O. G. AHLSTROM.

SWIMMING SHOES.

No. 169,396. Patented Nov. 2, 1875.

Fig: 1.

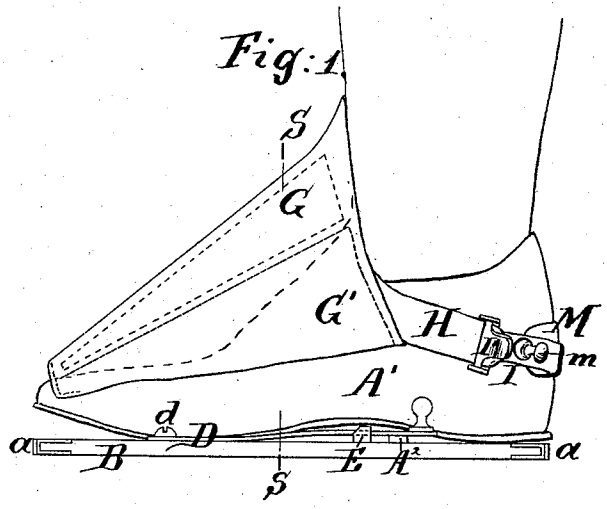


Fig: 2.

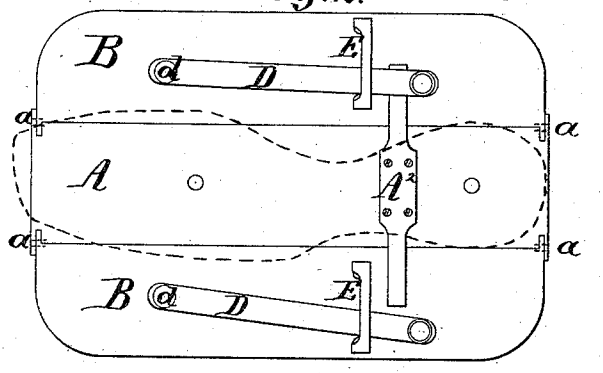
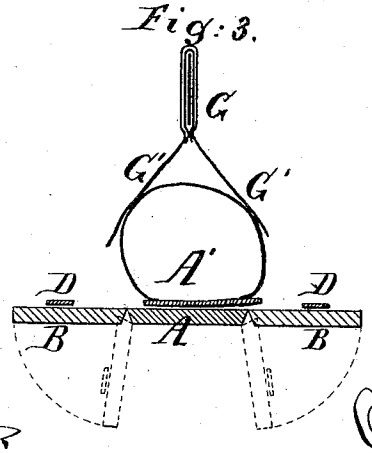


Fig: 3.



Witnesses:

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OSCAR G. AHLSTROM, OF NEW YORK, N. Y.

IMPROVEMENT IN SWIMMING-SHOES.

Specification forming part of Letters Patent No. **169,396**, dated November 2, 1875; application filed September 25, 1875.

To all whom it may concern:

Be it known that I, OSCAR G. AHLSTROM, of New York city, in the State of New York, have invented certain Improvements relating to Swimming-Shoes, of which the following is a specification:

I provide shoes, or attachments to shoes, which shall be strong and well adapted to be walked on while the operator is standing on the bottom, or on dry land, and shall also serve to induce an action analogous to the web-feet of aquatic birds, when required in swimming.

The accompanying drawings form part of this specification, and represent what I consider the best means for carrying out the invention.

Figure 1 is a side elevation of the entire construction in use. Fig. 2 is a plan view of the rigid sole-piece and the leaves detached. Fig. 3 is a cross-section through the whole, on the line S S in Fig. 1.

Similar letters of reference indicate like parts in all the figures.

A is a sole or an attachment having straight parallel sides, with hinges *a* for side pieces or falling leaves B. Hard wood may serve well for material for the parts A B, and brass for the hinges *a*, which connect these parts together. A^1 is the upper of the shoe, formed, preferably, of felt or other fibrous material which will stand water. A^2 is a cross-bar, of brass or other suitable material, rigidly attached to and extending across the shank of the sole A, and beyond the same over the falling leaves B. D D are latches or swinging catches, pivoted one on each leaf B at the point *d*. They can be moved outward and inward from the lines of the hinges, being each held down near the surface of its respective leaf B by the keeper E.

When my swimming-shoes are used in deep water for swimming the operator draws up his feet one at a time, and moves the catches D D outward, so as to clear them from their engagements with the ends of the cross-bar A^2. Thus conditioned, the leaves B B are free to turn on the hinges *a*, and to assume the upright position indicated in dotted lines in Fig. 3. The inner edges of the leaves B B are beveled, as shown, to allow them to be turned downward. When the swimmer rests his feet lightly on the bottom he may stand on the shoes in either condition—that is to say, with the leaves B in the upright position, bearing his weight on the edges, or with the leaves B extended, and allowing his weight to bear on their lower faces, and on the lower faces of the sole A. Either condition will serve when his weight is mainly supported by the water; but, in running about on dry land, or in shallow water, it is desirable to keep the leaves always extended. In such circumstances the operator will move the catches D D inward, and engage each over the corresponding end of the cross-bar A^2. There they serve effectively to hold the leaves extended, and, with the shoes in this condition, the person may walk on a beach for an indefinite period without injuring them. In some situations, as in soft mud, such an extended base, operating like a snow-shoe, may afford positive advantages over the bare foot or ordinary narrow-based shoe.

It is important, for use and safety of operating, that the shoes be efficiently secured to the foot; and, in cases of accident or derangement, it is important that the shoe be so constructed that it may be readily torn from the foot, or removed by a vigorous action, without stopping to operate any complicated fastenings. I accomplish this by making the upper part of the shoe-upper of rather narrow and not very strong strips; but, to give a tight fit, and allow for adjusting nicely to different feet, I make the straps elastic, and provide for adjusting the length with delicacy. In striking out with the foot the leaves B extend, and take a strong hold on the water. In drawing up the foot they fall down, and offer but little resistance. In walking on the land the operator may cause them to extend at each movement by a little effort; but it is better to hold them permanently extended for such use by means of the catches D D. G is a cut-water, of india-rubber or other suitable material, supported by a piece of metal in its interior. The front edge of this cut-water is thin. The back may be of the same thickness, or a good deal widened, as may be preferred in any case. G′ are wings of stout canvas or analogous material, extending out at an angle from the sides of the cut-water G. They are of sufficient width

to cover nearly the whole upper surface of the feet. H are elastic straps. I are metallic loops, secured thereto by means of cam-buckles I′, so that they may be adjusted to make the straps in effect longer or shorter, as may be desired. The loops I engage with knobs or buttons *m*, fixed on a metallic heel-plate, M, on the back face of the shoe.

To put on the shoe the loops I are disengaged from the buttons *m*, leaving a liberal opening in the top of the shoe, in which to insert the foot. Then the straps H are drawn down tightly, pressing the cut-water and the wings G′ down upon the instep, and the whole is secured by engaging the loops I on the buttons *m*. In case of accident or derangement, even in deep water or heavy sea, a swimmer can instantly free himself from the shoes by drawing up the feet one at a time, and acting thereon violently with the hands or with the other foot.

I have tested the invention in smooth water, and find that it enables me to swim and perform various evolutions with remarkable ease and facility. I believe the invention will contribute largely to the development of a healthy taste for the manly, and in many cases vitally useful, art of swimming. It may be also of great use in connection with life-saving establishments, and with a great variety of coast, river, and lake operations.

Some of the advantages of the invention may be realized by the use of some of the parts without the others.

I have represented an ordinary leather sole above the straight wood sole A. This can be dispensed with; or the construction may, if preferred, be made still more elaborate by introducing elastic material, as felt, or even spiral or other springs, between the leather sole and the rigid wood sole, to ease the action in walking.

I claim as my invention—

1. A swimming-shoe having the sole A, hinged leaves B, catches D, and cut-water G G′, all constructed substantially as and for the purposes described.

2. The catches D and keepers E, in combination with the falling leaves B and cross-brace A^2, as and for the purposes specified.

3. The cut-water G and wings G′, in combination with the upper A^1, sole A, and falling leaves B, as and for the purposes herein specified.

In testimony whereof I have hereunto set my hand this 24th day of September, 1875, in the presence of two subscribing witnesses.

OSCAR G. AHLSTROM.

Witnesses:

PHILLIPS ABBOTT,

HENRY GENTNER.