

No. 669,185.

Patented Mar. 5, 1901.

J. W. SEE.
WINDMILL TOY.

(Application filed May 14, 1900.)

(No Model.)

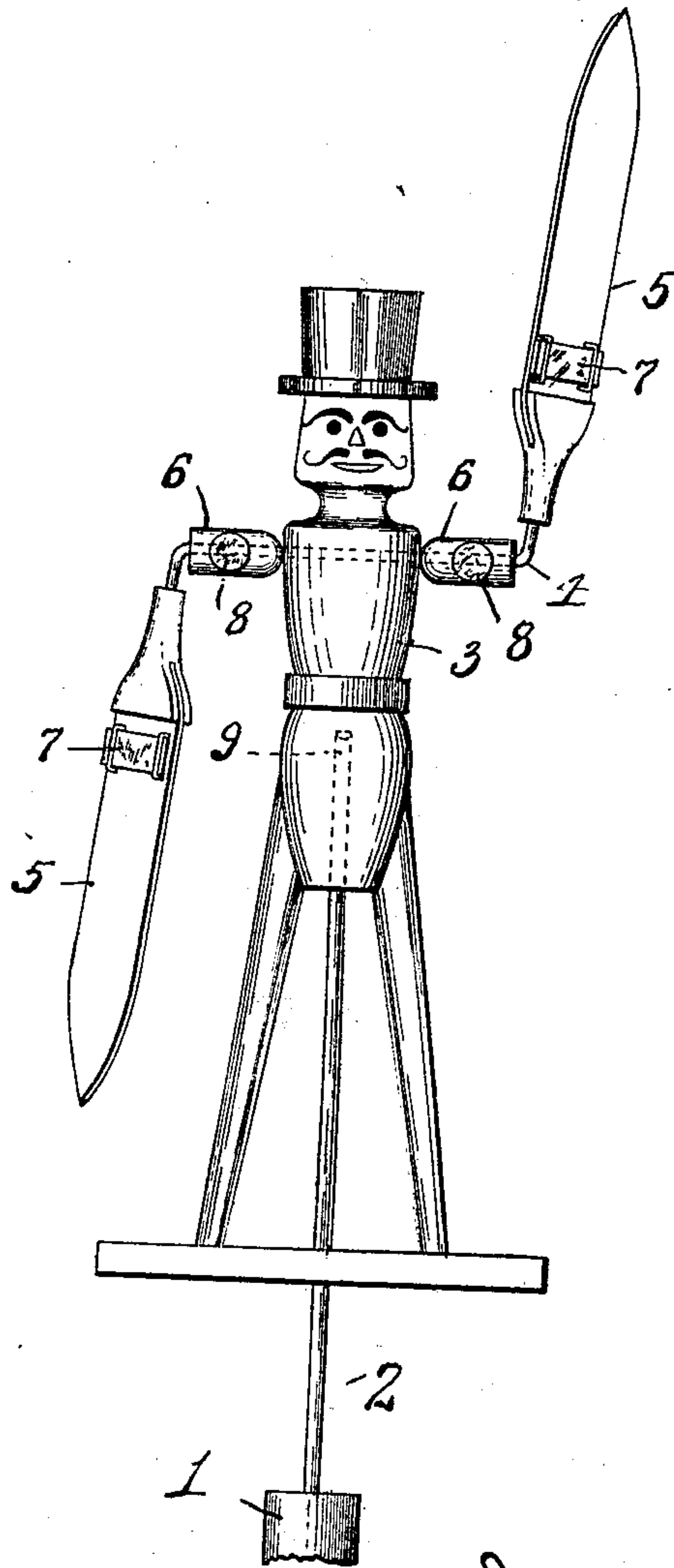


FIG. 1.

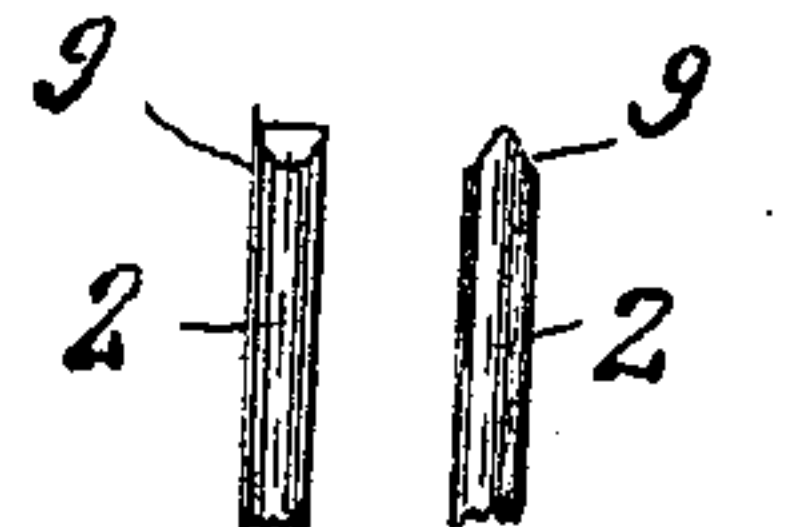


FIG. 2.

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UNITED STATES PATENT OFFICE.

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WINDMILL TOY.

SPECIFICATION forming part of Letters Patent No. 669,185, dated March 5, 1901.

Application filed May 14, 1900. Serial No. 16,628. (Nomodel.)

To all whom it may concern:

Be it known that I, JAMES W. SEE, a citizen of the United States, residing at Hamilton, Butler county, Ohio, (post-office address Hamilton, Ohio,) have invented certain new and useful Improvements in Windmill Toys, of which the following is a specification.

This invention, pertaining to improvements in windmill toys, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of a toy embodying the present improvements, and Fig. 2 front and side elevations of the upper end of the supporting-spindle.

In the drawings, 1 indicates any fixed support on which the toy is to be mounted; 2, a vertical spindle fixed in the support; 3, the swiveling body-piece mounted to turn upon the spindle 2 and finding its vertical support in the upper end of that spindle, the body-piece in the present case being, as a mere matter of fancy, given the form of a grotesque human figure standing on a base-piece, the spindle passing up through the base-piece and into a bearing-hole in the body, the roof of the hole in the body resting upon the upper end of the spindle; 4, a spindle journaled horizontally across body-piece 3, so as to rotate freely therein; 5, flat arms or vanes, one secured to each outer end of horizontal spindle 4 and projecting radially therefrom in opposite directions and accurately balanced upon spindle 4 as an axis, the transverse planes of these arms being set obliquely with reference to the axis of spindle 4 in such manner that wind striking the outer face of one of the arms will tend to turn the pair of arms in a certain direction, and the same current striking the inner face of the other arm will tend to turn the arms in the same direction, the setting of the arms being, in effect, the same as would be proper if both arms projected oppositely from one end of spindle 4; 6, hubs upon spindle 4 at each side of body-piece 3, the preference being that these hubs fit rather loosely upon spindle 4, so that if their inner ends happen to be free of contact with body-piece 3 the hubs will turn with the spindle, while if the inner ends of the hubs

happen to make sufficient frictional contact with the body-piece they will remain stationary or will at least turn irregularly; 7, mirrors or reflecting-surfaces carried by the arms 5; 8, mirrors or reflecting-surfaces carried by the hubs 6, and 9 the upper end of vertical spindle 2, the same being of non-circular form, Fig. 2 illustrating the end as having the form of a blunt wedge.

When the wind strikes the figures sidewise, it causes the arm system to rotate upon the axis of horizontal spindle 4 with a rapidity dependent upon the velocity of the wind and in a direction dependent upon which side of the figure receives the wind. During the rotation of the arm system the mirrors catch the sunlight and flash it to a distance.

Owing to the oblique arrangement of the mirrors 7 upon the spindles 4, the zone of the reflected area, through which the mirrors act, is greatly increased over any radial or other disposition of the mirrors upon the spindles and the signaling effect of the invention thereby greatly increased.

It is requisite that such a toy as this should be capable of swiveling on a vertical axis in order to be brought properly to the wind. If the body-piece be capable of swiveling with extreme freedom on the vertical spindle, then owing to the offset disposition of the two arms there is likelihood of the toy swiveling out of the wind almost as soon as it meets the wind, the result being that the figure takes a proper position, whereupon the arms begin to rotate, the figure then swiveling, so that the arms cease to rotate or begin to turn in the opposite direction. What is wanted is that the figure shall take a proper position to receive the wind and then set to work vigorously and as continuously and regularly as possible swing the arms, changing front only when a decided change of wind should dictate such change and then making it in a decided manner. It has not been found practicable to apply any friction clamping system to check the freedom of swiveling, as it requires too delicate adjustment and will not be efficient in varying weather and is subject to much wear. The non-circular upper end of vertical spindle 2 supports the load of the entire moving system, and the friction thus created will re-

quire decided changes in the direction of the wind to cause the figure to swivel. With the upper end of the vertical spindle made circular it is found that the behavior is erratic and
5 that in many cases the effect of the wind is to produce only a swiveling of the figure without any complete or satisfactory rotation of the arm system upon the horizontal axis.

I claim as my invention—

10 1. The combination, substantially as described, of a supporting-piece, a body-piece carried thereby, and a rotary spindle mounted in the body-piece having a mirror affixed thereto oblique to the plane of revolution.

15 2. The combination, substantially as set

forth, of a fixed vertical spindle having a frictional-surfaced upper end, a body-piece journaled on said spindle and having a bearing-hole engaging the upper cylindrical portion of said spindle and having its upper end
20 engaging the upper end of the spindle and thereby supporting the weight of said body-piece, a horizontal spindle mounted for rotation in the body-piece, and a pair of obliquely-set arms or vanes secured to said horizontal
25 spindle.

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