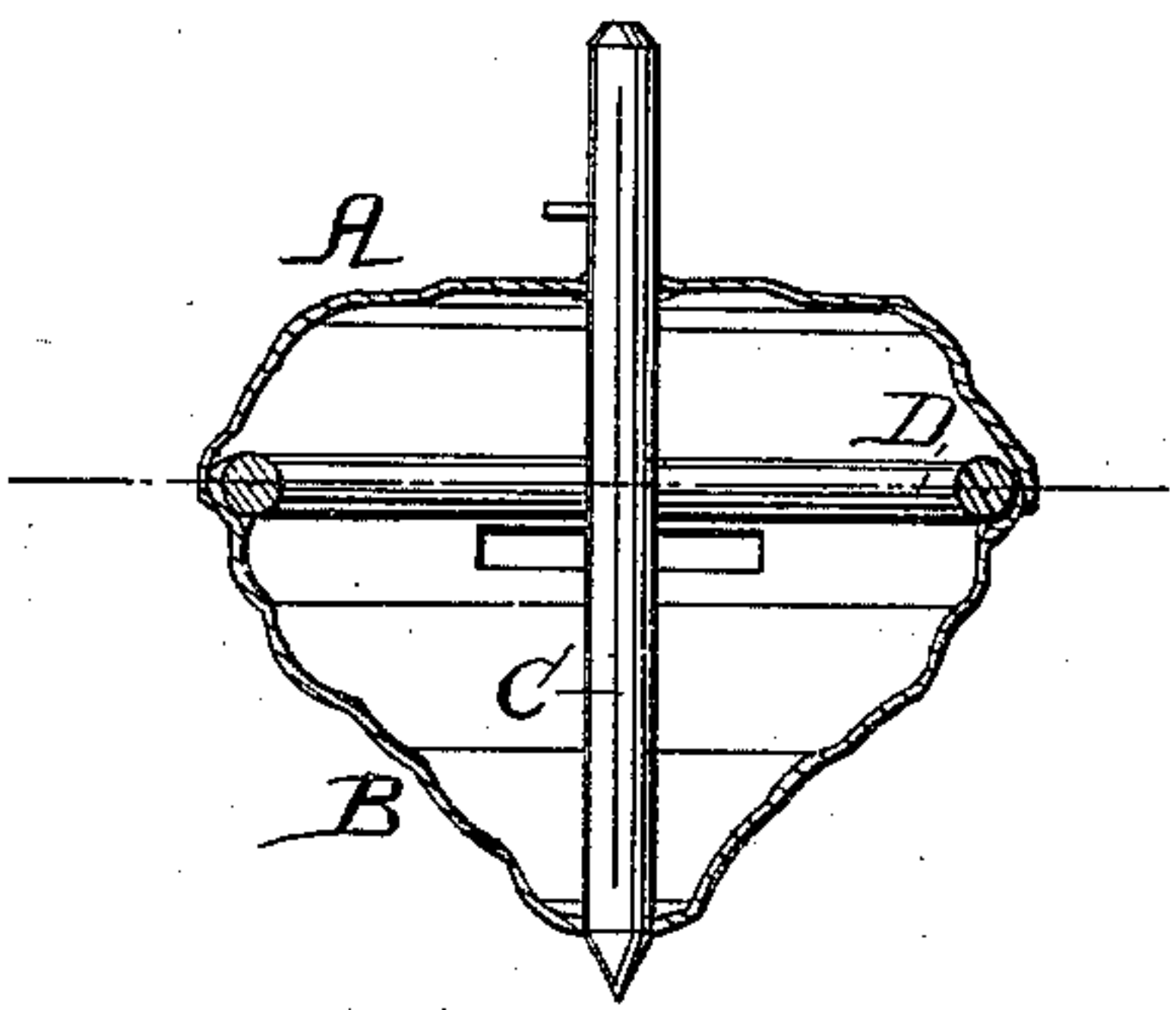
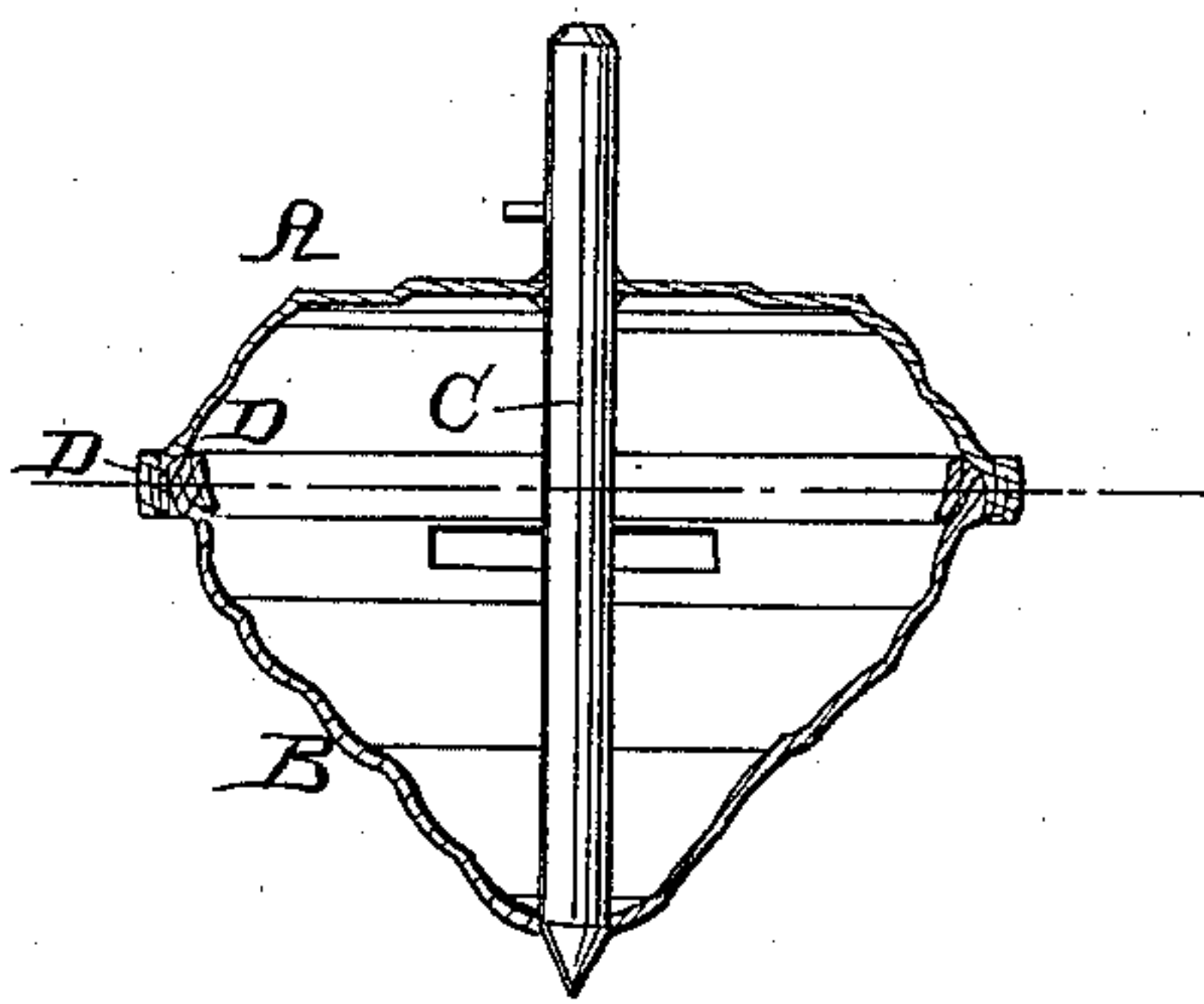


*R. Hoodley,*  
*Spinning Top,*  
*Nº 63,891, Patented Apr. 16, 1867.*

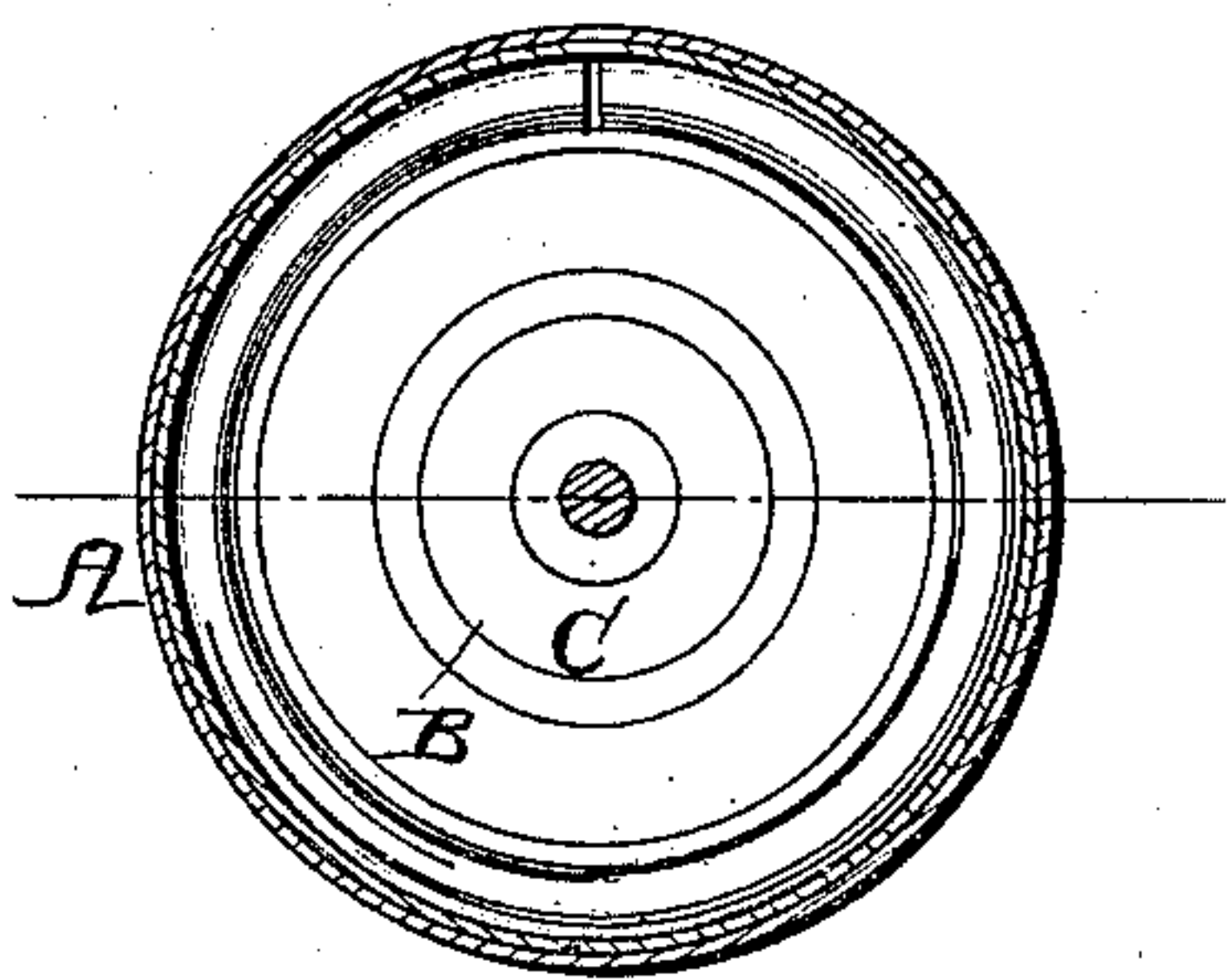
*Fig; 1.*



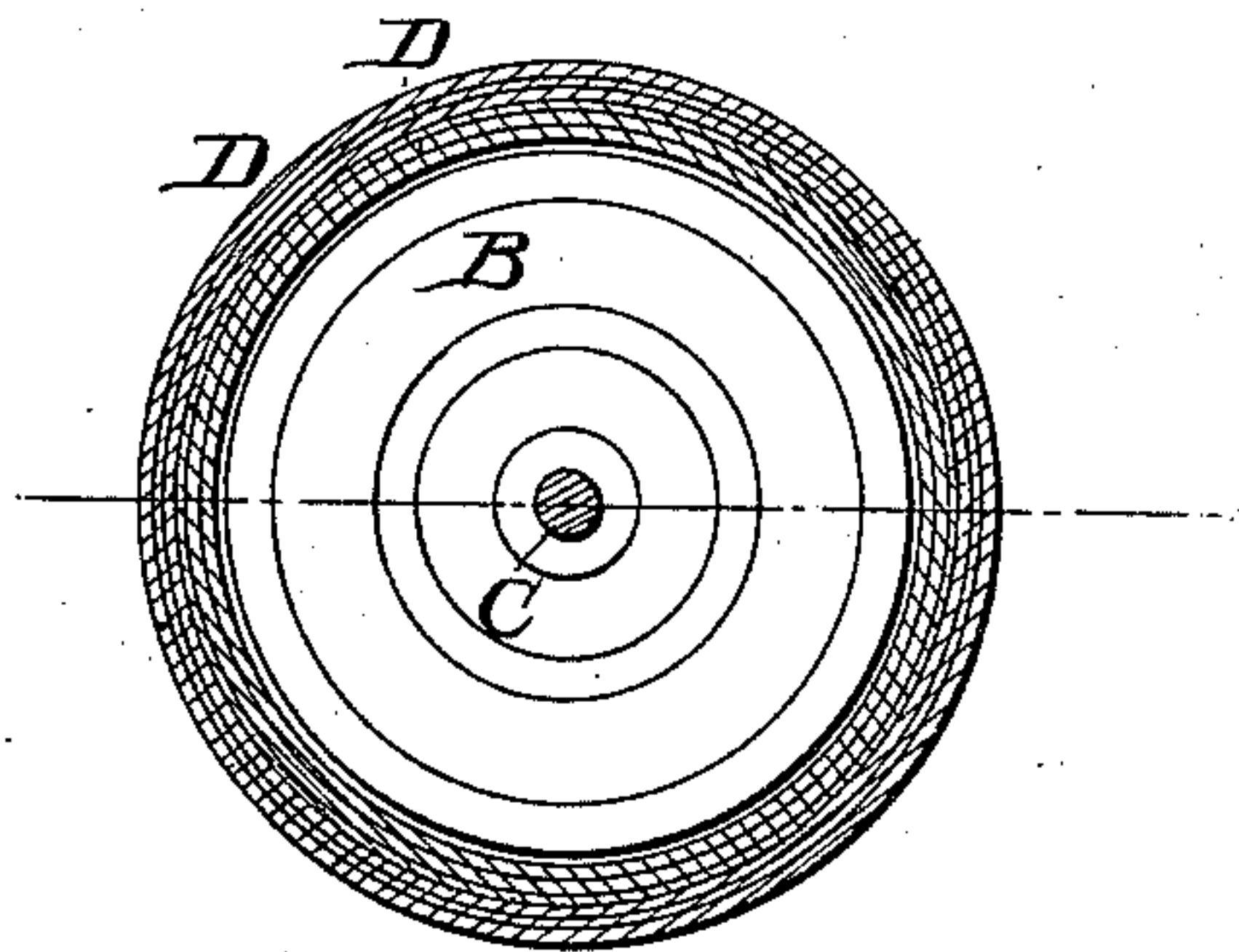
*Fig; 3.*



*Fig; 2.*



*Fig; 4.*



*Witnesses;*  
*Emil Vapnark*  
*J. C. Dey*

*Inventor;*  
*Robert Hoodley*  
*by his attorney*  
*J. D. Peterson*

# United States Patent Office.

ROBERT HOADLEY, OF ANSONIA, CONNECTICUT, ASSIGNOR TO N. C. STILES, S. S. WILCOX,  
E. N. CROCKER, F. O. TUCKER, AND W. W. TUCKER, OF WEST MERIDEN, CONN.

*Letters Patent No. 63,891, dated April 16, 1867.*

## IMPROVEMENT IN SPINNING-TOPS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT HOADLEY, of Ansonia, in the county of New Haven, in the State of Connecticut, have invented certain new and useful Improvements in Spinning-Tops; and I do hereby declare that the following is a full and exact description thereof.

My invention relates to tops which are formed of sheet metal or other very thin and strong material, and consists in introducing ballast or weight in excess of the ordinary weight of the material, distributed around the periphery of the top on the inside at or near the place where the diameter of the top is the greatest.

The great advantages accruing from the use of sheet metal as the material for tops are very widely known and universally appreciated. The material can be spun into elegant forms with but slight labor, and the expense of the material, and of the entire top produced thereof, is but slight, while the beauty and durability of the toy are very great; and the whistling effect due to the action of the air through the holes provided for the purpose in the thin material is finer than that in cheaply constructed wooden toys of this character.

The effect that the material of sheet-metal tops attains at the surface, instead of filling the whole mass, or extending inward to any considerable extent, is generally in its favor, but the total weight of the material near the periphery is not sufficient without my invention to maintain the motion of the top for a great length of time. I experimented to overcome this difficulty, and ultimately arrived at a degree of perfection by introducing a load for the purpose, which I designate as ballast, which causes the top to spin for a period longer by more than one hundred per cent. than before. I prefer to introduce the ballast in the form of a very nearly complete ring of stout wire, and to secure it in the top at the point where the diameter is greatest, partly by its own elasticity tending to enlarge its diameter, and partly by soldering.

I will proceed to describe what I consider the best means of carrying out my invention, and will afterwards designate the point which I believe to be new. The accompanying drawings form a part of this specification.

Figure 1 is a central vertical section, and

Figure 2 is a horizontal section, on the line S S, in fig. 1, showing the best form.

Figures 3 and 4 are corresponding sections of another form.

Similar letters of reference indicate like parts in all the figures.

A is the upper half and B the lower half of a sheet-metal top. C is a central stem, which may be provided with any approved means for receiving the rotary motion. D is a wire of tinned iron, which is bent around into nearly a complete circle of a little larger diameter than the largest diameter of the interior of the top. It is cut off in such lengths as will allow it to be sprung together and to be introduced into the top. It is introduced in that condition and allowed to extend, by its elasticity, into intimate contact with the interior surface. It is then soldered at one or more points. The two parts A and B are then applied together and united by solder or other approved means, and the ballast of the top is then completed. The stem C may be dispensed with by adopting some of the approved plans for imparting motion. My invention does not depend on the stem, but may be used with any style of sheet-metal top.

Figs. 3 and 4 show another mode of ballast. In this a quantity of surplus metal is left on the edges of one or both the parts A and B, and this metal is folded over by spinning or otherwise, so as to accumulate considerable weight, which is extra or additional to that of the metal required to form the top. The effect of this construction is the same to the extent that the weight is added thereby to the top at the right point. I prefer the mode of ballast shown in the figures.

The effect of my invention is to increase the inertia and momentum of the top. It increases the resistance which the top offers to the spring or other device which sets the toy in motion, and it to that extent is an evil, though it is an evil so slight as to be of no importance. It also increases the momentum or the power of the toy to continue its motion for a long period, and in that respect it is an advantage of very great importance in practice. By being uniformly distributed at the zone of greatest diameter, it adds to the efficiency of the top in the highest degree which it is possible to attain with an equal amount of weight and without causing the top to wobble or run unsteadily. My top, properly constructed as above described, is the most efficient, attractive, and durable toy of the kind which is known to me.



Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

I claim ballasting the thin top A B, by the addition of the extra weight D, or its equivalent, distributed around the periphery at or near the zone of greatest diameter, substantially as and for the purpose herein specified.

ROBT. HOADLEY.

Witnesses:

SYLVESTER BARBOUR,  
JOHN LINDLEY.