E. D. MACKINTOSH.

Top-Spinning Device.

No. 199,559. Patented Jan. 22, 1878.

FIG. 1.

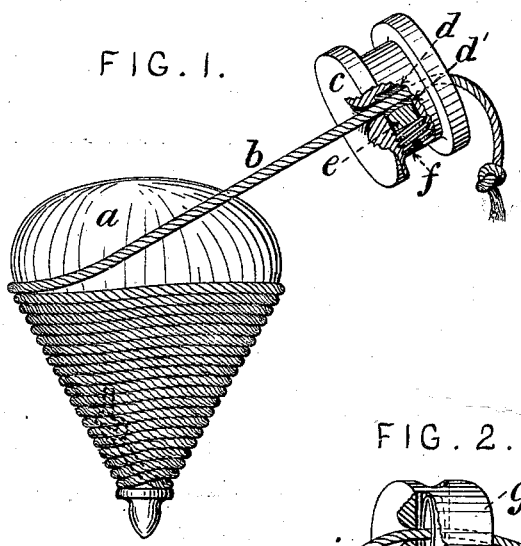
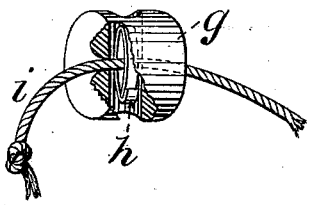


FIG. 2.



WITNESSES:

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IMPROVEMENT IN TOP-SPINNING DEVICES.

Specification forming part of Letters Patent No. **199,559**, dated January 22, 1878; application filed October 19, 1877.

To all whom it may concern:

Be it known that I, EDWARD DAMON MACKINTOSH, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful improvements in the device commonly used for operating the toy known as a "top."

This toy is simply a cone with a nearly hemispherical base, and is generally of wood, except at the apex, which is preferably of metal, and is known as the "peg."

If such a cone, while rapidly rotating around its axis, be dropped apex lowermost upon a plane surface, the action of natural laws will cause the axis to assume, and retain during the continuance of the rapid rotation, a vertical position above the apex. In other words, the top will stand upon its peg. The result will be the same even though the axis of the cone at the moment of dropping be considerably inclined from the vertical.

To impart such a motion to the top is the object of the device to which my invention relates, and which commonly consists of a cord, about four feet in length, provided at one end with a button.

In using this device, the top and the free end of the cord are held in one hand, while the fingers of the other grasp the cord near the same end, and, commencing at the peg, wind the cord in a continuous spiral on the top, the cord being forced to slide between the fingers in its passage thereto.

The button is then placed at the back of the fingers, a short length of cord extending between two of them, and connecting it with the spiral on the top, which is held within the hand.

If the top be then thrown violently from the hand, it will be caused to rotate rapidly in freeing itself from the cord, one end of which will be retained in the hand by the button at the back of the fingers.

Should it fall upon the peg, as it will if properly thrown, it will remain standing thereon, as hereinbefore described. But, to insure a successful result, it is found to be necessary to wind the cord very tightly upon the top, in order that the friction between top and cord may be sufficient to prevent the latter from slipping from the former, in which case the top would not be caused to rotate.

In the device described above, the necessary tightness of winding is produced by pinching the cord tightly between the fingers, through which it is drawn in its passage to the top. Such pinching produces friction, which, by opposing the passage of the cord, produces the desired result; but such a practice, when frequently repeated, has one very objectionable result—which is, that the fingers are made very sore by the oft-repeated passage of the cord between them.

To provide a device which shall not be subject to such a disadvantage is the object of my invention, which consists of a cord provided with a friction clutch or brake that may be slipped from end to end thereof, and which, besides acting as a perfect substitute for the button above described, acts also, in lieu of the fingers, to pinch the cord. By so doing it opposes, but does not prevent, any sliding motion of itself along the cord.

This device is used in the same manner as the one described above, with the exception that the fingers of the winding-hand, instead of grasping the cord tightly and causing it to slip through them to produce the necessary friction, grasp the brake, and produce the friction by causing the cord to slip through it.

In the accompanying drawings, forming part of this specification, I have shown, in Figure 1, and in combination with a top, *a*, and cord *b*, a brake, consisting of the block *c*, (part of which is represented as being broken away to expose the internal arrangement,) metal plates *d* and *d'*, for resisting the wearing action of the cord, rubber spring *e*, for pressing the plate *d'* forcibly against the cord, and screw *f*, for opposing the action of the spring *e* and regulating the tension of the same. This brake, being adjustable, is more reliable than that shown in Fig. 2, which consists simply of a block, *g*, (partly broken in the drawing,) containing an elliptic spring, *h*, which binds the cord *i*; but as it cannot be manufactured at so small a cost, I prefer the latter for general use, but I do not confine myself to either

of these forms. Suitable brakes may be made in numerous other ways—for instance, by causing the cord to pass through a sinuous passage in the block, or several times around a bar fixed in the same, or between two jointed blocks, which would bind the cord when pressed together by the fingers. Therefore,

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a top, a cord provided with a friction clutch or brake, substantially as described, and for the purposes specified.

2. A top-spinning-device consisting of a cord provided with a friction clutch or brake contained within a button, substantially as described, and for the purposes specified.

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Witnesses:
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