

1,011,817.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.

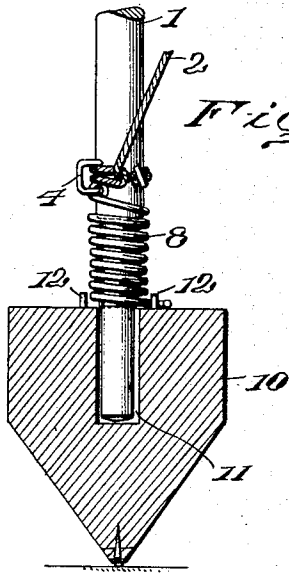


Fig. 1.

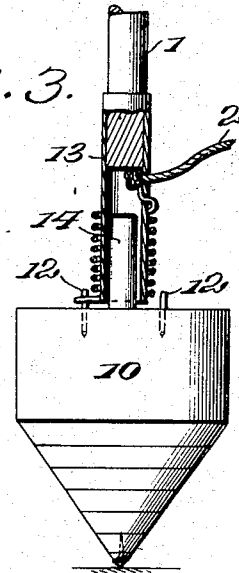


Fig. 3.

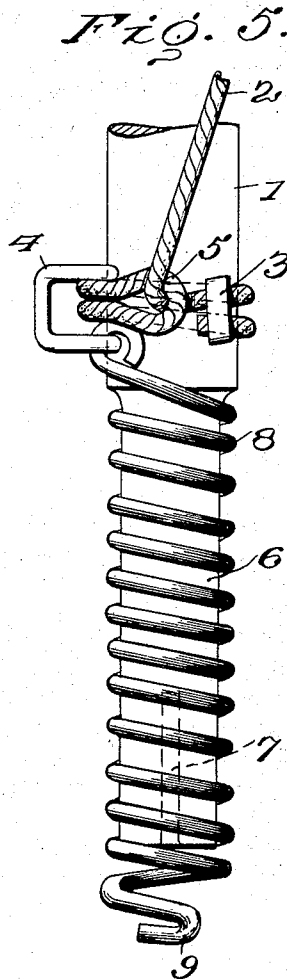


Fig. 5.

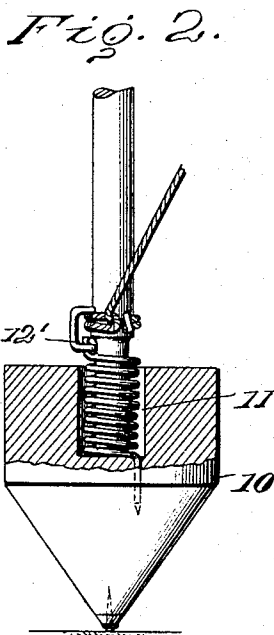
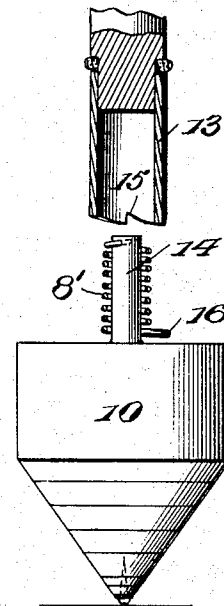


Fig. 2.

Fig. 4.



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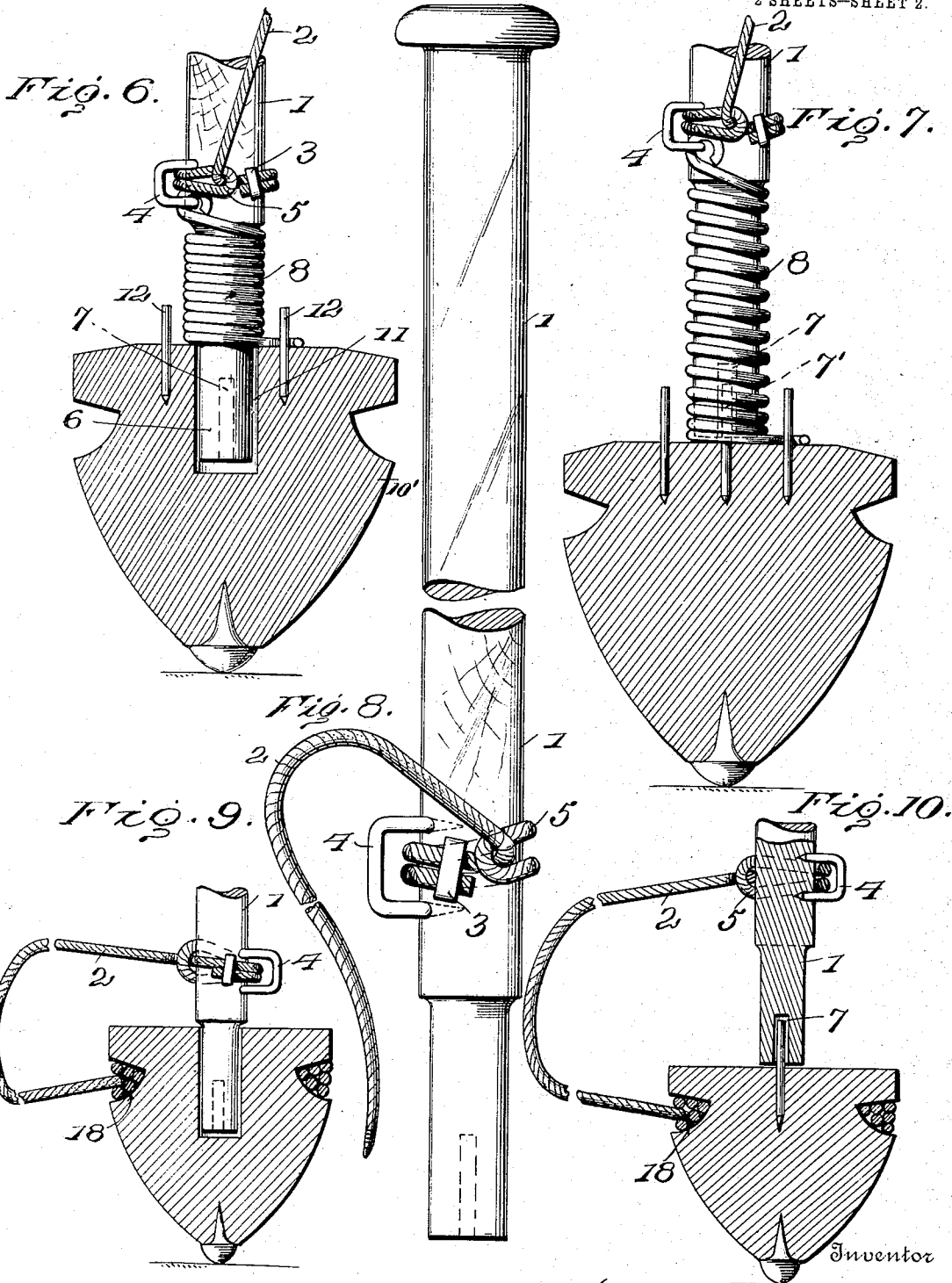
WHIPPING TOP.

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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

HANS KOWSKY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## WHIPPING-TOP.

1,011,817.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed July 16, 1910. Serial No. 572,299.

*To all whom it may concern:*

Be it known that I, HANS KOWSKY, of Washington, District of Columbia, have invented a new and useful Improvement in Whipping-Tops; which invention is fully set forth in the following specification.

This invention relates to whipping tops and has for its object to provide a top of this kind combined with means for imparting initial rotary movement to the top in which the number and cost of the parts shall be reduced to the minimum, while the working efficiency shall be maintained at the maximum.

A further object is to provide a device of this character which shall be of simple construction, attractive in appearance, certain in operation and which may be safely and effectively handled by a child.

Whipping tops should be a source of attractive, exhilarating and healthy exercise to a child, but, as heretofore constructed, they have been difficult to manipulate and possessed many annoying features tending to largely depreciate the attractiveness of this healthful sport, and it is one of the objects of the present invention to provide a top of this kind which shall eliminate the annoying and aggravating features heretofore present in tops of this kind.

With these objects in view, the invention consists of a spinning top of any suitable construction combined with a whip-stick having a suitable whip-lash attached at or near one end thereof, these two parts, viz., the top and the whip-stick, being provided with an axle on one of the parts and a corresponding axle-bearing on the other part, with means of any suitable kind for imparting an initial rotary movement to the top while the axle and the bearing are in operative relation to each other.

Any suitable means for imparting the initial rotary movement to the top may be employed, such as a spring reacting between the top and the whip-stick, or the whip-lash itself suitably wound around the top and operated by a quick pull thereon to initiate the spinning movement.

When a spring is employed, any suitable form for imparting the initial spinning movement to the top may be used and the spring may be located on the whip-stick in proximity to the whip-lash end thereof or may be located on the top itself, as desired.

Any suitable form of spring may be employed, as, for example, a coiled torsion spring having one end securely anchored either to the whip-stick or the top, as the case may be, and the other end reacting against a suitable abutment formed on the opposing part. Preferably, however, I employ a combined compression and torsion spring in the form of an open coil, the length of the spring being such that when the axle and the bearing are brought into operative relation with each other, the spring is, besides being subjected to torsion, also placed under longitudinal compression, to the end that when the top is freed from the hand of the operator the expansion of the spring acts to eject or cast off the top from the stick while the torsion under which the spring has been placed acts to simultaneously impart the initial spinning action to the top.

While I have above indicated that the top and whip-stick are constructed so that there shall be an axle on one of the parts and a suitable bearing on the other part, the invention further contemplates the provision of a whip-stick whose whip-lash end is provided not only with an axle, but likewise an axle-bearing, to the end that the same whip-stick may be used either with a top which is provided with an axle or with a top which has a bearing provided thereon. By this arrangement, a single whip-stick may be employed with any form of top and the annoyance incident to a change of whip-sticks when the kind of top employed is changed is entirely overcome.

The invention further consists of certain details of construction and combination of parts that will hereinafter be more specifically described and then pointed out in the claims.

The inventive idea involved is capable of receiving a variety of mechanical expressions, some of which, for the purpose of illustrating the invention, are shown in the accompanying drawings, but it is to be expressly understood that such drawings are designed for the purpose of illustration only and are not intended to define the limits of the invention, reference being had to the claims for that purpose.

In said drawings—Figure 1 represents a top provided with an axle-bearing, a whip-stick with an axle formed on the whip-lash

end thereof and a torsion spring fast on the whip-stick around the axle and having its lower end in operative relation with an abutment on the top; Fig. 2 is similar to Fig. 1, except that the spring is anchored within the axle-bearing of the top and with its opposite end engaging an abutment on the whip-stick; Fig. 3 shows the whip-stick with the axle-bearing on the whip-lash end thereof and the axle formed on the top and projecting into said bearing, with a torsion spring anchored on the end of the whip-stick and engaging the abutment on the top; Fig. 4 is similar to Fig. 3, except that the torsion spring is anchored to the axle on the top and engages, when in operative position, with a suitable abutment on the end of the whip-stick; Fig. 5 illustrates the whip-lash end of the whip-stick with the lash secured thereto, the extreme end of the whip-stick being formed as an axle and having also formed within said axle an axle-bearing, while a combined compression and torsion spring surrounds the axle end of the whip-stick. This figure also illustrates improved means for securing the lash and the spring to the whip-stick; Fig. 6 shows the whip-stick of Fig. 5 in operative relation with a top having an axle-bearing formed therein with the spring under compression and under torsion; Fig. 7 shows the same whip-stick in operative relation with a top having an axle formed thereon and entering the axle bearing in the end of the whip-stick with the spring under partial compression and under torsion; Fig. 8 shows the whip-stick of Fig. 5 with the combined compression and torsion spring omitted. With this form of stick, reliance is placed upon the lash to initiate the spinning movement; Fig. 9 shows the whip-stick of Fig. 8 in operative relation with a top having an axle-bearing formed within the top, and the whip-lash wound around the top to impart initial spinning movement thereto; and Fig. 10 shows the whip-stick of Fig. 8 in operative relation with a top having an axle formed thereon and in operative relation with the axle-bearing in the end of the whip-stick.

Referring to the drawings, in which like reference numerals indicate like parts, and referring first to Fig. 5, 1 is a whip-stick or whip-handle and 2 is a whip-lash secured thereto, preferably, by means of a loop 5 formed by use of a light metal clamp 3 which loop is passed under an open staple 4, and the whip-lash 2 is passed through the loop after encircling the whip-stick.

On the end of the whip-stick 1 there is formed a suitable axle 6, and within the extreme lower end of said axle there is formed an axle bearing or bore 7. Surrounding the axle 6 is a combined torsion and compression spring 8 having one end anchored to the whip-stick by means of the open staple 4,

as shown, and the other end provided with a suitable hook 9 for engaging a suitable abutment on the top proper, as hereinafter described. This spring 8, in its open or uncompressed state, is preferably of such length as to extend beyond the end of the axle portion 6, though this is not essential, since with some forms of tops it may be and sometimes is made shorter than said axle portion.

Referring to Figs. 1 and 2, 10 is a top having an axle bearing in the form of an axial bore 11 formed therein for the reception of the axle on the end of the whip-stick. As shown in Fig. 1, this top is provided with one or more upwardly projecting abutments 12 in the form of pegs which are engaged by the hooked end of the spring on the whip-stick. The spring 8 shown in Figs. 1 and 2 is a torsion spring. As shown in Fig. 2, however, a coil spring is located within the bore 11 of the top and the abutment 12' projects laterally from the axle portion of the whip-stick for engagement with the corresponding end of the spring.

Referring to Fig. 3, the whip-stick 1 is provided with an axle-bearing preferably in the form of a metal tube 13 which receives the axle 14 projecting upwardly from the top 10. In this case, the lash 2 is preferably secured to the whip-stick by being passed through a hole in the metal tube 13 and retained therein by a knot on the end of the lash. The spring in this case is a simple torsion spring and has its upper end anchored to the bearing of the whip-stick, its lower end projecting so as to engage suitable lugs or abutments 12 formed on the top, as in Fig. 1.

In Fig. 4, the spring 8', which is a torsion spring, surrounds the axle 14 projecting upwardly from the top and the axle bearing 13' on the whip-stick is large enough to slip over the spring and is provided with an abutment in the form of a notch 15 to engage the projecting end 16 of the spring.

Referring to Fig. 6, 10' is a top having an axle-bearing 11 with a whip-stick of the character illustrated in Fig. 5 in operative relation therewith. The spring 8 is shown under compression and under torsion with the hooked end 9 of the spring engaging one of the lugs or abutments 12 on the top. With the parts in this position, when the top is freed from the hand of the operator with the end of the whip-stick pointing downward, the spring not only imparts the initial spinning movement to the top upon the axle 6, but also by reason of the expansive action of the spring ejects the top from the axle rather than depending upon gravity to accomplish this result.

Fig. 7 shows the whip-stick of Fig. 5 in operative relation with a top having an axle 7' projecting upward therefrom and entering the axle-bearing 7 in the end of

the whip-stick. In this figure, the spring 8 is under torsion, but is only partially compressed, the compression, however, being sufficient to effectively eject the top when freed from the hand of the operator.

Fig. 8 shows the whip-stick end of Fig. 5 with the spring removed and with the whip-lash attached thereto, as in Fig. 5, that is, having the looped end thereof passed through the open staple 4, with the lash 2 in turn passing through the loop 5.

As shown in Figs. 9 and 10, the initial movement of the top may be obtained by tightly winding the whip-lash around the top, as for instance in the groove 18 formed therein, and then, while axle and bearing are still in engagement, giving the lash a quick horizontal pull, causing the top to rotate on the tip of the whip-stick like a wheel on its hub, before finally dropping to the floor spinning.

Particular attention is called to the fact that the whip-stick shown in Fig. 5 may be employed with a top which is provided with an axle-bearing or with an axle, whether said top is one designed to have the initial spinning action imparted thereto by a spring or by the whip-lash. It will thus be apparent that a child may have a variety of tops and may operate the same indiscriminately without any change of whip becoming necessary.

Briefly stated, the operation of the device is as follows: The stick is held with one hand and the top with the other and the two parts are moved relatively one to the other, the spring being thereupon put under tension. When sufficient tension has been had the operator releases the top whereupon either by the action of gravity, the compression and torsion springs, or both, the top is removed from the stick and commences to spin. If the action of gravity is relied upon to separate the top and the stick, the device is held in a substantially vertical position with the top downward. If a compression spring is used to effect the separation of the top and the stick, the device may be held, if desired, at an angle to the perpendicular, and depending upon the strength of the spring employed, this angle may be increased, as desired. If a very strong spring is employed, the device might be held substantially horizontal, and the top being ejected by the compression spring, would describe a trajectory similar to that of a projectile leaving the muzzle of a piece of ordnance.

One of the great advantages incident to the combination of elements described lies in the simplicity with which the parts may be operated, while at the same time maintaining the effectiveness of the operation. There is no necessity of changing hands on the whip-stick after the top has begun to

spin. The stick may be grasped by its handle end by one hand and the top placed in position onto the opposite end with the other hand, which opposite end also carries the lash, and the top wound up and freed while still leaving the handle end of the whip-stick firmly grasped by the right hand in the best position to immediately commence the whipping action to maintain the spinning movement of the top. Moreover, it will be observed that the entire construction while of the utmost efficiency is also of the utmost simplicity. The lash and the spring are securely united to the whip-stick by the fewest possible number of parts which in no way interfere with the ready manipulation of the lash during the whipping operation.

Having thus described my invention, what is claimed is:

1. The combination of a whip-stick and a top, one of which is provided with an axle-bearing and the other with an axle, and means on one of the parts for initiating the spinning movement of the top.

2. The combination of a whip-stick and a top, one of which is provided with an axle-bearing and the other with an axle, and means on one of the parts for simultaneously separating the parts and initiating the spinning movement of the top.

3. The combination of a whip-stick and a top, said parts having an axle and a bearing, one of which is on the top and the other on the lash end of the whip-stick.

4. The combination of a whip-stick and a top, one of which is provided with an axle-bearing and the other with an axle, and a spring anchored to one of the parts and reacting against an abutment on the other part to initiate the spinning movement of the top.

5. The combination of a whip-stick and a top, one of which is provided with an axle and the other with an axle-bearing, and a combined compression and torsion spring on one of said parts, for simultaneously separating the parts and initiating the spinning movement of the top.

6. The combination of a whip-stick and a top, one of which is provided with an axle-bearing and the other with an axle, with a spring anchored to the whip-lash end of the whip-stick and reacting against an abutment on the top.

7. The combination of a whip-stick and a top, one of which is provided with an axle-bearing and the other with an axle, with a spring anchored to one of the parts and reacting against the other part surrounding said axle when the parts are in operative relation.

8. The combination of a whip-stick and a top, said parts having an axle and a bearing, one of which is on the top and one on the

whip-stick, with a spring and a whip-lash secured to said whip-stick near one end thereof.

9. A whip-stick for tops having a lash and a top-propelling spring secured to one end portion thereof.

10. A whip-stick for tops having a lash and a combined top-spinning and top-ejecting spring secured to one end portion thereof.

11. A whip-stick for tops having a lash adjacent one end thereof, an axle between said lash and the end of the stick and a top-propelling spring anchored to said whip-stick and extending between said lash and the end of the stick.

12. A whip-stick for tops having a whip-lash, and one member of an axle and bearing formed on one end thereof between the lash and the end of the whip-stick.

13. A whip-stick for tops having a whip-lash secured thereto adjacent one end thereof, one member of an axle and bearing formed on said stick between the lash and

said end and a coiled spring anchored to said stick and surrounding said axle and bearing member.

14. The combination of a top having an axle-bearing, with a whip-stick having an axle on the whip-lash end thereof for entering said bearing, and a combined torsion and expansion spring anchored to one of said parts and reacting against the other.

15. A whip-stick for tops having a top-propelling spring secured near one end by an open staple passed through an eye on the spring and a lash secured to said stick by threading the lash through a loop therein which has first been passed through said open staple.

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

HANS KOWSKY.

Witnesses:

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