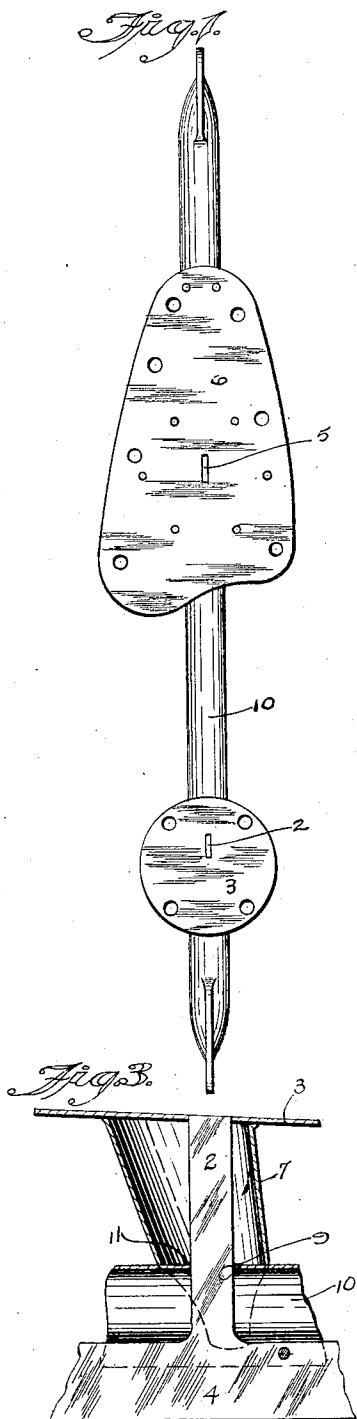
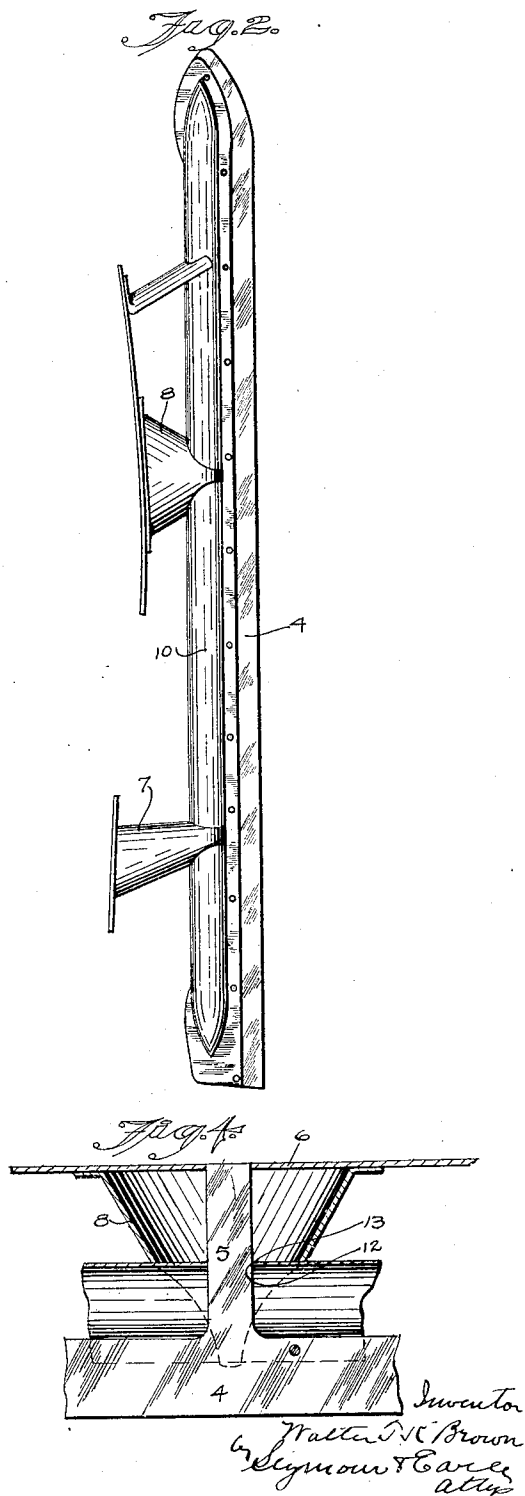


W. T. K. BROWN.
TUBULAR ICE SKATE.
APPLICATION FILED APR. 19, 1920.

1,352,113.

Patented Sept. 7, 1920.



UNITED STATES PATENT OFFICE

WALTER T. K. BROWN, OF BRANFORD, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

TUBULAR ICE-SKATE.

1,352,113.

Specification of Letters Patent.

Patented Sept. 7, 1920.

Application filed April 19, 1920. Serial No. 374,915.

To all whom it may concern:

Be it known that I, WALTER T. K. BROWN, a citizen of the United States, residing at Branford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Tubular Ice-Skates; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1. A plan view of a tubular ice-skate embodying my invention.

Fig. 2. A side view thereof.

Fig. 3. A broken view partly in side elevation and partly in vertical section of the skate, showing the heel-plate and the strut interposed between the same and the runner.

Fig. 4. A corresponding view showing the sole-plate and the strut interposed between the same and the runner.

My invention relates to an improvement in ice-skates of the type known as tubular skates, the object being to stiffen and strengthen skates of this type without sensibly increasing their weight.

With these ends in view, my invention consists in a tubular ice-skate having vertically arranged struts interposed between the heel- and sole-plates and the runner.

My invention further consists in certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention, as herein shown, I employ a vertically arranged strut 2 interposed between the heel-plate 3 and the upper edge of the runner 4, and a vertically arranged strut 5 interposed between the sole-plate 6 and the upper edge of the said runner. These struts may be made integral with the runner or brazed, riveted, butt or side welded, or otherwise secured thereto. At their upper ends, they may be welded, riveted, or otherwise secured to the heel- and

sole-plates, but however formed and secured in place, the heel-plate strut 2 will be located within the tubular heel-plate support 7 while the sole-plate strut 5 will be located within the tubular sole-plate support 8 of the skate. The supports 7 and 8 may be of any approved form and construction. The strut 2 passes upward through a slot 9 in the skate-tube 10 and is welded or brazed thereto as at 11, while the strut 5 passes upward through a slot 12 in the tube and is welded or brazed thereto as at 13.

I am thus enabled without sensibly increasing the weight of the skate, to greatly strengthen and stiffen the same, particularly with regard to all downward thrusts set up by the weight of the skater. I do not limit myself to any one mode of producing the struts or securing them to the runner, heel- and sole-plates, and to the tube, my invention being broadly characterized by the use of struts interposed between the runner and the heel- and sole-plates and located within and protected by the tubular heel- and sole-plate supports.

I claim:

1. A tubular ice-skate, having a tube, a runner, heel- and sole-plates, tubular supports for mounting the heel- and sole-plates upon the tube, and vertical struts interposed between the said plates and runner and respectively located within the said tubular supports.

2. A tubular ice-skate, having a tube, a runner, heel- and sole-plates, tubular supports for mounting the heel- and sole-plates upon the tube, and vertical struts interposed between the said plates and runner and located within the said tubular supports and secured to the tube through which they pass.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WALTER T. K. BROWN.

Witnesses:

A. P. PAINE,
A. E. HODGSON.