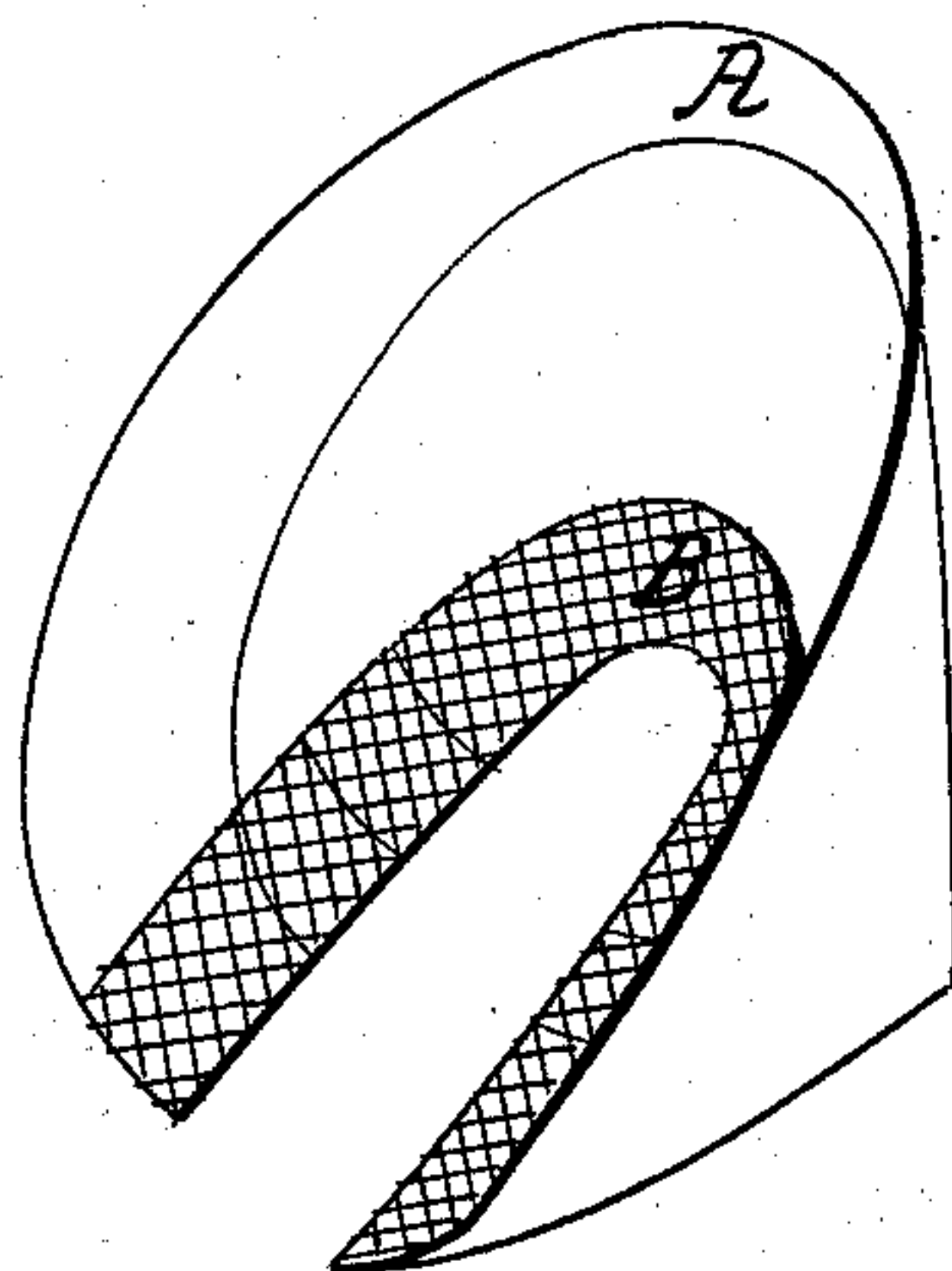


E. M. Stevens,
Shoe Uppers,
N^o 39,594. Patented Aug. 18, 1863



Witnesses:

N. Ames.
A. B. Ely

Inventor:

E. M. Stevens

UNITED STATES PATENT OFFICE.

E. M. STEVENS, OF BOSTON, ASSIGNOR TO ALFRED B. ELY, OF NEWTON,
MASSACHUSETTS.

STIFFENING FOR HEELS OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **39,594**, dated August 18, 1863.

To all whom it may concern:

Be it known that I, E. M. STEVENS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Stiffenings for Heels of Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, forming a part of this specification.

The drawing is a perspective full-sized view of one of my stiffenings before it is worked into the heel of a boot or shoe.

To enable others skilled in the art to make and use my improvement, I will now proceed to describe its construction and operation.

Stiffenings for the heels of boots and shoes have been made of solid leather, strips of leather pasted together, pasteboard, and also of india-rubber; but solid leather is expensive, pasteboard and strips of leather pasted together break down, and, especially after being wet, are apt to curl, wrinkle, and lose their stiffness, while stiffenings made wholly of rubber are too limber and very expensive.

The nature of my invention, therefore, consists in making a stiffening for the heels of boots and shoes of india-rubber mixed with ground rags or other fibrous material, whereby I produce a new article of manufacture, water-proof, and at the same time much stiffer and cheaper than stiffenings made entirely of rubber, and in all respects more desirable than any kind of leather or pasteboard.

I do not confine myself to any particular proportions of rubber and fibrous material, as they may be varied at pleasure, according to the quality of the stiffening required. One part, by weight, of india rubber, and two parts, by weight, of fibrous material—such as ground cotton or linen rags—produce a very excellent article (like the model) water-proof, so elastic as not to break by being turned over, and at the same time sufficiently stiff for the purpose required. Cotton and linen rags or other suitable fibrous material, ground, “picked,” or reduced to pulp, are mechanically mixed with the plastic rubber, which is then pressed into the proper shape (having the side A and bottom B) in the usual manner by suitable heated molds.

Stiffenings of this material may be made as cheap as those of leather, and are in all respects preferable to those of any other material hitherto in use for a similar purpose.

Having thus described the nature of my improvement, what I claim as my invention, and desire to secure by Letters Patent, is—

As a new article of manufacture for the heels of boots and shoes, a stiffening made of india-rubber mixed with ground rags or other suitable fibrous material, substantially as set forth, and for the purpose described.

E. M. STEVENS.

Witnesses:

N. AMES,
A. B. ELY.