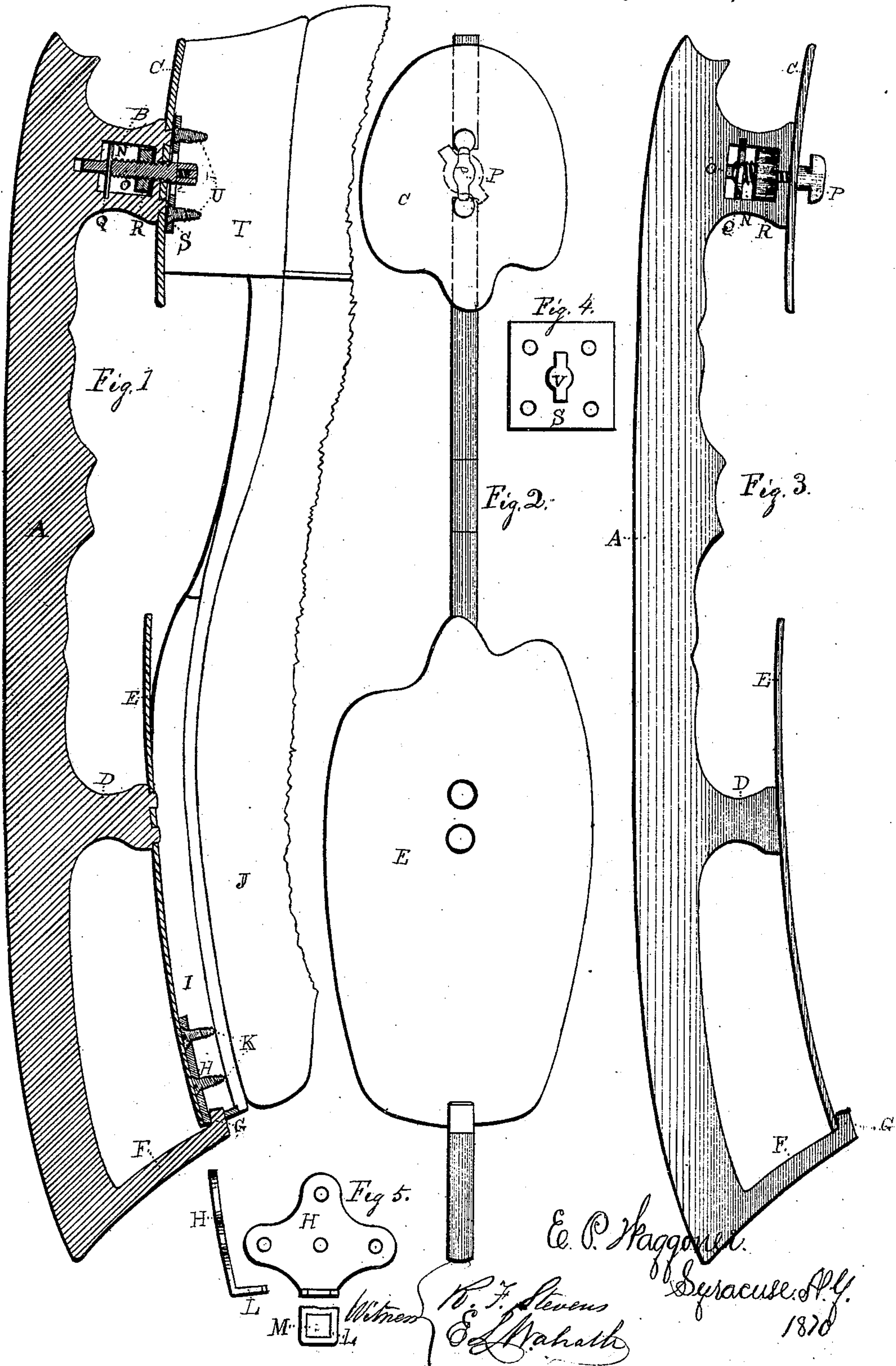


E. P. Waggoner,

Shale.

No. 106,748.

Patented Aug. 23, 1870.



# United States Patent Office.

EDWARD P. WAGGONER, OF SYRACUSE, NEW YORK.

*Letters Patent No. 106,748, dated August 23, 1870.*

## IMPROVEMENT IN SKATES.

The Schedule referred to in these Letters Patent and making part of the same.

I, EDWARD P. WAGGONER, of Syracuse, in the county of Onondaga and State of New York, have invented certain Improvements in Skates, of which the following is a specification.

In the drawing—

Figure 1 is a sectional view of the skate, attached to the heel and toe of the boot.

Figure 2 is a top view of the skate.

Figure 3 is a side view of the skate.

Figure 4 is a view of the heel-plate.

Figure 5 is a view of the toe-plate.

The nature of my invention consists in supplying skates with a button or lock, to attach them to the heel-plate, a lever to turn the button, and a thumb-screw to tighten and secure the heel to the skates.

It also consists in attaching a plate to the sole of the boot at the toe, so constructed that the front of the skate locks into it, and securely fastens it to the boot.

To construct my invention, make the skate-runner A of any convenient form or dimensions, having the upward projection B, to which is riveted the back plate C, and having also an upward projection, D, to which is riveted the front plate E.

The toe-piece of the runner has a projecting point, G, by which it is locked into the toe-plate H.

This toe-plate H is attached to the sole I of the boot J by screws K, and has its front part L turned upward with a mortise, M, to receive the point G.

The front plate E is so attached to the projection D

as to spring upward and hold the plate H firmly against the point G.

Through the projection B make the mortise N, into which insert the screw O, to which is attached the button P, and to which is also attached the lever Q and the thumb-screw R.

The heel-plate S is fastened to the heel T of the boot by screws U, having in its center a slot, V, to receive the button P.

The operation of my invention is as follows:

To attach the skate to the boot, spring down the plate E, so that the point G enters the mortise M in the toe-plate L. Then draw the skate back till the button P enters the slot V in the heel-plate S.

By the lever Q turn the button P in the heel-plate S, by which the skate is locked to the heel of the boot.

I am aware that buttons have been used to lock skate-runners to plates attached to boot-heels; I, therefore, do not claim that device as my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The screw O, the lever Q, and thumb-screw R, combined with the button P and skate-runner A, substantially as set forth, and operating with the plate S, to fasten the skate to the heel.

EDWARD P. WAGGONER.

Witnesses:

R. F. STEVENS,

E. L. WALRATH.