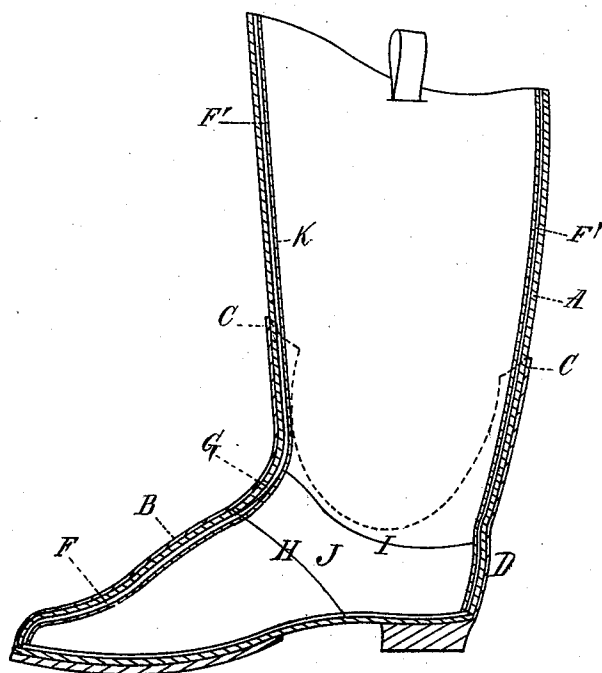


D. E. HAYWARD & E. H. BURLINGAME.

RUBBER-BOOTS.

No. 180,231.

Patented July 25, 1876.



Witnesses:
A. M. Leonard,
H. E. Metcalf,

Inventors:
Daniel E. Hayward,
Edwin H. Burlingame,
Per C. A. Shaw,
Atty.

UNITED STATES PATENT OFFICE.

DANIEL E. HAYWARD AND EDWIN H. BURLINGAME, OF WILLIAMSPORT,
PENNSYLVANIA.

IMPROVEMENT IN RUBBER BOOTS.

Specification forming part of Letters Patent No. **180,231**, dated July 25, 1876; application filed
April 5, 1876.

To all whom it may concern:

Be it known that we, DANIEL E. HAYWARD and EDWIN H. BURLINGAME, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a certain new and useful Improvement in Boots, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which our invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which the figure is a vertical longitudinal section.

Our invention relates to that class of boots which are composed principally of rubber; and consists in a novel construction and arrangement of the parts as hereinafter more fully set forth and claimed, by which a stronger and more durable article of this character is produced than is now in ordinary use.

The nature and operation of our invention will be readily understood by all conversant with such matters from the following description:

In the drawing, F represents the canvas vamp, and F' the canvas leg of the boot. This vamp extends upwardly about to the line I, and is integral with the canvas quarters J, the two being made in one piece, and united at the rear on the line D, the seam being stayed at that point with an extra coating or piece of rubber. The canvas leg is also preferably composed of one piece united at the back of the boot, and extends downwardly over the canvas vamp about to the line H.

Rubber boots have heretofore been made of rubber as the foundation of the manufacture, lined with some light textile fabric to give it shape and to hold the inner lining of felt or other soft material; but this manufacture is objectionable, as the rubber is easily penetrated by snags, and the light lining used fails to give the required resistance. It is also well

known that the rubber boots thus constructed are liable to crack, and the rubber being the foundation, the light lining also gives way, and the boots are rendered worthless.

To overcome these objections is the object of our invention. We make the foundation of our boots out of a strong heavy canvas, which is rendered water-proof by means of the compound known as "living gum" before it is incorporated with the other parts. In fact, we make a water-proof canvas boot, the leg of which is subsequently lightly coated with gum and the vamp coated with an extra thickness of the same material.

Another great advantage we gain by our improvement is we avoid the necessity of extra stiffening in and around the heels, the canvas giving ample strength and stiffness to all the parts. The vamp-canvas being joined at the rear of the heel avoids the tendency of the boot to give way at the sides, where the vamps have been usually joined.

The boot is lined throughout with the ordinary fibrous lining K, and all of the parts are cemented together or united in the usual manner for such work.

Having thus explained our invention, what we claim as new, and desire to secure by Letters Patent, is—

As an improved article of manufacture, a rubber boot provided with a strong canvas foundation, the said canvas passing over the top of the foot at or near the instep and doubling around the heel, stiffening and strengthening the same, substantially as described.

DANIEL E. HAYWARD.
EDWIN H. BURLINGAME.

Witnesses:

C. A. SHAW,
H. E. METCALF,
H. F. SNYDER,
C. W. HILL.