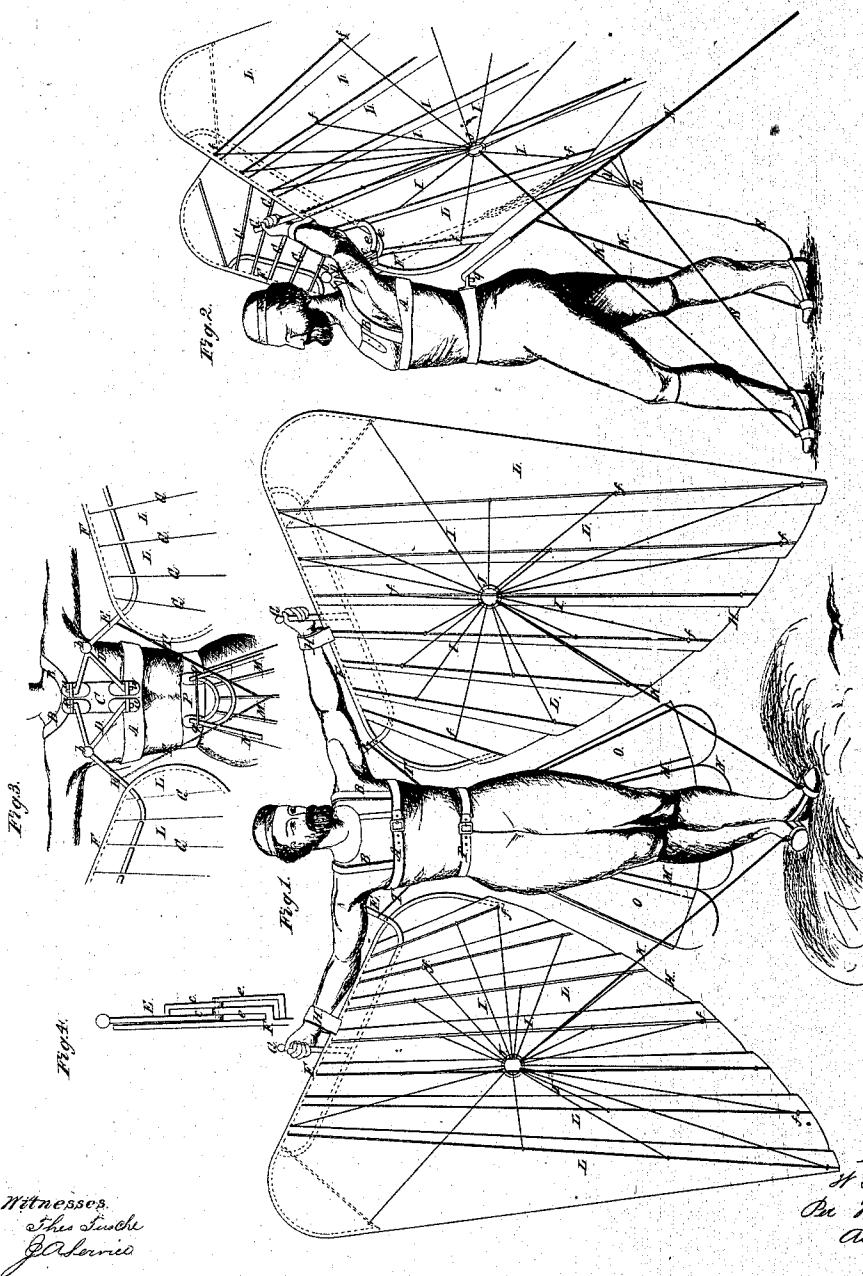


W. F. QUINBY.
FLYING APPARATUS.

No. 68,789.

Patented Sept. 10, 1867.



United States Patent Office.

W. F. QUINBY, OF WILMINGTON, DELAWARE.

Letters Patent No. 68,789, dated September 10, 1867.

IMPROVED FLYING APPARATUS.

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, W. F. QUINBY, of Wilmington, in the county of New Castle, and State of Delaware, have invented a new and improved Flying Attachment; and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim, and desire to have secured to me by Letters Patent.

This invention relates to a new and improved flying attachment, whereby a person will be enabled to fly or propel himself through the air similar to birds.

The invention consists substantially of two lateral or side wings and one dorsal wing, constructed, arranged, and applied in such a manner as to be capable of being operated by the combined action of the arms and legs. In the accompanying sheet of drawings—

Figure 1 is a front view of my invention applied to a person.

Figure 2, a side view of the same.

Figure 3, a portion of a back view of the same, and

Figure 4 a detached view of one of the joints pertaining to the same.

Similar letters of reference indicate corresponding parts.

A represents a strong belt, which encircles the body of the person under the arms, is buckled in front, and secured in position by shoulder-straps B B, the rear ends of which are attached to a strap, C, connected to the rear of the belt A, as shown in fig. 3. To the strap C two V-shaped metal frames, D D, are attached by joints a, and the outer ends of these frames are connected by ball-and-socket joints b to bars E E, the outer ends of which are provided with two prongs, c c, shown more particularly in fig. 4. The frames D D, in consequence of being connected to the strap C by the joints a a, have, when operated, a motion forward and backward at their outer ends. The prongs c c of the bars E are connected by pins to prongs e e, connected to frames F F of bow form. (See more particularly figs. 1 and 2.) These frames F have strong handles G attached, which may be conveniently grasped by the operator, and the arms pass through sheaths H attached to the frames F. These frames may be made of wood or metal tubing, and may be readily applied and removed at pleasure. To these frames F rods G, of cane or other suitable material, are firmly secured, said rods varying in length, and having such a direction or position as to give a proper shape or form to the wings. The outer ends of the rods G are connected by wires or cords H, and may, if necessary or desired, be stayed by a net-work of cords at any part of their length. Any number of small cords, I, are attached to the rods G, and are all connected, those of each wing to a ring, J, the rings being connected by cords K to the feet of the wearer. These cords may be of leather, or any other suitable material. A strip of waxed or oiled silk, L, is secured at one edge to each rod G, said strips being of such a width that they may cover the spaces between the rods, and each strip slightly overlap the rod next adjoining it. The silk strips L are prevented from being forced through the spaces between the rods G, on the downward stroke of the wings, by having the cords I pass through eyelets f in the strips near their free or unattached ends. This arrangement also admits of the strips L rising to allow the air to pass through freely during the upward stroke of the wings. The frames F, with the rods G and silk strips L, constitute, as will be doubtless understood, the side or lateral wings. The dorsal wing is constructed similarly to the side or lateral wings, rods M being attached to a light frame composed of a wire, N. This dorsal wing is of V-form, gradually expanding from its inner to its outer end, and is provided with silk strips O, arranged like those of the lateral or side wings. This dorsal wing is attached to a waist-belt, P, by means of hinges or joints, g, which will admit of it vibrating up and down, and cords Q are attached to it, which are all secured to a ring, R, the latter being connected by cords S S to the feet of the person. Cords T are also attached to the upper side of this dorsal wing, which are secured to the rods E, as shown clearly in figs. 1 and 3. These upper ends are intended to raise the dorsal wing when the arms are raised, and the cords which are attached to the feet are intended to depress all the wings simultaneously when the legs are struck out or distended.

In using this invention a motion is given the arms and legs almost precisely like that in swimming, and the effect is nearly the same, the difference in density between water and air being compensated for by the greater

extent of surface presented by the wings in the one case over the hands and feet in the other. The wings are brought up to their full height, the edges of the lateral or side wings facing the wind, and then suddenly pushed forward, and by a pronation of the hands thrown outward, and then brought down by a full force or power of both arms and legs. By this means both the arms and legs are rendered subservient in operating the wings, and every muscle of the body is brought into action to the best advantage.

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

1. The lateral or side and dorsal wings, applied to the person in such a manner as to admit of said wings being operated by the combined action of the arms and legs, substantially as shown and described.
2. The means of connecting the lateral or side wings to the person, consisting of the frames and joints constructed and arranged substantially as shown and described.

W. F. QUINBY.

Witnesses:

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