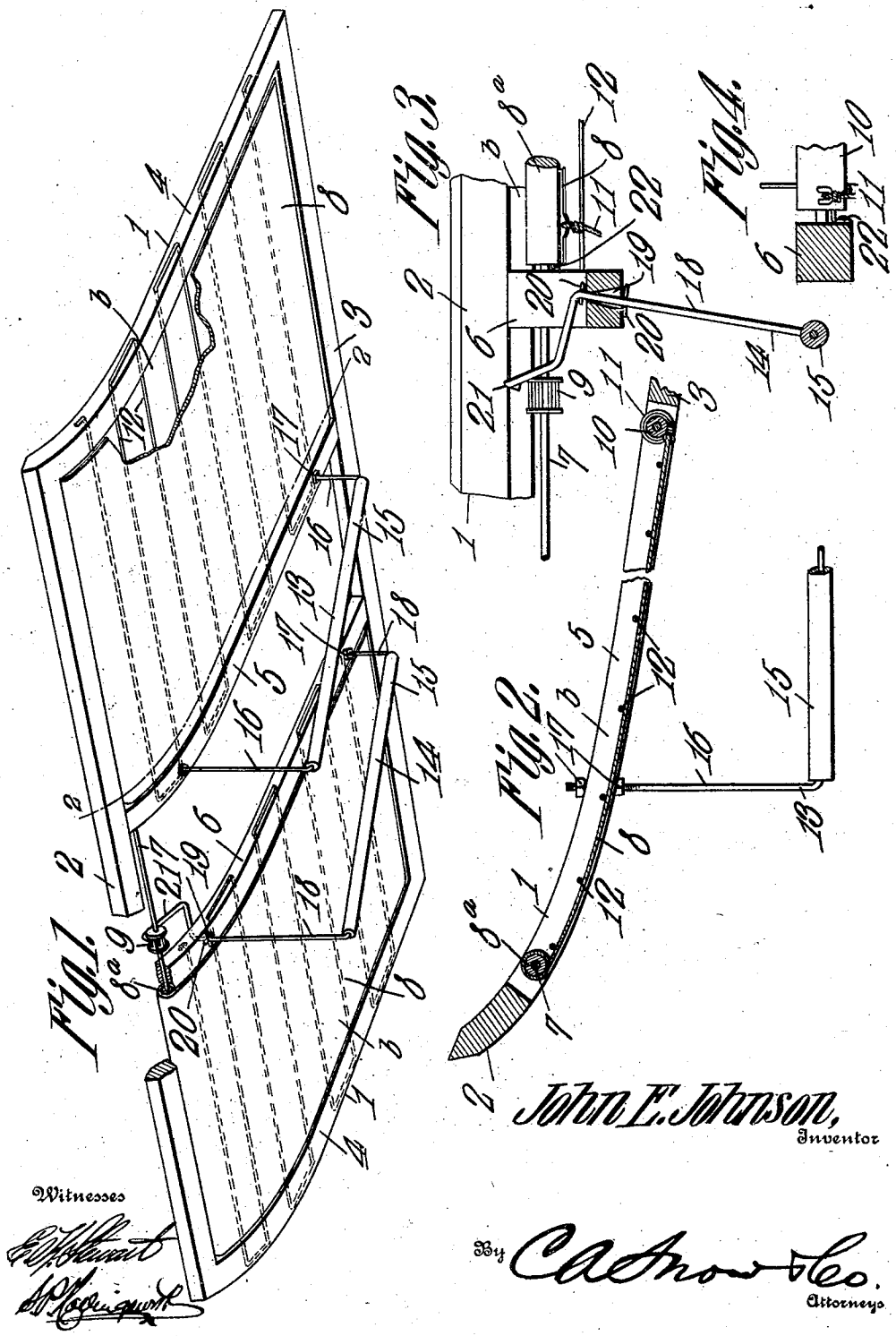
J. E. JOHNSON.

SKATING SAIL.

APPLICATION FILED JUNE 15, 1908.

915,677. Patented Mar. 16, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN EMIL JOHNSON, OF ISHPEMING, MICHIGAN.

SKATING-SAIL.

No. 915,677. Specification of Letters Patent. Patented March 16, 1909.

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To all whom it may concern:

Be it known that I, JOHN E. JOHNSON, a citizen of the United States, residing at Ishpeming, in the county of Marquette and State of Michigan, have invented a new and useful Skating-Sail, of which the following is a specification.

This invention relates broadly to an apparatus for the use of skaters, skee jumpers and others, and has for its object to provide a simple, strong and light frame to be held by the hands above the head of the user, said apparatus having spring rollers connected by cords to curtains wound on other rollers which as soon as a lock is released, are drawn from said rollers by the cords winding on the spring rollers and thus form an aeroplane which carries the person suspended therefrom for a great distance.

This apparatus is designed especially for the use of skee-jumpers who wear long narrow plates on their feet and to get the proper start for a jump, each jumper slides down an incline of suitable length and pitch at the base of which is a slight elevation called the "bump" from which the jump is made. Very often, skee jumpers trying to make a long jump, say about one hundred feet, receive serious accidents as the result of falls from various causes. To prevent these accidents and to enable a jumper to exceed the distance mentioned and descend quietly to the ground, the present invention has been designed.

To more clearly understand the construction and operation of the invention, attention is directed to the following detailed description of the same and to the accompanying drawings, in which:—

Figure 1 is a perspective view of the sail or aeroplane as it appears when in use certain parts being broken away to more clearly illustrate the invention; Fig. 2 a sectional view on the line 2—2 of Fig. 1; Fig. 3 a detail view showing the lock more clearly; and Fig. 4 a detail view of one end of a spring roller.

Like reference characters are used on all the figures to indicate the same parts.

In the drawing, the numeral 1 indicates the frame, made preferably of light strong wood, rectangular in form and slightly curved upward at the front end. The frame has a front bar 2, and a rear bar 3, both bars extending laterally the full length of the frame which is greater than its fore and aft dimension. The bars 2 and 3 are connected by a side bar 4 at each lateral end and two intermediate bars 5 and 6 parallel to the end bars and to each other and separated one from the other about the width of a man's shoulders more or less. The bars 4, 5 and 6 are straight for the greater part of their length, but curve upwardly slightly at the forward ends to cause the plane to have a better lifting power.

Between the front and rear bars 2 and 3, respectively, and the outer sides of the bars 5 and 6 and the side bars 4 are two rectangular spaces *b* framed by the bars above noted. At the front of the frame 1 and running entirely across it just back of the front bar 2, is a shaft 7 around which, within each space *b* a curtain 8 is adapted to be wound on a roller 8^a. Beside the curtains, a toothed or other form of locking wheel 9 is fastened to the shaft between the intermediate bars 5 and 6. For the purposes of illustration, a lantern pinion is used in place of a more complicated wheel.

At the rear of each space near the back bar 3 is a spring roller 10, near each end of which is fastened a light strong cord or rope 11 extending forwardly to the curtains and fastened to their ends so that when the lantern wheel is released the tension of the spring rollers 10 will wind the cords or ropes 11 thereon and draw the curtains 8 to the rear of the frame and fill each space *b* with air resistance material. The curtains 8 are held in a substantially flat position below the top of the frame by means of wire strands 12 of suitable size extending across each space above the curtains from the side bars 4 to its adjacent intermediate bar 5 or 6. The strands 12 are placed sufficiently close to one another to prevent the pressure of air below the curtain from appreciably bulging it through the strands.

Depending from the intermediate bars 5 and 6 are handles 13 and 14 respectively, made of light but strong metal preferably circular in cross section and bent each at its ends perpendicular to the intermediate portion and parallel to each other. The intermediate portion of the handles are nearly as long as the bars 5 and 6 and are each pro-

vided with a hand grip 15 preferably made of wood. The parallel portions or uprights 16 of the handle 13 are rigidly fastened to the intermediate bar 5 by nuts 17 on said uprights, screwed tightly against the upper and lower sides of said bar 5. The uprights 18 on the handle 14 extend through holes in the intermediate bar 6 and the rear upright is fastened in place by nuts 17 in the same manner as the uprights 16. The forward upright 18, however, passes through a laterally tapered aperture 19 in the bar 6 and held in place therein by pins 20 passed through holes in the upright, one above and the other below said bar. By means of this connection the forward end of the handle 14 may be moved to and from the handle 13. The upper end of the rocking upright may have attached to its end any preferred means to coöperate with the lantern wheel 9, on the shaft 7 to form a locking device, but in the drawing, the upright 18 is bent to the shape of a hook 21 for engaging the lantern wheel and releasing the same by moving the handle 14 inwardly.

The spring roller 10 resembles a window shade roller, but it is provided with a stronger spring which projects from the end of the roller and fastened to the frame at 22, see Fig. 4.

In use, the skee-jumper grasps the handles of the sail or aeroplane before descending the hill whereon he gains the required momentum, holding the apparatus in position to present as little surface as possible to the wind, the curtains of course being wound on the through shaft 7 and held by the locking device heretofore described. As the jumper approaches the slightly raised "bumper" from which the jump is made, he raises the apparatus above his head and presses the handles together as soon as the jump is made. The movement of the handle 14 releases the hook from the lantern pinion and the spring rollers pull the curtains across the spaces *b* producing a sufficient surface to retain the jumper a longer time in the air and prevent a rapid fall as the momentum rapidly diminishes toward the completion of the jump.

What is claimed is:—

1. In a skater's appliance, a frame, a curtain carried at one end of the frame, means for normally holding the curtain in furled position, means for releasing the curtain, and means for stretching the curtain across the frame when released.

2. In a skater's appliance, a frame, a roller carried at one end of said frame, means for normally holding the curtain wound on the roller, means for releasing the curtain, and means for unwinding the curtain and stretching it across the frame when released.

3. In a skater's appliance, a frame, a roller carried at one end of the frame, a curtain normally wound on the roller, means for locking the curtain in wound up position, means for releasing the curtain, and means for unwinding the curtain and stretching it across the frame when released.

4. In a skater's appliance, a frame, a roller carried at one end of the frame, a curtain wound on the roller means for locking the curtain in wound up position, means for releasing the curtain, and a spring roller carried by the frame opposite the first mentioned roller, and connected to the curtain for unwinding the same from the first mentioned roller and stretching it across the frame.

5. In a skater's appliance, a frame, a roller carried at one end of said frame, a curtain wound on said roller, a spring roller carried by the frame opposite the first mentioned roller and connected to the curtain for unwinding the same from the first mentioned roller and stretching it across the frame, and means for locking the curtain in wound up position on the first mentioned roller.

6. In a skater's appliance, an open framework divided by cross-bars into sections, a curtain carried at one end of each of said sections, means for normally holding the curtains, in furled position, means for releasing the curtains, and means for stretching said curtains across the frame sections when released.

7. In a skater's appliance, an open framework divided by cross-bars into sections, supporting handles carried by the frame at the inner sides of the sections, curtains carried by the frame one at one end of each section, means for normally holding the curtain in furled position, means for releasing the curtains, and means for stretching the curtains across the sections when released.

8. In a skater's appliance, a frame, a curtain carried at one end of the frame, means for normally holding the curtain in furled position, means for releasing the curtain, means for stretching the curtain across the frame when released, and transverse members on the frame above the curtain, and engageable by the latter, for retaining the same in substantially flat position.

9. In a skater's appliance, a frame, a shaft carried at one end of the said frame and provided with a lantern pinion, a roller mounted on the shaft, a curtain wound on the roller, a detent engageable with the lantern pinion for locking the curtain in wound up position, means for releasing the detent, and means for unwinding the curtain to stretch it across the frame when the detent is released.

10. In a skater's appliance, an open framework, divided by cross-bars into sections, supporting handles carried by the frame at the inner sides of the sections, rollers, one at the end of each section, a shaft for said roll-

ers, a lantern pinion on the shaft, a detent carried by one of the aforesaid handles, engageable with the lantern pinion, a curtain wound on each roller, and means for unwinding the curtains to stretch them across the sections when the detent is disengaged.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN EMIL JOHNSON.

Witnesses:
HANS GUNDERSON,
JOHN D. ELLRIDGE.