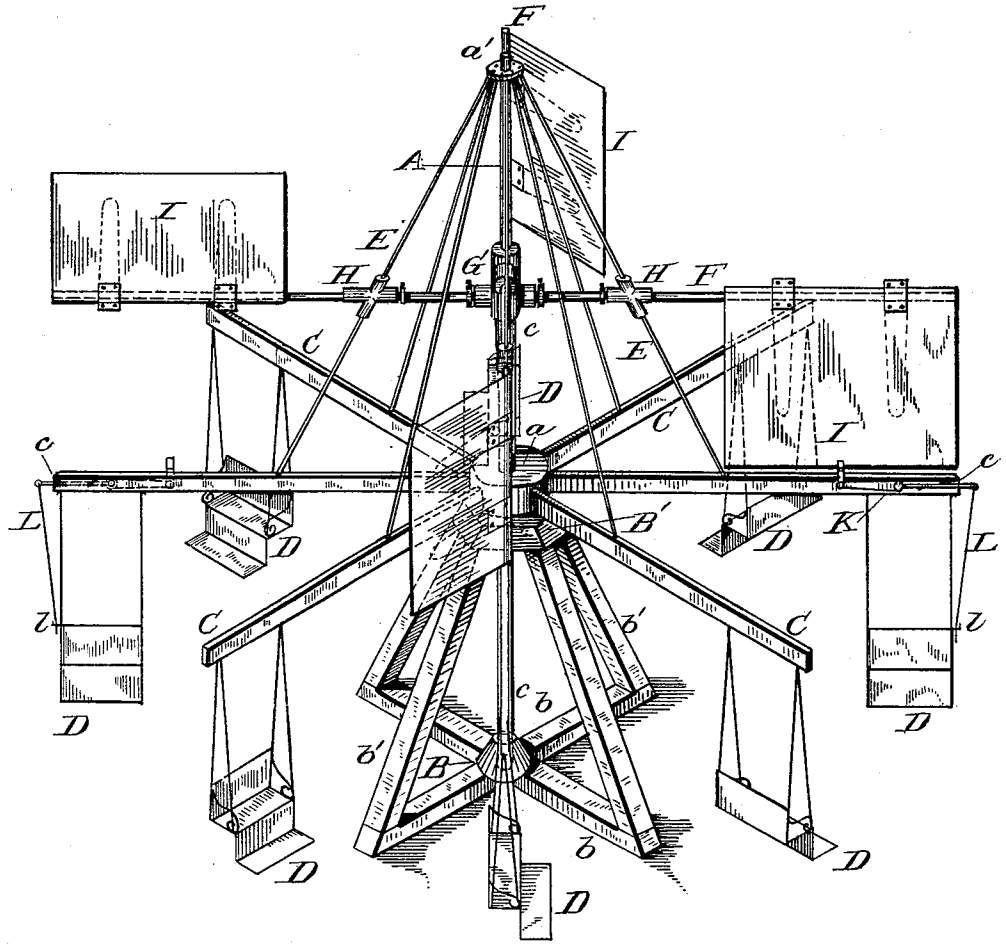
(No Model.) 2 Sheets—Sheet 1.

T. J. SIMPSON.

WIND PROPELLED SWING.

No. 386,358. Patented July 17, 1888.

Fig. 1.



Witnesses.
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N. D. Goodale.

Inventor.
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

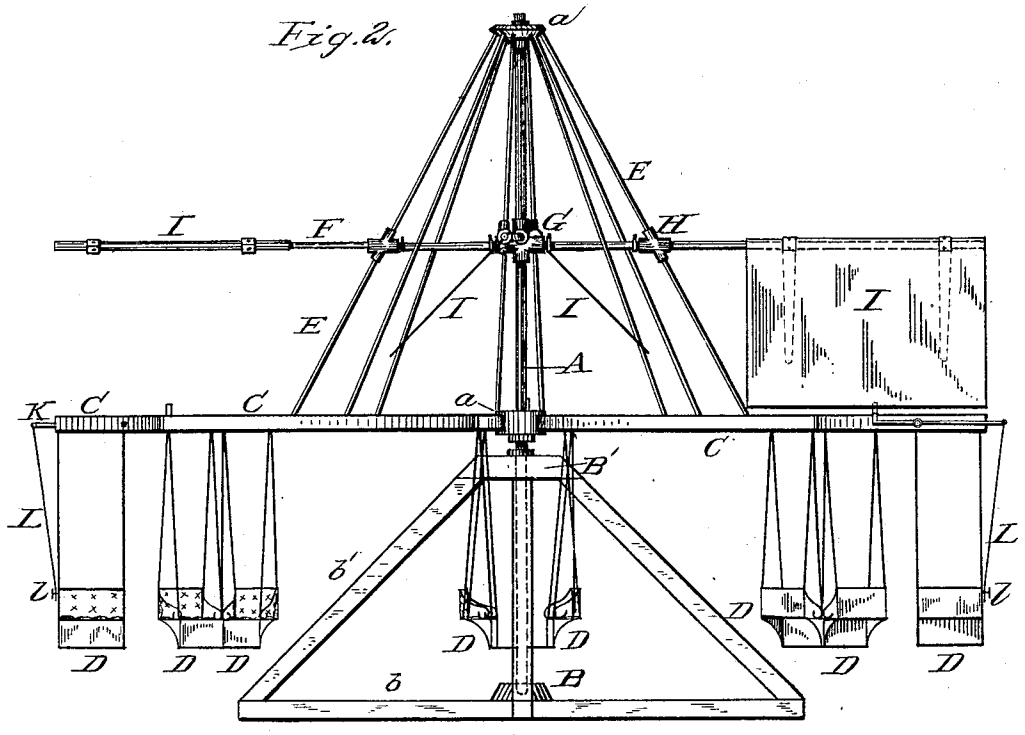
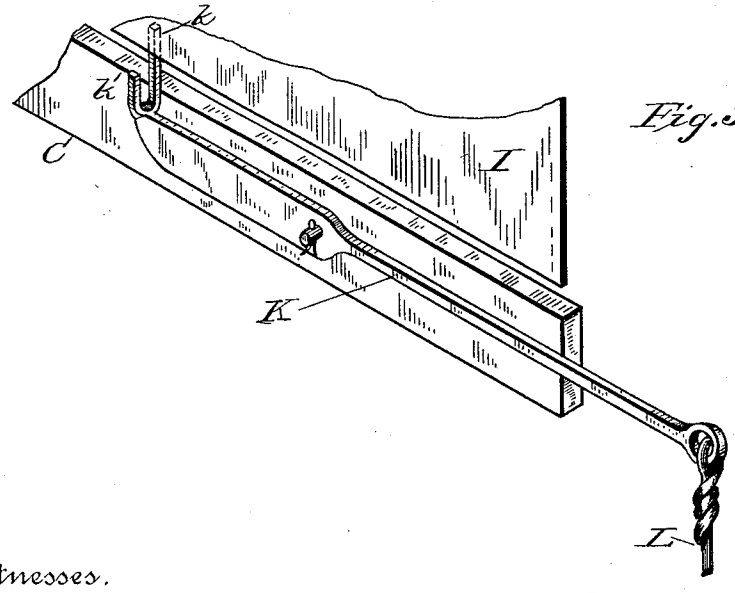


Fig. 3.



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A. M. Paxton.
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Inventor.
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UNITED STATES PATENT OFFICE.

THOMAS J. SIMPSON, OF WORTHINGTON, MINNESOTA.

WIND-PROPELLED SWING.

SPECIFICATION forming part of Letters Patent No. 386,358, dated July 17, 1888.

Application filed April 13, 1887. Serial No. 234,720. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. SIMPSON, a citizen of the United States, residing at Worthington, in the county of Nobles and State of Minnesota, have invented certain new and useful Improvements in Wind-Propelled Swings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of machines known as "merry-go-rounds" or "roundabouts;" and its object is to render such machines self-propelling, in order to lessen the labor of the operator, and, if necessary, to dispense with the services of an operator altogether.

My invention consists, broadly, in the combination of a roundabout with a wind-wheel, preferably of the horizontal type.

It also consists in certain combinations and arrangements, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents in perspective my combined roundabout and wind-wheel. Fig. 2 is a side elevation of the same, and Fig. 3 is an enlarged detail view in perspective of the governing and stopping device.

The same letters refer to corresponding parts in all the views.

A is the mast, which supports the wind-wheel and the swings. Its lower end is mounted in the step B, secured at the intersection of the cross-bars *b b*. A collar, B′, encircles the mast A at a suitable distance above the step B, being supported by braces *b′*, extending upward and inward from the ends of the cross-bars *b*. The mast is free to revolve in the step B and collar B′.

Just above the collar B′ a hub, *a*, is secured to the mast, from which extends several horizontal arms, C. From the end of each arm is suspended a swing, D, of any desired construction. The arms are supported by stay-rods E, which extend from a collar, *a′*, secured to the upper end of the mast A to the arms C.

About midway between the hub *a* and the collar *a′* a horizontal wind-wheel is secured to the mast A. This wind-wheel is preferably constructed as shown and described in my Patent No. 325,366, dated September 1, 1885, and a detailed description of the construction and mode of operation need not here be given, further than to say that it consists of two or more shafts, F, the center of each being carried in a journal-bearing, G, secured to the mast A. The shafts pass through bearings H, attached to the stay-rods E. At the ends of each shaft are secured wind-sails I, arranged at right angles to each other, so that when one sail is vertical and in a position to be acted on by the wind the opposite sail will be horizontal and will offer little or no resistance. As the wheel revolves the sails reverse their relative position, so that the wind acts always upon the same side of the wheel. As explained in my patent above referred to, this wheel is self-regulating and cannot be driven faster than a certain rate of speed. By thus combining a self-regulating wind-wheel with a roundabout it will be seen that the roundabout becomes self-propelling, although it cannot exceed a safe rate of speed, which can be determined upon beforehand and arranged for.

In order to govern or stop the machine, one or more suitable devices are provided, consisting in each instance of a lever, K, pivoted to the outer end of the arm C and carrying at one end a fork. One leg of this fork, *k*, is longer than the other leg, *k′*. In the normal position of the lever both legs of the fork are kept below the upper edge of the arm C, the inner end of the lever being heavier, as shown in Fig. 3. To the outer end of the lever is attached a cord, L, which is fastened to the swing D at *l*. As has been said, the wind-wheel is self-regulating, this being accomplished by leaving the sails free to swing as they please under the action of the wind; but should it be desired to increase the speed of the machine the cord L may be drawn down slightly, lifting the long leg *k* above the arm C, so that when the sail I drops down it comes against the leg *k* and is held vertically, thus compelling it to receive the full force of the wind. If the occupant of the swing desires to

stop the machine, he has only to draw down the cord a little farther, throwing up the short leg *k'* above the arm C and catching the edge of the sail I in the fork, so that when a half-revolution of the machine has been made the sail is prevented from rising to a horizontal position, but offers such a surface to the wind as to speedily check and stop the roundabout. By this means the occupants of the swings have the machine under entire control, and can increase their speed or come to a standstill at pleasure.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The improved roundabout hereinbefore described, consisting of a series of radial arms mounted on a central mast, suitable seats carried by said arms, a horizontal wind-wheel mounted on said mast above said arms, and one or more levers pivoted to said arms and adapted to be engaged with the wind-wheel to regulate its speed, substantially as set forth.

2. The combination of the revoluble mast A, the radial arms C, the shafts F, carrying wind-sails I, arranged at right angles with each other, as shown, and one or more levers, K, pivoted to the arms C and provided with the legs *k k'*, substantially as shown and described.

3. The combination of the frame-work *b b'*, supporting the step B and collar B', the mast A, mounted in said step and collar, the radial arms C, carrying swings D, the stay-rods E, bearings G H, shafts F, provided with wind-sails I, forked levers K, pivoted near the outer ends of the arms C, and the cords L, attached to said levers and to the swings D, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. SIMPSON.

Witnesses:
J. S. BRADFORD,
M. A. BALLINGER.