

No. 698,286.

Patented Apr. 22, 1902.

J. A. IRVING.

TOY TOP.

(Application filed May 13, 1901.)

(No Model.)

FIG. 1.

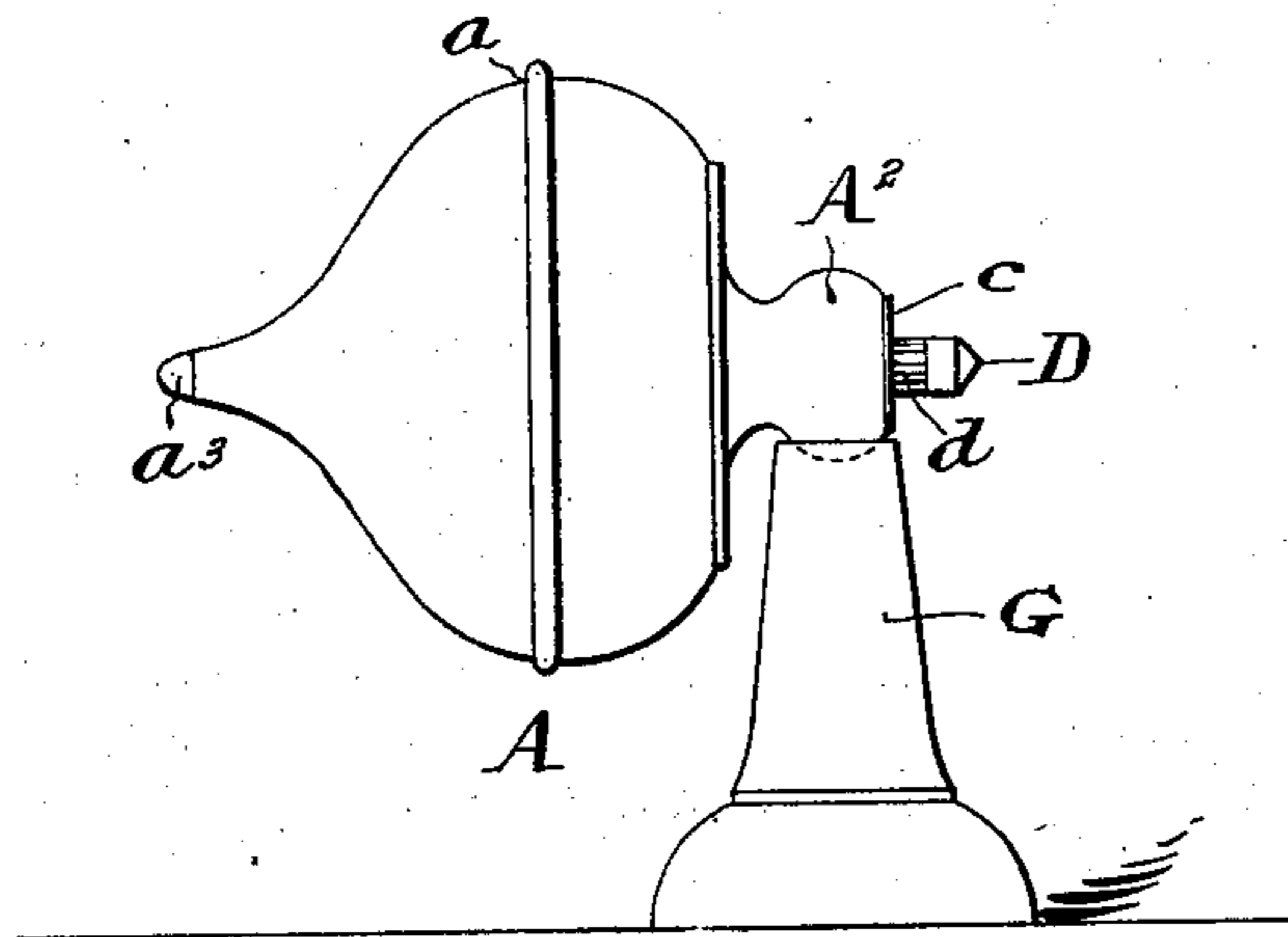


FIG. 2.

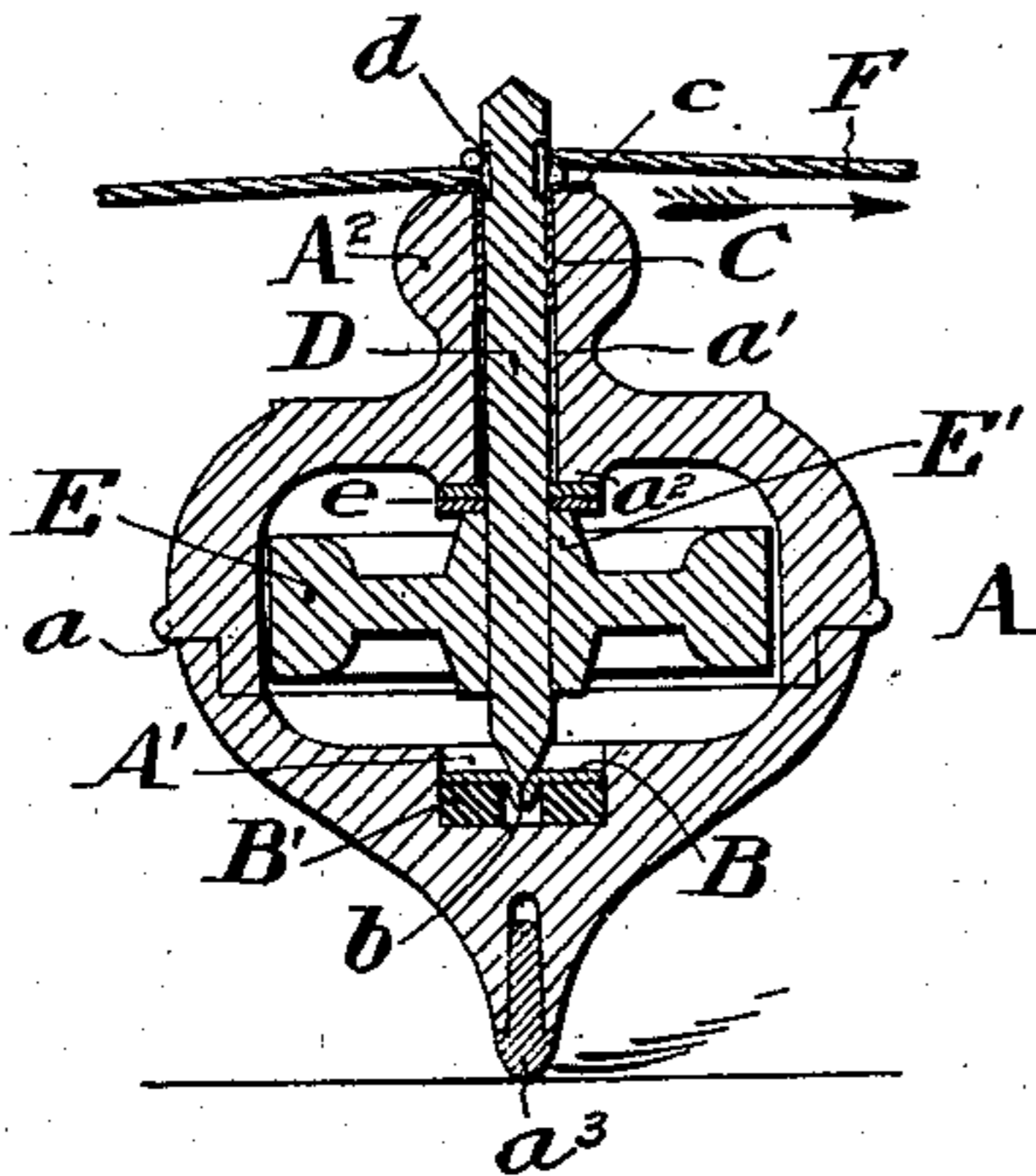


FIG. 3.

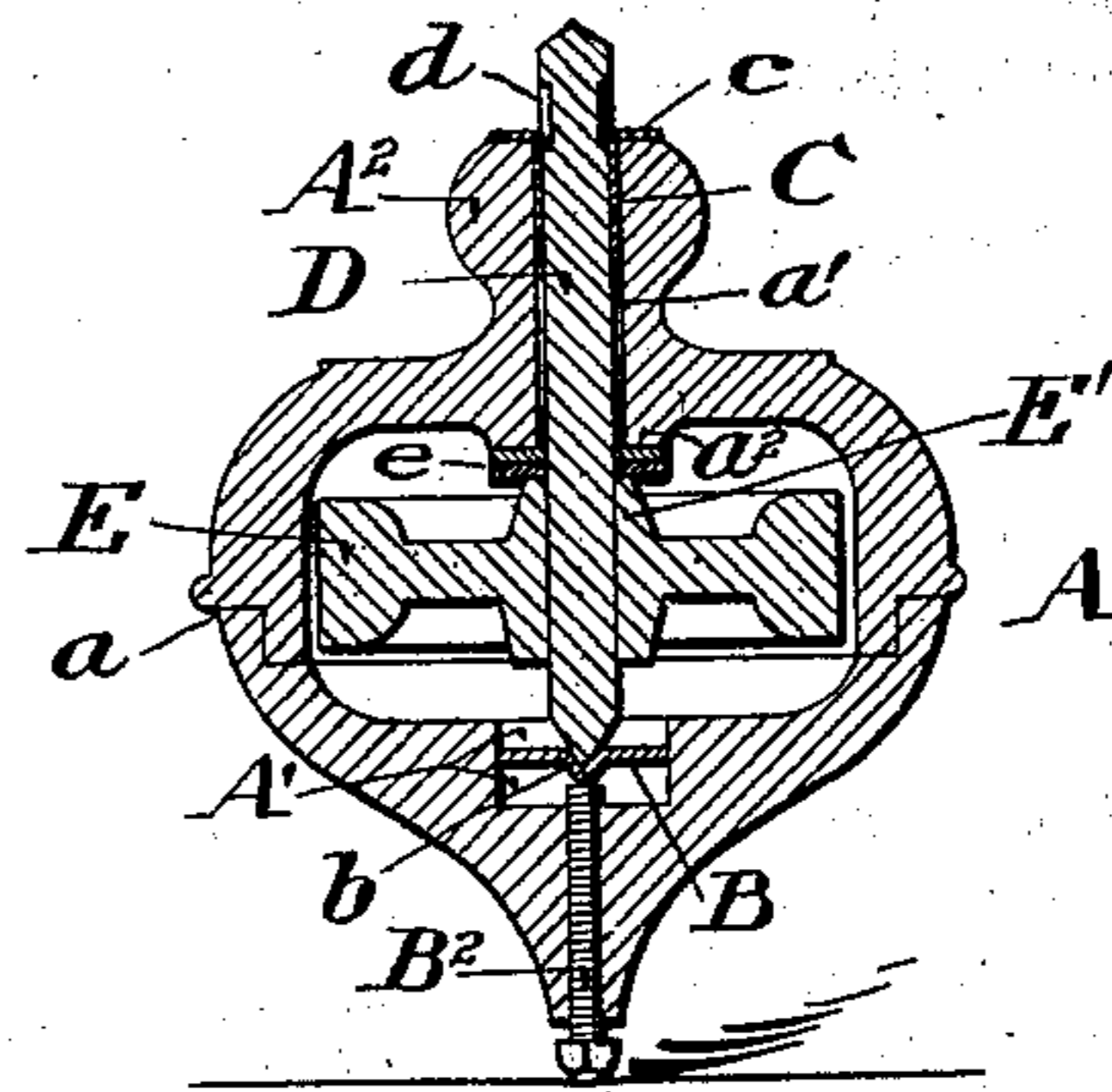
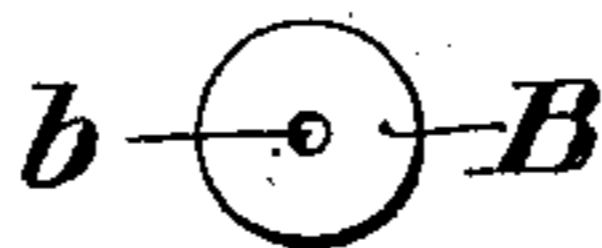


FIG. 4.



FIG. 5.



WITNESSES:

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TOY TOP.

SPECIFICATION forming part of Letters Patent No. 698,286, dated April 22, 1902.

Application filed May 13, 1901. Serial No. 59,895. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. IRVING, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Toy Tops, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to toy tops of the class comprising an outer casing, in which is mounted a balance-wheel provided with a spindle projecting exterior to said casing and arranged to be rotated independently of the casing by means of a driving-cord looped upon the projecting extremity of said spindle.

My invention comprehends the various novel features of arrangement and construction hereinafter more definitely specified and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a top conveniently embodying my invention and showing one operation of which it is capable. Fig. 2 is a vertical sectional view of the top shown in Fig. 1. Fig. 3 is a vertical sectional view of a top, showing a modified form of my invention. Fig. 4 is a plan view of the corrugated extremity of the wheel-spindle which coöperates with the driving-cord. Fig. 5 is a plan view of the bearing-plate shown in section in Figs. 2 and 3.

Referring to said figures, A is the outer casing, conveniently formed of wood in two sections, which are permanently secured together at *a*.

A' is a recess in the lower casing-section, in which is fitted the plate B, provided with the step-bearing *b*. The upper section is provided with the bushing C, whose flange *c* overlies the knob A² at the top of said section. Said bushing is forced within the journal-opening *a'* in the upper section and forms a bearing for the spindle D, which latter is fixed in the balance-wheel E and stepped in the bearing *b* of the plate B. Said wheel E is provided with the hub E', opposed to the bearing-shoulder *a*² in the top of the casing A, which serves to limit the extent of projection of the spindle D, the bearing-washers *e* being interposed between said hub and said shoulder. The free extremity of said spindle D, projecting through the casing A, is provided with corrugations *d*, which serve to

frictionally engage the driving-cord F, by which the spindle D and wheel E may be rotated within the casing independently thereof. It is to be noted that the independent relation of the casing A and the spindle and wheel contained therein permits the casing to be handled without interference with the spinning operation, the casing remaining stationary until it is freed from the hand of the operator.

The spinning operation is conveniently effected while the casing is grasped in one hand of the operator by placing a bight or loop of the cord around the corrugated extremity of said spindle, as indicated in Fig. 2, and drawing said cord to its end in engagement therewith, a slight tension being afforded for the free end of the cord by permitting it to pass between the fingers of the hand containing the top. The spindle and wheel having been spun by the application of the driving-cord, as aforesaid, the top will continue to spin when set upon the peg *a*³ at the bottom thereof or upon the opposite extremity of the spindle D, or, as indicated in Fig. 1, the knob A² may be rested in the depression at the top of the standard G, in which position the entire top will have a planetary motion around said standard G, owing to the motion imparted to the casing A from the rotating wheel within it.

It is to be noted that the flange *c* upon the bushing C serves to protect the wooden casing A from wear due to the friction of the driving-cord.

In the form of my invention shown in Fig. 2 the bearing-plate B is conveniently supported upon the resilient cushion B', which is so proportioned that the parts are maintained in proper adjustment without rattling. Said cushion B' is so arranged as to yield slightly, and thus prevent damage to the top when it is accidentally dropped upon its peg *a*³.

In the form of my invention shown in Fig. 3 the cushion B' and peg *a*³ are dispensed with and the bearing-plate B is adjustably supported upon the set-screw B², which is entered in threaded engagement with the lower section of the casing and serves both to determine the proper relation of the spindle in its bearings and also as a support upon which the top may be spun. It is to be noted that the set-screw B² not only serves to accurately

adjust the parts for free rotation when first assembled, but may also be subsequently re-set and adjusted to compensate for wear of the spindle in its bearings.

5 I do not desire to limit myself to the precise details of construction and arrangement of the parts herein set forth, as it is obvious that various modifications may be made there-
10 in without departing from the features of my invention.

I claim—

1. In a toy top, the combination with an outer casing; of a balance-wheel arranged to rotate within said casing independently there-
15 of; a spindle fixed in said wheel and extending exterior to said casing; a recess in the interior bottom wall of said casing; and an adjustable bearing-plate fitted in said recess and provided with a step-bearing for said spindle,
20 substantially as set forth.

2. In a toy top, the combination with the outer casing; of a balance-wheel arranged to rotate within said casing independently there-
25 of; a spindle fixed in said wheel and extending exterior to said casing; a recess in the interior bottom wall of said casing; a bearing-plate fitted in said recess in engagement with the inner extremity of said spindle; and a set-screw entered through said casing, within
30 said recess, in adjustable relation with said bearing-plate, substantially as set forth.

3. In a toy top, the combination with the outer casing A; of the balance-wheel E, arranged to rotate within said casing independ-
35 ently thereof; the spindle D, fixed in said wheel and extending exterior to said casing; the corrugations *d*, upon the extremity of said spindle exterior to said casing and arranged to coöperate with a driving-cord looped there-
40 on; the recess A', in the bottom of said casing; the plate B, fitted in said recess and provided with the step-bearing *b*, for said spindle D; the bearing-bushing C, surrounding said spindle at the top of said casing; and the flange
45 *c*, upon said bushing exterior to said casing, substantially as set forth.

4. In a toy top, the combination with an outer casing; of a balance-wheel arranged to rotate within said casing independently there-
50 of; a spindle fixed in said wheel and extending exterior to said casing, in rotatable relation with the latter; corrugations upon the extremity of said spindle, exterior to said casing, arranged to coöperate with a driving-
55 cord looped thereon; a bearing-bushing sur-

rounding said spindle at the top of said casing; and, a metal flange at the top of said casing, arranged to receive the wear of the driving-cord, substantially as set forth.

5. In a toy top, the combination with an outer casing; of a balance-wheel arranged to rotate within said casing independently there-
60 of; a spindle fixed in said wheel and extending exterior to said casing in rotatable relation with the latter; and, a series of corruga- 65 tions upon said spindle exterior to said casing, terminating short of the end of said spindle and arranged to engage a driving-cord looped upon the latter, substantially as set forth. 70

6. In a toy top, the combination with an outer casing; of a balance-wheel arranged to rotate within said casing independently there-
75 of; a spindle fixed in said wheel and extending exterior to said casing in rotatable relation with the latter; a series of corrugations upon the free extremity of said spindle exterior to said casing and arranged to engage a driving-cord looped thereon; and, a bearing-
80 plate in the bottom of said casing in engagement with the inner extremity of said spindle, substantially as set forth.

7. In a toy top, the combination with an outer casing; of a balance-wheel arranged to rotate within said casing independently there-
85 of; a spindle fixed in said wheel and extending exterior to said casing, in rotatable relation with the latter; and a series of corrugations upon the free extremity of said spindle exterior to said casing, arranged to engage a driving-cord looped thereon, substantially as set forth. 90

8. In a toy top, the combination with the outer casing; of a balance-wheel arranged to rotate within said casing; a spindle fixed in
95 said wheel and extending exterior to said casing; a bearing-bushing seated in the upper part of said casing; a bearing-plate in the bottom of said casing in engagement with the inner extremity of said spindle; and a set-
100 screw entered through said casing in adjustable relation with said bearing-plate, substantially as set forth.

In testimony whereof I have hereunto signed my name, at Philadelphia, Pennsylv-
105 ania, this 9th day of May, 1901.

JAMES A. IRVING.

Witnesses:

ARTHUR E. PAIGE,
E. L. FULLERTON.