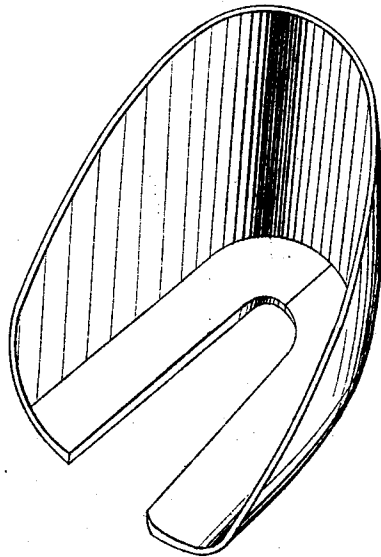


A. B. ELY.

Heel Stiffeners for Boots and Shoes.

No. 123,985.

Patented Feb. 27, 1872.



Witnesses.

*J. M. Preston*  
*N. M. Parker*

Inventor.

*Alfred B Ely*

## UNITED STATES PATENT OFFICE.

ALFRED B. ELY, OF NEWTON, MASSACHUSETTS.

## IMPROVEMENT IN HEEL-STIFFENERS.

Specification forming part of Letters Patent No. 123,985, dated February 27, 1872.

Be it known that I, ALFRED B. ELY, of Newton, Massachusetts, have invented a new and useful Improvement in Heel-Stiffenings for Boots and Shoes, of which the following is a full description:

I have heretofore invented and patented a heel-stiffener made of felted or woven fabric, saturated with suitable substances, and molded by heat and pressure into the proper form for use; and also a heel-stiffener made of leather or leather-board, and shaped in dies or molds for use. This invention is in the same or a similar direction, and has reference to a heel-stiffener made of fibrous pulp, such as that used in making paper, leather-board, &c., and with or without size, and then formed or shaped in dies or molds for use. It may be called a *papier-maché* heel-stiffening, although not necessarily confined to the material used for making paper. It is prepared by placing a sufficient quantity of the pulp in suitable dies or molds of the form required for use, where it assumes the proper shape by a proper degree of pressure, and where it may be dried; or the drying process may be carried on to completion after removal from the dies. The dies or molds may be warmed or heated, so that the stiffener may assume its shape, and also be dried and assume proper hardness and elasticity, while in the molds.

The drawing shows the form of the heel-stiffener ready for use as usually constructed. The upper edges may be compressed, as if beveled off, and the sides may be perpendicular, or the edges slightly turned outward, if desired. The hollow part in the center of the bottom may be filled up also, if desired. But the general form and objects of a heel-stiffener are perfectly familiar to all having any knowledge of boot and shoe making.

A heel-stiffener made of fibrous pulp possesses many advantages over those made of paper, leather-board, &c., as a better distribution of the material can not only be made, and that without waste, but it can be made at much less cost, and still possess more strength and durability from being in a compact form as contradistinguished from those made in laminae, folds, or leaves.

What I claim as an article of manufacture is—

A molded or shaped heel-stiffener made entirely of fibrous pulp, substantially as described.

ALFRED B. ELY.

Witnesses:

W. M. PARKER,  
HARVEY KING.