and exact description.

This invention relates to improvements in spinning-tops of the kind including a top proper and a spinning device therefor or "whirling-jack."

An object of the invention is to so improve the construction of the parts that the spinning device when wound up and in engagement with the top will support the top preparatory to its being spun and yet permit such properly-timed and free disengagement of the top as to in no wise impair its spinning potentiality.

Another object is to very much simplify and cheapen the device, providing constructions which are very practicable of construction and easy of assemblage and rendering it not necessary or even desirable to provide any casing or inclosure for the mechanism of the spinning-jack.

The invention consists in the combination and arrangement of parts and the constructions of certain of the parts, all substantially as hereinafter fully described, and set forth in the claims.

In the drawings, Figure 1 is a central vertical sectional view through the spinning-top and whirling device, the parts being in engagement as in readiness to spin the top. Fig. 2 is a perspective view showing the parts as in separated relations. Fig. 3 is a horizontal cross-section taken on the line 3-3, Fig. 1. Figs. 4, 5, and 6 represent provisions for making the device a musical top.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the spinning-top proper, and B represents the spinning device or whirling-jack.

The top has at its upper side a thin metallic plate 10, having the tongues *a* struck up therefrom, comprising upstanding portions 11 and horizontally-extending portions 12, which form spaces between such horizontal portion of the upper top surface, which are open at their ends which are reverse from the spinning rotation of the top.

The whirling device comprises a holder 15, which may be a metallic casting, the same having intermediate spring-accommodating

space 16 and a vertical bore 17 therethrough for the spindle *b*, which is employed to forcibly impart the rotative movement to the top. The shank or downwardly-extending portion 18 of the holder has at its lower end the ratchets 19, with which engage the oppositely-located projections, pawls, or dogs 20, which are extended transversely from the lower end portion of the spindle, and these projections 20 are further continued in thin extensions 22-22, which are adapted to have engagement under the horizontal members 12 of the aforementioned tongues at the upper side of the spinning-top.

As specifically constructed the spindle *b* is made in two sections, the main spindle-section 25 being tubular and having its upper extremity projecting somewhat above the upper edge of the frame-like holder B, and the secondary spindle-section 26 is tightly fitted in the upper portion of the tubular section 25, being inserted therein friction-tight or with a driving fit, and both of these spindle-sections are longitudinally slotted, as represented at 27, Figs. 1 and 3, whereby the inner end of a clock or similar spring *d* is engaged and the outer extremity 29 of the clock-spring is engaged with a side portion of the holder, as represented in Fig. 3, so that with the extensions 22-22 in engagement with the top-tongues *a a* and the holder is rotated relatively to the top, or vice versa, the spring will be more or less wound up and retained in such condition by the engagement of the dogs 20-20 with the ratchets 19-19.

The spring-accommodating space within the holder is of a vertical dimension somewhat greater than the height of the clock-spring, as shown in Fig. 1, so that by downwardly forcing the spindle to carry the dogs 20-20 out of engagement with the ratchets 19-19 to permit the recoil of the spring for spinning the top a lower portion of the spring may be downwardly distensible, assuming temporarily the shape of a volute spring; but in this top the reaction of the spring is essentially a whirling and not an axial one, and for the purposes of normally keeping the spindle in its uppermost position, so that the dogs may remain in engagement with the ratchets 19 until willfully displaced, a spiral spring 32 is provided to encircle the upward projection of the spindle and in compression between the upper edge of the holder and the head or button 33, which constitutes the bearing-shoulder for the upper end of the spring. This but-

ton, as shown in Fig. 2, is made rotatable relatively to the spindle, the secondary spindle-section 26 being shouldered near its upper extremity, and such upper extremity thereabove is attenuated and upset in the manner of riveting, but without binding on the button.

The frame has opposite sidewise-extending finger-rests 35 35, which are of great convenience in the use of the toy, especially when letting off the top to be spun, it being apparent that when the parts are wound up and in engaged relation, as represented in Fig. 1, by grasping the holder so that two fingers of the hand are beneath the finger-rests 35 and the thumb is applied for pressure at the top of the button downward pressure on the latter will so endwise move the spindle as to disengage the dogs 20 from the holder-ratchets 19, imparting a decided impetus to the spindle and extensions 22 22, which have engagement with the portions 11 11 of the top-tongues and drive the top, it being understood that the scope of rotary motion of the spindle is comparatively slight and of short duration, so that the rotative force acquired in the top causes in spinning the tongues *aa* to depart from engagement with the members 22 of the whirling device.

The top, as shown in Figs. 1 and 5, is made with a central cavity 40, having sidewise-opening ducts 42, leading therefrom, and in said cavity is located an air sound-producing device, which in Fig. 1 at 44 is represented as a reed, Fig. 4 showing the reed-plate 45 as made with a plurality of slits or openings and a corresponding number of reed tongues 46, which may be of tones so that the spinning of the top will by the suction from the upper opening down into the cavity and sidewise out sound a chord.

In Figs. 5 and 6 a whistle 47 is represented as the sound-producing device.

I claim—

1. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate sidewise-open aperture and lower end ratchets, a spindle extending vertically through the holder, rotatable therein, and also having a limited degree of endwise movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also with said ratchets, and a spring located within said holder-aperture, having its outer end in engagement with the holder and its inner end with the spindle.

2. In a spinning-top, the combination with a top having one or more upper side abutments, each comprising an upstanding member and a horizontally-extending member, of a whirling device comprising a holder having an intermediate sidewise-open aperture and lower end ratchets, a spindle extending ver-

tically through the holder, rotatable therein, and also having a limited degree of endwise movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also with said ratchets, and a spring located within said holder-aperture, having its outer end in engagement with the holder and its inner end with the spindle.

3. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate sidewise-open aperture, lower end ratchets and opposite edgewise-extended finger-rests, a spindle extending vertically through the holder, rotatable therein, and also having a limited degree of endwise movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also with said ratchet, and a spring located within said holder-aperture, having its outer end in engagement with the holder and its inner end with the spindle.

4. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate sidewise-open aperture, lower end ratchets, and opposite edgewise-extended finger-rests, a spindle extending vertically through the holder, rotatable therein, and also having a limited degree of endwise movement, provided at its upper end with a head relatively to which it is independently rotatable, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also with said ratchet, and a spring located within said holder-aperture, having its outer end in engagement with the holder and its inner end with the spindle.

5. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate sidewise-open aperture, lower end ratchets, and a spindle extending vertically through the holder, rotatable therein, and also having a limited degree of endwise movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also with said ratchet, a spring located within said holder-aperture, having its outer end in engagement with the holder and its inner end with the spindle, and a spiral spring surrounding the spindle and in compression between the top of the holder and a shouldered upper part of the spindle.

6. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate spring-accommodating space and lower end ratchets, a tubular upwardly-open spindle extending vertically through the holder, rotatable therein,

and also having a limited degree of endwise movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also
5 with said ratchets, a spring located within the said space in the holder, having its outer end in engagement with the holder and its inner end with the spindle, a supplemental spindle-section tightly fitting in the upper
10 portion of the tubular-formed spindle, proper, and having at its upper end a button relatively to which it is freely rotatable, and a spiral spring encircling the upper portion of the spindle and in compression between the
15 top of the holder and said button.

7. In a spinning-top, the combination with a top having one or more upper side abutments, of a whirling device comprising a holder having an intermediate spring-accommodating space and lower end ratchets, a tubular upwardly-open spindle extending vertically through the holder, rotatable therein, and also having a limited degree of endwise

movement, and provided at its lower end with one or more transverse members adapted to engage the top abutments and also
25 with ratchets, a supplemental spindle-section tightly fitting in the upper portion of the tubular-formed spindle, proper, and having at its upper end a button relatively to which
30 it is freely rotatable, said two spindle-sections being longitudinally slotted, a spiral spring encircling the upper portion of the spindle and in compression between the top of the holder and said button, and a clock or
35 like spring located in said holder-aperture having its outer end in engagement with the holder and its inner end engaging through the matched slots in said spindle-sections.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

MICHAEL L. POWERS.

Witnesses:

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