

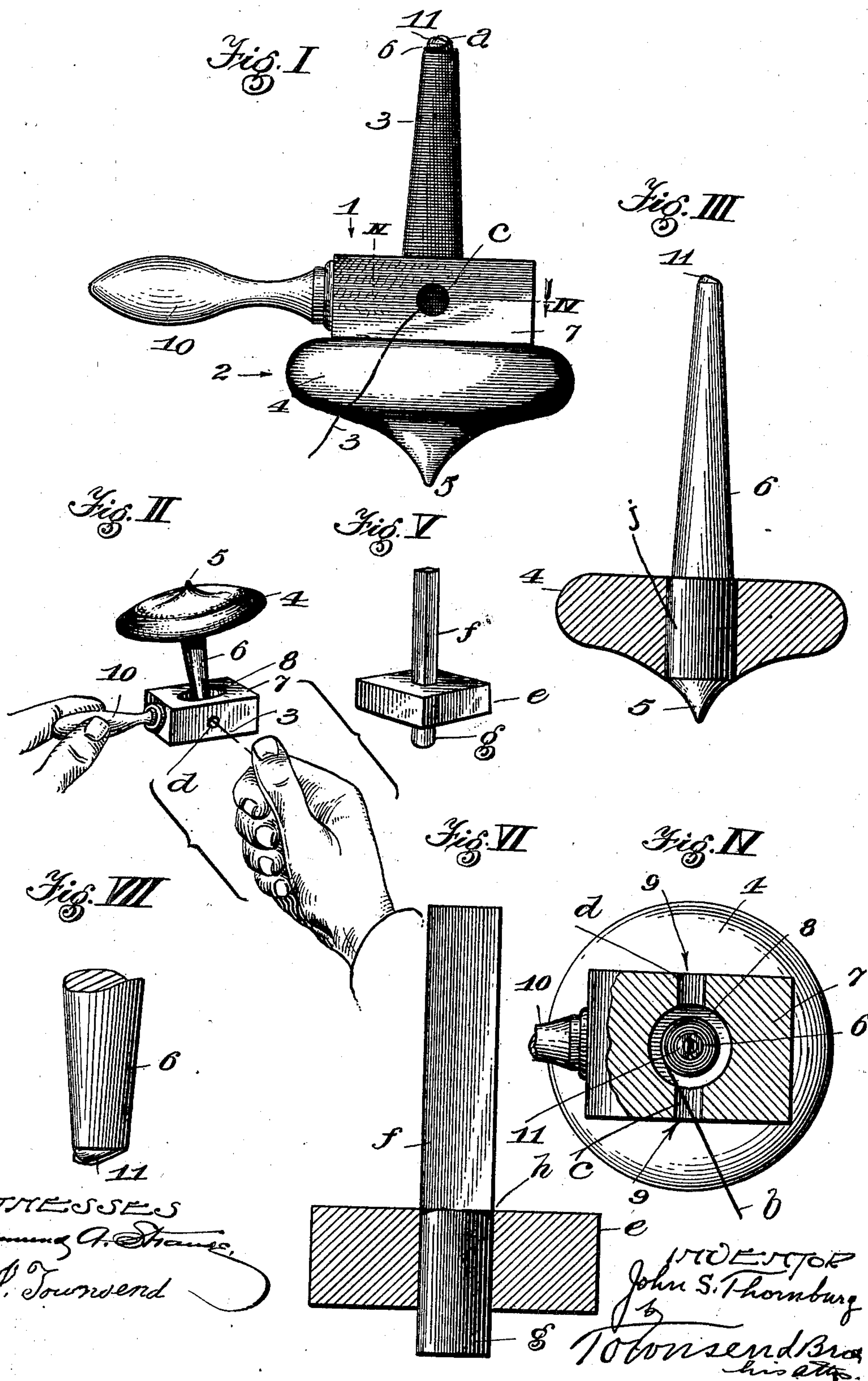
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J. S. THORNBURG.  
SPINNING AND DANCING TOY.

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NO MODEL.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## SPINNING AND DANCING TOY.

SPECIFICATION forming part of Letters Patent No. 719,276, dated January 27, 1903.

Application filed March 14, 1902. Serial No. 98,147. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. THORNBURG, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Spinning and Dancing Toy, of which the following is a specification.

An object of this invention is to provide a spinning top which can be made at a minimum price and which can readily be spun for a great length of time. This toy includes a novel construction of handle by which the top may be spun from either the right or left hand.

One object is to provide a top which will spin for a remarkably long time on one end with a steady motion and which when spun on the other end will spin with a dancing motion.

By this invention I provide a simple and easily-constructed top having its center of gravity close to the pivot-point and make provision for producing a very high speed of rotation.

The accompanying drawings illustrate the invention.

Figure I is a view of the toy ready for long-time spinning. Fig. II is a view of the top as it appears just before starting to spin in a dancing manner on the dancing end. Fig. III is an elevation showing the stem or spindle intact and the body of the top in vertical mid-section. Fig. IV is a plan view of Fig. I, showing the top-handle sectioned in part in a horizontal mid-plane, indicated by line IV. Fig. V is a perspective view of the block and stem prepared ready for turning in the process of manufacturing the top. Fig. VI is a view of the same on a scale corresponding to that in Figs. I, III, and IV, the block for forming the top-body being shown in mid-section. Fig. VII is an enlarged detail of the tip of a form of the spindle.

The toy comprises a handle 1, a spinning device 2, and a string or cord 3. The spinning device consists in a top furnished with a disk-shaped body 4 and having on one side of said body a short pivot-point 5, formed in an ogee with said body, and on the other side a long slender taper spindle 6. The purpose of the broad thin disk 4 and the short pivot-

point 5 is to bring the center of gravity close to the surface (not shown) upon which the top will be spun.

The purpose of the long taper spindle 6 is to provide room for a large number of turns of the cord 3 around the spindle without requiring a great length of cord and also providing for evenly increasing the speed of rotation as the cord is drawn in the act of spinning the top. Forming the pivot-point in an ogee with the body 4 brings the body close to the pivot, so that for long-time spinning the center of gravity is at such a point as to insure great stability. The spindle desirably has a large cylindrical portion *j*, which may be approximately equal in diameter to the thickness of the body, thus to give great strength to the bond between the spindle and body.

In practical use for long-time spinning the cord or string 3 will be wound around the long tapering spindle 6, beginning at the small end thereof and bending a portion of the cord over the tip of the spindle, as indicated at *a* in Fig. I.

The spindle may be long enough to allow seventy or eighty turns of the string or cord 3 around the spindle.

The handle 1 comprises a body 7, having intersecting bores 8 and 9; one of the bores being amply large to receive the base of the taper spindle, together with the string or cord 3 wound thereon, and the bore 9 being of small diameter, thus making two openings *c* *d* on opposite sides of the handle communicating with the spindle-receiving bore 8. The handle is furnished with a handpiece 10, which extends at right angles to the bore 9.

In practical use when the cord has been wound upon the spindle 6 the free end *b* will be passed through one of said openings *c* *d*, formed by the smaller bore 9. To spin the top for long spinning, drawing the string with the right hand the free end of said cord will be passed down through the string-receiving bore 8 and laterally through that portion of bore 9 which is farthest away from the person, while the handpiece 10 is held by the left hand. Then the spindle will be inserted down into bore 8 and the body 4 of the top brought to rest on the top of the handle, whereupon



the toy will be inverted to bring the body 4 into position underneath the body 7 of the handle. Then the cord will be drawn by the right hand, thereby giving a very high speed of rotation to the spinning top. The long even taper of the spindle 6 causes the speed of the spinning body to smoothly increase as the cord is drawn until the cord is entirely unwound from the spindle. Such speed can easily be brought to eighty or more revolutions per second, and when the cord is entirely unwound from the spindle the spinning body or top will become freed from the handle and will spin upon any smooth surface for an extremely-long period of time.

To spin the toy left-handed—that is to say, in order to draw the cord with the left hand—the free end of the cord will be passed through the portion *d* of the bore 9 instead of through the portion *c* thereof, as described, or if the handpiece 10 is held in the right hand while adjusting the cord the cord then may be passed through the hole *d*, (shown in Fig. II,) and then the toy will be inverted, thus bringing the free end of the cord into position to be drawn by the left hand.

In order to give a pleasing variety for the use of the toy, the point of the spindle 6 may be provided with an irregularity, projection, or cam 11, which is arranged at one side of the point of said spindle, and by appropriately adjusting and holding the parts the top may be made to spin upon the spindle in a dancing manner.

It is not necessary that the cam 11 should be very great, and in the drawings it is exaggerated somewhat for clearness of illustration.

To spin the top in a dancing manner, the cord will be wound on the spindle substantially in the way above described, and for spinning with right hand the free end of the cord will be brought through the portion *d* of the bore 9 which is next to the person, while the handpiece 10 is held in the left hand, and the operator will cant the handpiece to one side and will then draw the cord through the hole *d*, thereby giving the spinning body a high speed of rotation and at the same time drawing the spindle 6 and top-body 4 up, as indicated in Fig. II, and at the latter movement of the cord the handle 1 may be suddenly brought down, thereby freeing the spindle from the handle, whereupon the top will fall to the surface upon which it is to be spun and standing aslant thereon will begin to dance and will continue to dance until the rotation ceases or until the top may attain an upright position.

If the spindle 6 were perfectly smooth at the tip and the surface upon which it is spun were also smooth, the toy would spin on the spindle with a steady and smooth motion.

In order to construct the toy at minimum cost and in a durable and superior manner,

the same is formed of two members, as suggested in Figs. III, V, and VI. One of these members *e* is a block of suitable dimensions for forming the body 4 by turning the same in a lathe.

*f* is a stem, which originally may be square in cross-section from end to end, but which before assembling the parts will be turned for a space at one end, as indicated at *g* in said Figs. V and VI. The block *e* will be perforated by boring a centrally-located hole *h* therethrough, whereupon glue or some other suitable cement may be applied to the cylindrical portion *g* and the same inserted in the hole *h* and the glue allowed to set. Then the body thus formed, as shown in Fig. V, may be placed in the lathe and reduced to the form shown in Figs. I, II, III, and IV.

The under part of the block will be turned to form, with the lower end of portion *g*, the pivot-point 5 at the end of the axis of the stem.

The spindle 6 will be turned to slender taper, and the upper face of the block will preferably be left flat throughout its main portion, but rounding at the periphery, as shown in Figs. I, III, and IV. It is to be understood, however, that I do not limit myself as to the exact form of the portion 4. The same may be varied without departing from my invention in its main features. In practical manufacture a single stick (not shown) may be turned at intervals to produce cylindrical portions *g*, with intermediate unturned portions *f*, and after thus being turned the stick may be cut in any suitable manner into appropriate lengths for forming the spindles and pivot-points of the tops.

By the construction shown the center of gravity and the axis of the spindle may be made to perfectly coincide. The pivot-point 5 will be at the end of such axis, so that there will be no liability to wobble in spinning the top.

The spindle 6 may be made of very hard dense wood and the main body 4 of wood of a less expensive character, and a top of great durability and superior spinning qualities may thus be produced at a minimum cost.

The grain of the stick which forms the spindle runs lengthwise of the spindle, and the grain of the block which forms the main body for the top will have its grain running at right angles to the grain of the spindle.

The top may readily be spun for a considerable time by simply twirling the spindle between the fingers of the hand; but in order to get the most satisfactory results and also to produce a dancing motion and also to provide for spinning from either the right or left hand the handle 1 is used.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

A top furnished with a disk-shaped body



and having on one side of said body a long slender taper spindle the point of which is slightly irregular and formed as a cam in order to cause the top to dance when spun aslant on  
5 such point.

In testimony whereof I have signed my name to this specification, in the presence of

two subscribing witnesses, at Los Angeles, California, this 8th day of March, 1902.

JOHN S. THORNBURG.

Witnesses:

JAMES R. TOWNSEND,  
JULIA TOWNSEND.