

No. 845,266.

PATENTED FEB. 26, 1907.

W. P. SAMMS.
SWIMMING APPLIANCE.
APPLICATION FILED FEB. 20, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

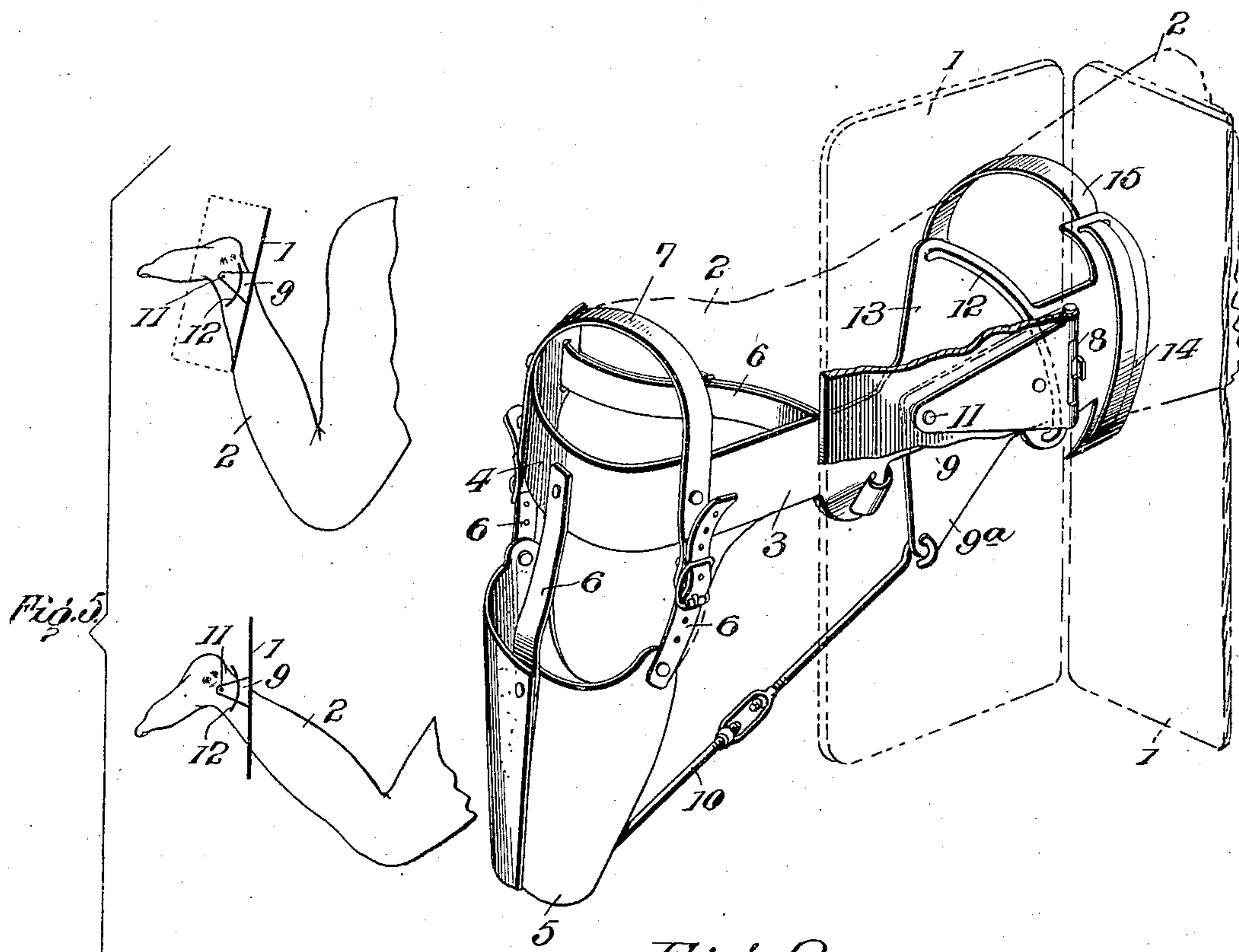
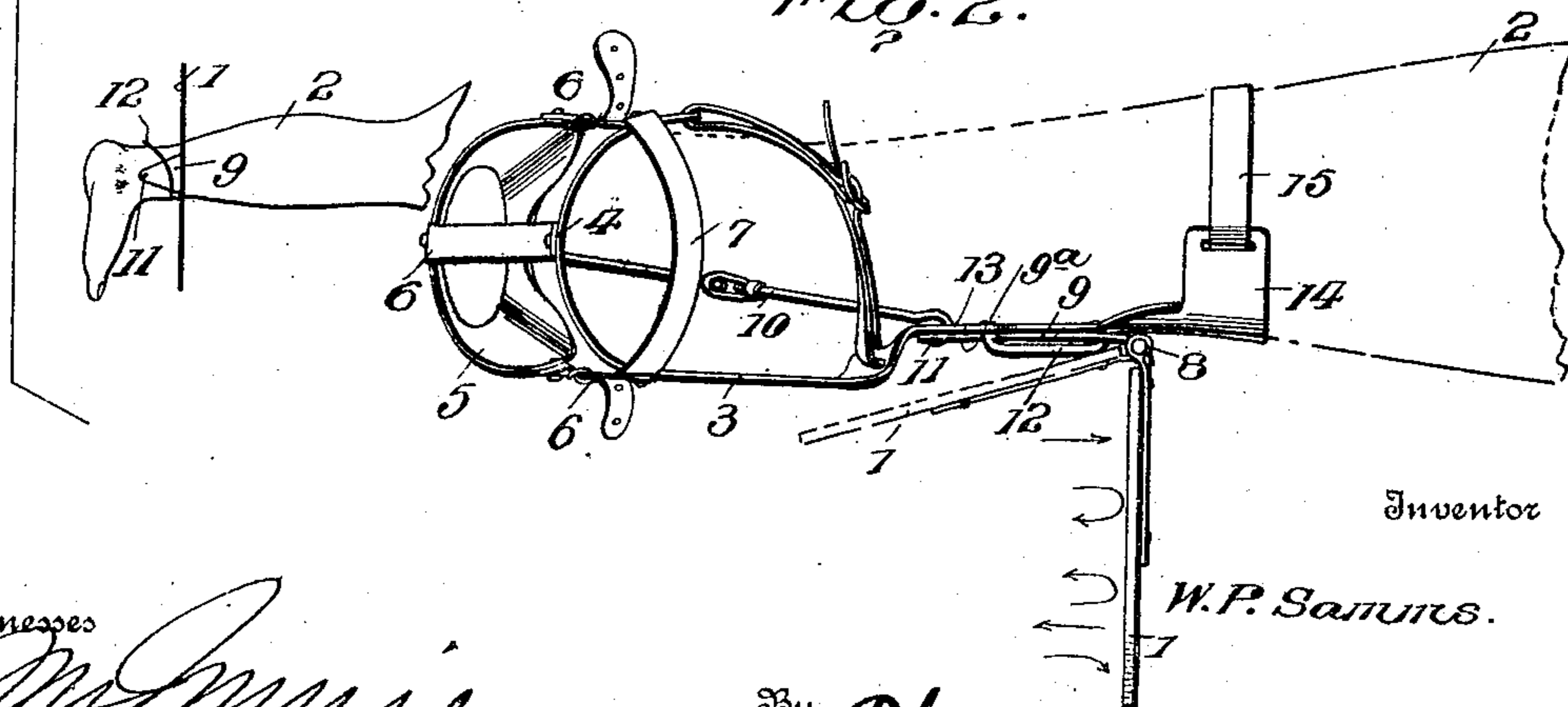


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

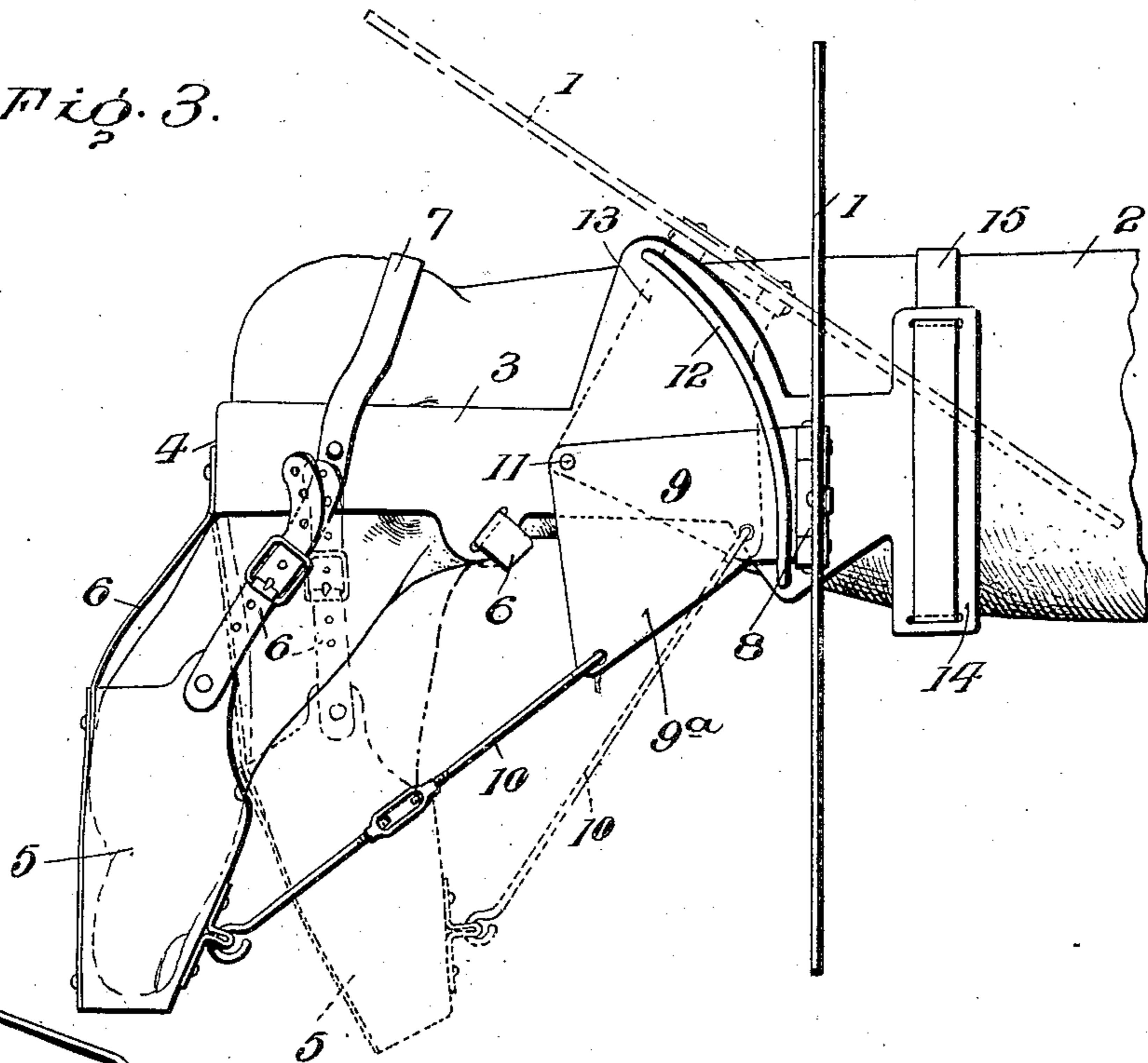
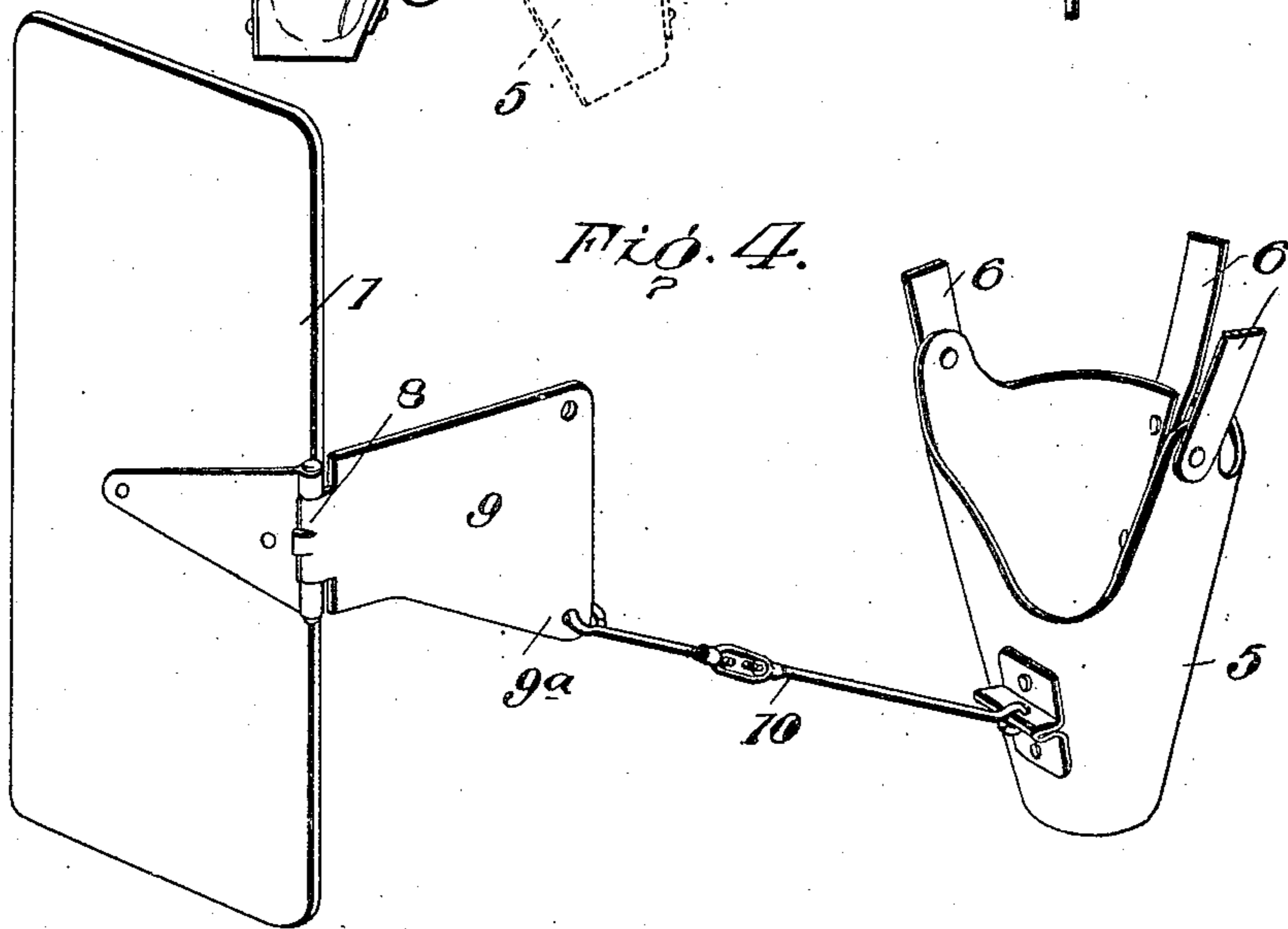


Fig. 4.



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SWIMMING APPLIANCE.

No. 845,266.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed February 20, 1906. Serial No. 302,096.

To all whom it may concern:

Be it known that I, WILLIAM P. SAMMS, a citizen of the United States, residing at Enterprise, in the county of Wallowa and State of Oregon, have invented certain new and useful Improvements in Swimming Appliances, of which the following is a specification.

This invention embodies improvements in swimming appliances, and relates particularly to that type of these devices which are designed to be secured to the leg of the swimmer in order to facilitate propulsion of the body through the water.

An appliance constructed in accordance with the invention consists mainly in a suitable means for attaching a feathering-blade to the leg, the especial advantage of the invention residing in the peculiar mounting of such blade whereby it may most readily perform its functions, the movement of the blade being peculiar, as required by the peculiar movement which is given to the leg of a swimmer when he is in the water.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view showing an appliance constructed in accordance with the invention applied. Fig. 2 is a top plan view. Fig. 3 is a side elevation, dotted lines showing the position of the blade with reference to the attaching means when the foot of the swimmer is in its forward position initial to the rearward stroke of the leg. Fig. 4 is a detail perspective view of the blade, bringing out more clearly its connection with the toe-section of the attaching means. Fig. 5 is a diagrammatic view showing the leg of the swimmer in three different positions as it is straightened on the stroke and bringing out the relative movement of the feathering-blade of the swimming appliance.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In a practical embodiment of the invention the feathering-blade 1 is attached to the leg 2 of the swimmer by means of a longitudinal plate or bar 3, which is provided at one end with a lateral extension 4 to pass beneath the foot of the wearer. The bar 3 is connected

with a toe-section 5 by means of suitable straps 6, which are adjusted so that the attaching means may be readily applied to feet of different sizes. A heel-strap 7 is also provided in order to more effectively hold the appliance in position when in use. The blade 1 is adapted to feather by means of a hinged or pivotal connection 8, by which it is attached to a hinge-plate 9. The hinge-plate 9 is formed with an extension 9^a, connected by a rod 10 with the toe-section 5 of the appliance. The plate 9 is pivotally connected at 11 with the bar or member 3. The point intermediate the ends of the latter and said plate 9 is therefore adapted for movement in a vertical plane with respect to the part 3 when the appliance is in use. The vertical movement of the plate 9 is limited by means of an arc-shaped guide-rod 12, which is applied to a transversely-widened portion 13, formed between the ends of the bar 3. The rod 12 has its ends suitably connected with the widened portion 13 of the rod of the bar 3, and said ends form stops to limit the pivotal movement of the plate 9 in a vertical plane.

From the foregoing it will be comprehended that the blade 1 is adapted for movement independent of its feathering movement, or, in other words, the blade 1 has a hinged or pivotal connection 8, by which it is adapted to feather as the leg is drawn forward in the water, and in addition to this the blade will have a certain amount of movement vertically by reason of the pivotal connection 11, which is supplemental to the connection 8, by which the blade is attached to the bar 3. The end of the bar 3 opposite that having the extension 4 is transversely enlarged, as at 14, to admit of securance of an attaching-strap 15 thereto, said strap 15 passing about the calf of the leg when the swimming appliance is in use.

The operation of the invention is shown most clearly in Fig. 5, and it will be noted that as the foot and leg of the swimmer are at the forward extreme of movement in the stroke the blade 1 will be flat against the plate 9 and at its limit of vertical movement afforded by the supplemental connection 11. As the leg is forced rearwardly the blade 1 resists the movement thereof and opens outward in the customary way, at the same time gradually moving downward in a vertical plane by reason of its connection 10 with the toe-section 5 and by reason of the

straightening of the leg, which causes the resistance of the water to the movement of the blade to effect the vertical movement aforesaid.

5 It is designed that the several parts of the appliance be made of aluminium or similar light metal, with the exception, of course, of the straps and connections, so that the device will not form an impediment to the
10 swimmer when in use. The appliance, however, may be constructed in any suitable way so far as the material is concerned within the spirit of the invention. The rod 10 is preferably provided intermediate its ends
15 with a turnbuckle whereby the length thereof may be varied, so as to admit of use of the appliance upon feet of different lengths and giving rise to various other advantages of obvious import.

20 Having thus described the invention, what is claimed as new is—

1. In a swimming appliance, the combination of a feathering-blade, and means admitting of movement of the blade independent
25 of its feathering movement and in a different plane from that of the feathering movement.

2. In combination with attaching means therefor, a swimming appliance embodying a feathering-blade having pivotal connection
30 with the attaching means, and an auxiliary connection between the blade and the attaching means to permit simultaneous feathering movement of the blade, and movement independently of such feathering movement.

35 3. In combination with attaching means comprising a member adapted to be secured to the leg and including a toe-section, a feathering-blade, means connecting the toe-section with said blade to effect movement of
40 the latter independent of its feathering movement, and a stop means to limit the last-mentioned movement of the blade.

4. In combination with attaching means therefor, including a movable toe-section, a feathering-blade applied to the attaching
45 means, and means operable by the toe-section to effect movement of the blade independently of its feathering movement, and stop means for limiting the last-mentioned movement of said blade. 50

5. In a means of the class described, a swimming appliance embodying a feathering-blade, attaching means therefor including a member adapted to be secured to the leg, a hinge-plate pivotally connected with
55 said member and having a hinged connection with the blade, whereby the blade is permitted to have both feathering movement and movement independent of such feathering movement, a toe-section movably connected
60 with the first-mentioned member, and a rod connecting the toe-section with the hinge-plate.

6. In a means of the class described, a swimming appliance embodying a feathering-blade, attaching means therefor including a member adapted to be secured to the leg, a hinge-plate pivotally connected with
65 said member and having a hinged connection with the blade, whereby the blade is permitted to have both feathering movement and movement independent of such feathering movement, a toe-section movably connected with the first-mentioned member, a rod connecting the toe-section with the hinge-plate,
70 and a guide applied to the first-mentioned member and arranged to limit the movement of the hinge-plate aforesaid. 75

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

WILLIAM P. SAMMS. [L. s.]

Witnesses:

THOS. M. DILL,
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